Poster Presentations

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Introducing a novel drying technology: Microwave-Osmotic Dehydration of Apples under Continuous Spray Medium Flow Conditions

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Abstract: Microwave osmotic dehydration (MWOD) under continuous flow is a new process with a good potential for quality optimization. It combines microwave process with osmotic dehydration for enhancing the mass transfer rate of osmotic dehydration process and product quality. This study was carried out to investigate the effects of MWOD of apple (Red Gala) cylinder in the immersion (MWODS) and spray medium (MWODI). Selected temperatures, sugar concentrations, flow rates and contact times were studied.The process was monitored employing several parameters related to moisture content, weight reduction and solid gain changes. The results showed that applying Microwave-Osmotic Dehydration under spray medium (MWODS) considerably increased the water mass transfer from the fruit to the osmotic solution, leading to a significant increase of moisture loss. The results also showed that at 50oC/50oBrix and 30 min immersion in osmotic solution, the moisture loss was 36 % higher under MWODS than MWODI, while solid gain was 26% less under MWODS than MWODI at the same conditions. Thus, this spray system is more efficient and much easier to adapt under commercial conditions, and MWODS was far more effective than MWODI in removing moisture while at the same time restricting solid gain.
Keywords: Microwave, Osmotic dehydration, Moisture loss, Weight reduction, solid gain, Apple

Radiofrequency and Ultrasound cavitation technology for body contouring adversely affect hemoglobin concentration

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Background: Obesity isa risk factors for several conditions including cardiovascular disease and cancer. Dietary management is the major intervention for treating obesity although other methods have been proposed including noninvasive devices in body contouring. We aimed to determine the adverse effects of two of these devices that use Radiofrequency (RF) and Ultrasound (US) modalities for body contouring in overweight females.
Methods: We conducted a case-control study in Mashhad (Iran) on fifty overweight patients (females),aged between 18 and 65 years were randomly allocated into two groups. All of the participants received low calorie diet while only one group (case),simultaneously received RF and Ultrasound devices for 5 week, twice a week. Blood samples were collected before and after treatment. Data were analyzed with SPSS 16 and p value < 0.05 was considered significant.
Result: Over 50 patients, 25 cases received diet, RF and US and 25 controls only received diet and none of the participants didn't leave the study. We found that after 5 weeks of intervention, WBC (p value=0.003), HCT (p value=0.001), Hb (p value= 0.001), MCV (p value=0.001) and MCH (p value=0.001) decreased only in the case group which received RF and US devices in addition to diet.
Keywords: Overweight, Complete blood count, Radiofrequency, Ultrasound cavitation, Adverse effects

Phytosterols and stanols Effects on lipid-cholesterol levels (review)

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Background: Today, the disease caused by dyslipidemia, hyperlipidemia and hypercholesterolemia, the most common causes of death and disability have been identified, so need for appropriate diets to deal with them more than ever felt. The use of plant sterols and their derivatives on blood lipid level of research has been done Hypocholesterolemic effect of sterols and stanols are today proven. Unfortunately since it Conferences in the country is small,The aim of this study was to gather information from several Persian literature review study abroad, Direction for future research studies. Search Method; To compile this article using keywords blood stanol or sterols- hyperlipidemia _hypercholestrolemia- lipid profile web-based academic articles such as pubmed, googlescholar, sciencedirect as well as the websites of the country sid.ir and magiran.com and the Google search engine a total of 95 articles original, review, systematic review obtained by restricting the publishing date the time span between the years 2004 and 2014 a total of 25 articles that contained at least one of the keywords above, regardless of the end result, have been chose, were used for this study. Conclusions; In this review, we have discussed examines several research the effect of phytosterols and stanols on blood lipid profile. In this study, stanols depressing effect on the total and LDL- cholestrol verified up to 2gr/ day. According to what was found in this study, Phytosterols are more effective than supplementation with meals is consumed during fasting. In addition, stanols and sterols supplementation in small and frequent doses throughout the day, its effects on blood lipid level is greater than when taken in a single dose throughout the day.
Keywords: Hyperlipidemia, lipid profile, hypercholestrolemia

Effect of a hot meal on improving nutritional characteristics in rural children preschool programs in villages Ghochan city in 1392

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Background: Malnutrition is a global problem with destructive consequences that weaken the immune system and can intensify the disease. Other hand the rapid growth of high mobility and small size of the stomach in children 3-6 years on one hand and on the other hand busy mothers is predisposing malnourished. Therefore the effect of a hot meal in which peers play will an important role in the increase in energy and micronutrients . This process beside nutrition education will play an important role in improving indices malnourished.
Method: This cross - sectional study. According to the questionnaire sent from Province monitoring measurements (height and weight) was carried out in two steps in 20 kindergarten Village city Ghochan. At the beginning of the first phase of the project in November 2013 The second step was performed6months later in May 2014. The questionnaires were collected and were analyzed using ena pro-

gram.
Results: In the first stage 10 children 2/1% with stunting and number 16 children3/4%with underweight and number 21 child 4/5% were wasting. And secondly 10 children 2/1% with stunting and number 1/7% children with underweight and number 1/3%were wasting. The prevalence of stunting in the first stage 2/1% than the second 2/1% had not a significant change. The prevalence of underweight in the second stage 1/7% is lower than the first stage 3/4%. Prevalence of wasting in the second 1/3% is lower than the first stage 4/5%.
Conclusion: Improved indicators of underweight and wasting in the second stage than the first stage can be indicated Usually the collective environments like kindergarten children tend to mimic their classmates Which can of this opportunity to establish the correct good food behavior used Therefore improving childrens health care to educators and parents about nutrition in the early years of training should be given.
Keywords: stunting- underweight - wasting - the cradle of the the village - Malnutrition

The effects of Berberis Vulgaris consumption on adiposity indices in women with benign breast disorder .
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Introduction: Benign breast lesions is susceptibile to transform to a cancerous cells,consequently it is vital to prevent this pathologic eventRegardingly,obesity seems to be a predominant risk factor in development of neoplasstic tumorogenesis in breast. Therefore,we aim to study the effect of berberis vulgaris (BV) on adiposity indices among women with breast benign disrders (BBD).
Methods: Present research is a randomized double blind controlled clinical trial carried out On 80 patients recruited between November and July 2013 from Nour Nejat Hospital. Participants were randomly assigned into either intervention or control group and consumed 480 ml/day BV juice or placebo both in lunch & dinner meal for 8 weeks. Anthropometric measurements [weight, height, waist,mid arm and hip circumference and Body mass index (BMI)] were measured by plastic none-elastic centimeter at baseline and endpoint of the study.
Results: Body weight significantly decreased (p=<0.001) with placebo,a greater fall also seen at BV group(p=<0.001). Significantly reduction of waist circumference also found out within BV group, whereas there was an increase in placebo group (p=<0.001). Hip circumference decreased significantly in both group (p=<0.001). There was a remarkably reduction of wrist circumference in placebo group (p=0.00), while it didn't differ significantly in BV group. There was a greater improvement of BMI in both group (p=0.00). Waist to hip ratio increased significantly in placebo group (p=0.00), while no statistical difference was found in BV group.
Conclusion: We provide evidence that BV juice diminish obesity by affecting Anthropometric variables in benign breast patients
Keywords: breast cancer, benign breast, Berberis Vulgaris, obesity

Nutritional indicators in children city Ghouchan 0-72 months of 1391
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Background: Growth and evolution are tow importamt feadures of childhood period especially in first years of life. The first six months 0d life concerns the most part of growth and evolution so that the infants weight becomes doubles during 5th and 6th months of age. At the end of the first year of old the weight becomes tripled than birthday weight . Today although people know more about the significance of nutrition but the inerease of life costs especially for food has caused hazards for food security and there is the possibility of bad impact on the childrens health.
Methods: This study is descriptive analytic which has been accomplished sectionally on 2012. 1870 children between 0-72 months old were selected randomly among rural heath houses and urban health bases. Standard questionnaire of national project of the study of anthropometric measure and nutrition patterns 1387 among children bellow 6 years old which accomplished as ANIS project has been used in this rese.
Results: Among 1870 children between 0-72 months old,773 child,were urban (%41/3),1097(%58/7) children were rural,%49/8 boy,%50.2 girl. In urban areas we had %2.8 outbreak of stunting,%1.8 underweight,%2.8 slimming. In rural areas we had %4 outbreak of stunting,%2.5 under weight and %4slimness the outbreak of stunting among boys (%4.6) is more common than girls (%2.5) and outbreak of slimness in girls (%2.5) is more than boys (%1.9). In addition the outbreak of stunting in 1-2 years old children (%5.7) is more common than other age groups.
Conclusion: The outbreak of stunting,slimness and underweigh is more common in rural areas. The outbreak of underweight is more common among girls than boys. Meanwhile,the outbreak of stunting is more common among 1-2 years old children group than other age groups. Accordingly it seems that accurate nutrition training to parents,especially in rural areas in firs years of birth is important to prevent underweight,stunting and slimness.
Keywords: underweight, slimness, stunting, growth and evolution,nutrition.

Bread Consumption Patterns Before and After Subsidies
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Background: Bread is the oldest processed food in the human history which has been considered as the staff of life and a scared product in many cultures. Food consumption survey in Iran have shown that bread and cereals comprise about 33% of the total weight of food basket, with bread alone comprising more than half of this share. The aim of this study was to determine the type and mean per capita intake of different types of bread at household and individual level in Tehran and comparison with the prior subsidies.
Methods: In this cross-sectional descriptive study, 2312 households from different parts of the urban areas of Tehran were selected by multistage cluster sampling. Quantitative and qualitative pattern of bread consumption was studied among households and individuals (in 4 age-sex groups) through face to face interview. A combination of a 'purchase frequency questionnaire' and 24 hour recall was used. Data on the type and amount of breads consumed during the previous day was collected through the 24 hour recall on a subsample of households and individuals.
Results: Mean (SE) per capita intake of bread before subsidies was (240±8.5) gr/day and after subsidies was (220±2.9) gr/day, respectively. Comparison of per capita bread con-

sumption shows that the average consumption of 12/5% decline that is statistically significant difference (P<0.05). Based on the finding 37% of households reported 'lavash' to be the main bread consumed by the family, followed by 'sangak' (25%), 'Taftoon'(19%) and 'Barbari' (12%). The buying pattern of bread was reported to be weekly among 59% of households, followed by 37% of households that did the shopping for bread on a daily basis.

Conclusion: Over the past years, bread was the highest amount of subsidy. Information on the bread consumption is the main directive for policy making and planning in different areas of agriculture, international trade and domestic supply of wheat which has long been the most strategic crop in the Iranian food market.

Keywords: Bread Consumption, Before and After, Subsidies

Comparison of Healthy Eating Index (HEI) in children aged 6-10 years with Autism Spectrum Disorders and Typically Developing children

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Background: In the past two decades, the prevalence of autism has been quadrupled. Inappropriate eating behaviors and sleep disturbances have been reported in autistic children. In this regard, few researches have studied the sleep patterns and diet quality of autistic children. The aim of this study is to compare the sleep pattern and diet quality of autistic and typically developing children.

Methods: This research has carried out as a case–control study and was conducted on 124 boys aged between 6 to 11 years (62 cases and 62 controls) in Tehran, Iran. After obtaining parental consent, the general questionnaire was completed. Anthropometric measures were done using standard protocols. Dietary intake was assessed by 3-day food record. Physical activity was measured by Actigraph (GTX).

Results: Age, height, BMI percentile for age, hours of watching television per week, physical activity per week, parental education and income levels were not significantly different between two groups. Total of 32% of autistic children and 16% of typically developing children were obese. Compared to the typically developing children, autistic children had lower score of HEI (71.96 ± 9.84 vs. 66.18 ± 9.84, P <0.05), whole fruit (4.19 ± 1.80 vs. 4.33 ± 0.95, P <0.05), whole grain (0.25 ± 0.42 vs. 1.18 ± 1.38, P <0.05), milk (4.48 ± 3.23 vs. 7.12 ± 2.19, P <0.05), total vegetable (2.82 ± 1.77 vs. 3.68 ± 1.22, P <0.05), dark green and orange vegetable and legumes (1.60 ± 2.05 vs. 2.58 ± 1.57, P <0.05), saturated fat (6.90 ± 2.69 vs. 7.92 ± 2.16, P <0.05),however they had higher score of meat and beans (8.44 ± 2.48 vs. 7.17 ± 2.76, P <0.05).

Conclusion: It appears that diet qualities in children, especially in children with autism were not adequate and dietary diversity of autistic children was lower than healthy children.

Keywords: Autism, healthy eating index, children, BMI percentile, physical activity

The co-impact of the instruction of the nutrition education and physical activity on body mass indexes, lipid profile, and fasting blood sugar in obese and overweight military forces of Sepahe Ghods in Guilan province

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Background: Overweight and obesity are among the most important health issues in the world. Among the main reasons of this overwight and obesity,we can refer to improper nutrition and the lack of physical activity. The present study conducted to clarify the co-impact of the instruction of the nutrition education and physical activity on body mass indexes,lipid profile,and fasting blood sugar in obese and overweight military forces of Sepahe Ghods in Guilan province.

Method: this study is a semi-experimental a priori and a postiriori one and it is conducted on 50 obese and overweight (BMI≥25) military force personnel of Sepahe Ghods in Guilan. At the beginning and end of the study,these data had been measured and recorded: 24 hour food record,body mass index,fast blood sugar,and lipid profile. The intervention of the study consisted of 3 sessions of nutrition education,each of session 90 minuts and eight weeks of physical activity during 3 days of the week,each of which lasted 60 minutes. The elicited data were analyzed using the SPSS Version 16.

Results: the mean and degree of freedom (df= 95%) of the obese,overweight and whole participants were significantly reduced in amounts of the weight,waist circumference,hip,total cholesterol,TG,LDL-C and fasting blood sugar but significantly increased in HDL-C (p< 0/05). The daily energy and carbohydrate intake of the whole participants and obese ones was significantly reduced (p< 0/05) but in overweight participants,this reduction was not significant (p< 0.1). The protein intake of the whole participants as well as the overweight and obese participants was reduced which was not significant (p< 0/05). The fat intake of the whole participants as well as the obese and overwight ones was increased which was not significant (p> 0/05).

Conclusion: this study,nutrition education and doing physical activity resulted in improved body indexes,lipid profile,and fasting blood sugar in overwight and obese individuals.

Keywords: nutrition education, Physical Activity, Overweight, Obesity

The effects of probiotic supplementation on symptoms, oxidative stress indices and lipid profile in women with rheumatoid arthritis

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Background: Rheumatoid arthritis (RA) is an inflammatory disease in which the gut microbiota is altered. Oxidative stress has a role in the pathogenesis of RA and lipid profile is impaired in the patients. Probiotics are live microorganisms with many health benefits including antioxidative and hypolipidemic properties.

Methods: In a randomized,double-blind,placebo-controlled clinical trial,forty-six RA patients were assigned into two groups; patients in the probiotic group received a daily capsule containing 108 colony forming unit (CFU) of Lactobacillus casei 01,and those in the placebo group took identical capsules containing maltodextrin,for eight weeks. A demographic questionnaire,international physical activity questionnaire (IPAQ),Spielberger state-trait anxiety inventory form Y (STAI-Y),a 24 hour dietary recall questionnaire and three food record questionnaires were completed

for the participants. Anthropometric measurements were done,global health (GH) of the participants was assessed by visual analogue scale (VAS) and fasting blood sample was drawn. Tender and swollen joints of the subjects were counted and disease activity score 28 (DAS28) was calculated. European league against rheumatism (EULAR) response state was evaluated based on DAS28 changes through the study. Serum level of hs-CRP was measured by immunoturbidometry. Serum malondialdehyde (MDA) and total antioxidant capacity (TAC),the activity of superoxide dismutase (SOD),glutathione peroxidase (GPx) and catalase (CAT) and serum levels of total cholesterol (TC),HDL-C and trigelyceride (TG) were measured spectrophotometerically. LDL-C level was calculated by Friedewald equation.
Results: There were no significant between- or within-group differences for demographic characteristics,anthropometric parameters,physical activity and anxiety levels,and dietary intakes through the study. Serum hs-CRP,tender and swollen joint counts and DAS28 decreased significantly in the probiotic group,while GH score decreased in both groups. The between-group differences were significant for all these parameters at the end of the study (P0.05); no significant differences were observed between the groups. Within-group changes and between-group differences were statistically insignificant for blood lipids.
Conclusion: Probiotic supplementation may be an appropriate adjunct therapy for RA patients and help alleviate symptoms. No significant effects of probiotic supplementation were observed on oxidative status and lipid profile of the patients.
Keywords: Rheumatoid arthritis,Probiotics,DAS28,Oxidative stress,Lipid profile

Investigatation of the association between malnutrition status and cognitive and physical function in the elderly living at nursing homes and welfare center of Tabriz

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Background: Regarding the globally-increasing elderly population in recent decades and the higher prevalence of malnutrition and physical diseases among them, the present study was aimed to investigate the association between malnutrition status and cognitive and physical function in the elderly living at nursing homes and welfare center of Tabriz.
Methods: This cross-sectional study was carried out on 76 elderly aged 65 years and older residing in the nursing homes and one welfare center of Tabriz in 1393. Mini Nutritional Assessment-short form (MNA-SF), Mini Mental State Examination (MMSE), and Baerthel index (BI) were used for malnutrition status, mental status, and physical function, respectively. Pearson Correlation and One-way ANOVA tests were used for statistical analysis.
Results: The mean age of the patients was 75.93± 9.5 years (women: 68.5% and men: 31.5%). Ninety-one, 1.3, 5.3, 2.6% was illiterate, under diploma, diploma, and graduate, respectively. According to MNA, 26.3 percent of the participants had a good nutritional status, while 22.4%, had malnutrition, and 51.3 percent were at risk of malnutrition. The mean scores of MMSE and BI in the three centers were 7.8±0.7 and 63.3±36.6, respectively. MNA score was not significantly different among the three centers . MMSE (P=0/03) and BI (P= 0) scores were also significant among the three centers. Among the whole elderlies, a significant correlation was observed between MNA score and BI (r =0.5, p<0.001); however, the correlation between MNA and BI was not significant. MMSE score and BI were also significantly correlated (r=0.3, p=0.004).
Conclusion: MNA-SF can be a good prognostic tool for daily physical activity in the elderly residing in nursing homes. Also the present study indicates the direct association between the cognitive and physical function in the elderly.
Keywords: elderly, malnutrition, cognitive function, Baerthel index

The prevalence of eating disorders and body image dissatisfaction among elite and non-elite female athletes

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Background: Researchers reported a significant increase in the incidence of eating disorders among women. Young women and teen athletes,more than any other groups,are concerned about their body image and are at risk of eating disorders. The aim of this study was to compare the prevalence of eating disorders and body image dissatisfaction among elite and non-elite female athletes in sports that have weight classifications.
Method: 100 volunteered young female athletes were divided into two groups. Elite athletes (n=50) (age 20.2±2.16 years,height 166.8±6.5 Cm,weight 59.69±9.1 Kg and body mass index 21.5±2.9 kg/m2) and non-elite athletes (n=50) (age 19.6±3.2 years,height 163.4.7 Cm,weight 56.6±5.6 Kg and body mass index 21.06±1.7kg/m2). The data were collected by the food and body attitude questionnaire. Group mean differences on body attitude and eating disorders were analyzed using Kruskal Wallis and Mann-whitney tests and Spearman Correlation test is conducted to identify the relationship between the variables. SPSS version 16 was used for analyzing statistical data.
Results: This study showed that the prevalence of eating disorders and body image dissatisfaction is higher in elite athletes (P<0.05). Moreover,in non-elite female athletes,dissatisfaction with body image and eating disorders showed a positive correlation (P<0.05). Discussion and conclusion: In sports that have weight classifications,eating disorders may reflect a reasonable effort in order to reach a certain body weight. Exercise training has a dual-role in athletes,health. It can reduce nutritional disorders and body image dissatisfaction or vice versa exacerbate it. Keywords: Nutritional disorder,body image,female athletes
Keywords: eating disorders, body image, female athletes

Probiotics and Non-alcoholic fatty liver disease

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Background: Non-alcoholic fatty liver disease (NAFLD) is a major disease. NAFLD contains a spectrum ranging from simple steatosis to non-alcoholic steatohepatitis,which causes an increasing risk of cirrhosis,type 2 diabetes mellitus,and cardiovascular difficulties. Probiotics have been proposed as a novel treatment for the prevention of chronic liver damage. Probiotics are live microorganisms that if consumed in sufficient amounts,result in healthful benefits to the host. Bifidobacterium and Lactobacillus are mainly used as probiotics because they are able to inhibit an expansion of Gram-negative pathogenic bacteria by

producing lactic acid and other antimicrobial substances. Although the probiotic bacteria normally reside in the gut,the population of probiotic bacteria decreases in pathogenic conditions. Probiotics prevent bacterial translocation and epithelial invasion; also they can inhibit bacterial mucosal adherence and the production of antimicrobial peptides,while decreasing inflammation,and stimulation of host immunity. Then,there is an expectation of probiotic supplementation to reverse the phenotype of gut microbiota, leading to an improved health.

Methods: In this study all the published papers during 2010-2014 were reviewed from PubMed using "probiotics,NAFLD" as keywords.

Results: Both VSL#3 (type of probiotics consist of live freeze-dried lactic acid bacteria) and a synbiotic (combination of pro/prebiotics) given to NAFLD patients for two to three months,improved liver enzyme levels,TNF-α and oxidative stress markers; while there was a significant reduction in liver aminotransferases with probiotic administration in both children and adults. The levels of Escherichia were significantly increased in NASH (Non-Alcoholic Steatohepatitis) in children compared with those in obese control. Escherichia can produce ethanol that promotes gut permeability. Thus,the application of probiotics or prebiotics for normalization of gut microbiota is a promising treatment for NAFLD.

Conclusion: The modification of intestinal microbiota may have a beneficial effect on NAFLD. Complications of liver disease could potentially be reduced by altering the microbiota either quantitatively or qualitatively. Probiotics are safe,inexpensive and there are no known damaging effects with long-term use,and probiotic supplementation in the management of NAFLD/NASH seems to be a practical therapeutic strategy.

Keywords: probiotics, Fatty liver, prebiotics, microbiota, steatohepatitis

Effects of L-Carnitine supplementation on levels of TNF-α, TGF-β cytokines, Malondialdehyde and CRP in Nonalcoholic Steatohepatitis (NASH) patients on weight loss diet

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Background: Non-alcoholic fatty liver disease (NAFLD), accumulation of more than 5 to 10% of liver by extra fat is the most common liver disease in the world. NASH is the severe form of NAFLD with inflammation and liver cell injury. Multiple factors are involved in pathogenesis of NASH. Pro-inflammatory cytokines has an important role in development of progression of fatty liver disease. Several studies revealed increase levels of pro-inflammatory cytokines in NAFLD. Recently, anti-inflammatory and antioxidant property of L-carnitine has been interested in several diseases. There are rare studies on anti-oxidant and anti-inflammatory effect of L-carnitine in NASH disease. Therefore this study is conducted to evaluate effect of L-carnitine consumption on plasma TNF-α, TGF-β , Malondialdehyde (MDA) and Hs-CRP concentration among NASH patients.

Methods: Study subject was divided in the 3 groups of 35 ones: NASH intervention group (NASH patients receiving L-carnitine supplementation), NASH control (NASH patients receiving the placebo) and healthy controls. Intervention group received 2000 mg L –carnitine daily as 8 tablets with meals and NASH control subjects received 8 placebo tablets daily, for 12 weeks in two groups. Blood samples obtained after an overnight fasting, at baseline and week 12. The samples were centrifuged at 3000gr for 15min and then frozen until analyzing. Serum TNF-α, TGF-β and Hs-CRP was determined by using the enzyme-linked immunosorbent assay (ELISA) . MDA was assayed with biochemical method.

Results: L-carnitine consumption plus CR(calorie restriction) in NASH patients decreased TNF-α, TGF-B, MDA and Hs-CRP levels within groups. Changes between groups was significant only for MDA ($p<0.05$) .However the changes between 3 intervention groups were not significant for other variables. TNF-α levels decreased within healthy control group treated by CR ($p<0.05$). Conclussion L-carnitine consumption in NASH patients could inhibit lipid peroxidation. Further studies with long time duration is needed to confirm anti-inflammatory effect of L-carnitine.

Keywords: L-carnitine, NASH, Pro-inflammatory cytokines

Assessment of the effect of turmeric intake on Turmeric on Body Measurement Indices, on blood Indicators and blood pressure in hyperlipidemic patients with diabetes type 2

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Background: Assessment of the Effect of Turmeric on Body Measurement Indices, on blood Indicators and blood pressure in Hyperlipidemic Patients with Diabetes Type 2 Abstract: Background and goal: Diabetes mellitus is the most common metabolic disorder all around the world which accompanies with absolute or relative insulin deficiency, increase in blood glucose, and disorder of carbohydrate, fat and protein metabolism. Rise in blood fat and sugar in diabetic patients leads to the exacerbation of the incidence of DM late-onset complications. Regarding to side effects and sometimes inefficacy of synthetic drugs, researchers have been always interested in using herbal medicine in order to improve fat and sugar condition. The goal of this study is to assess the effect of turmeric intake on Turmeric on Body Measurement Indices, on blood Indicators and blood pressure in hyperlipidemic patients with DM type 2 .

Methods: This study was a double blind randomized clinical trial in which 80 hyperlipidemic patients with DM type 2 were surveyed. Patients were categorized into two groups each containing 40 members. Intervention group received 2100 mg of turmeric powder daily for 8 weeks, while members of control group took placebo during this time. Food intake, Anthropometric indices and systolic and diastolic blood pressure , insulin resistance index and venous blood samples were collected in both groups at the beginning and at the end of the experiment. The amount of average fasting blood sugar, insulin, HbA1C, triglyceride (TG), total cholesterol (TC), LDL-c, HDL-c, apolipoprotein A1,and apolipoprotein B of serum were measured. The statistical analysis was done using paired and independent T tests and chi-square test.

Results: 75 out 0f 80 participants stayed in the study till the end. After 8 weeks of intervention, Among the turmeric receiving group, BMI(p=0/000), Systolic and Diastolic Blood Pressure(p=0/000) , TG concentration(p=0/000) and LDL-c(p=0/009) significant were decreased. At the end of the study significant changes were observed between two groups or between The mean changes two groups. (p <0/05). total cholesterol, HDL-c and apolipoprotein A1 significant difference was observed between the two groups

at the end of the study (p <0/05). In the end of the study no significant changes were observed The other parameters such as average levels of blood glucose, serum insulin, hemoglycosylated hemoglobin,Insulin resistance, and mean body weight. Conclusion: Turmeric powder intake improves lipid profile and lowers weight, Blood Pressure in patients with DM type 2 There was no significant effecton glycemic condition. Keywords: turmeric, diabetes type 2, blood Indicators, in Hyperlipidemic.
Keywords: Turmeric, type 2 diabetes, blood Indicators, hyperlipidemia

Effects of L-Carnitine supplementation on body composition and metabolism in Nonalcoholic Steatohepatitis (NASH) patients on caloric restriction diet

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Background: Nonalcoholic steatohepatitis (NASH) is a known metabolic disorder of the liver. No treatment has been conclusively shown to improve NASH or prevent disease progression. One of L-carnitine functions is to modulate metabolism and weight. The aim of this study was to evaluate the effects of L-carnitine supplementation on body composition (weight, Body Mass Index; BMI, Total Body Water, Total Body Fat and Trunk Fat) and metabolism rate in NASH patients.
Methods: In a duble bline randomized clinical trial, study subject was divided in the 3 groups of 35 ones: NASH intervention group (NASH patients receiving L- carnitine supplementation), NASH control (NASH patients receiving the placebo) and healthy controls. Intervention group received 2000 mg L –carnitine daily as 8 tablets with meals and NASH control subjects received 8 placebo tablets daily, for 12 weeks in two groups.
Results: L-carnitine consumption plus CR (calorie restriction) in NASH patients decreased weight and BMI levels within group and compared to control groups (p<0.05). We found significant decrease of weight and BMI in control groups (p<0.05). Changes between 3 intervention groups were not significant for other resting metabolism rate and other body composition variables. Conclusion: L-carnitine consumption with calorie restriction in NASH patients could decrease body weight. Assessment effect of L-carnitine plus caloric restriction on body fat component and metabolism needs further studies.
Keywords: L-carnitine, weight, metabolism, NASH

Effect of garlic and lemon juice mixture on total cholesterol, triglyceride and some risk factors of cardiovascular disease in people 30-60 years old with hyperlipidemia.

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Background: Cardiovascular diseases are complex and are characterized by multiple factors. Epidemiologic studies have characterized some of these factors such as modified plasma lipids, elevated plasma fibrinogen and … Although pharmacological interventions caused a significant reduction in elevated plasma lipids, lifestyle modification meaning correction of the diet is a key step in the management of cardiovascular disease. one of food that is believed to reduce cardiovascular risk factors is combined garlic and lemon juice. According to current knowledge, several studies have been done on the relationship between garlic and lemon juice separately and lipid profile in patients with cardiovascular disease, so, The present study investigated the effects of garlic and lemon juice mixture on total cholesterol, triglyceride and fibrinogen in patient with hyperlipidemia.
Methods: In this study 120 patients aged 60-30 years of with newly diagnosed hyperlipidemia were recruited, then, they randomly divided into 4 groups. The first group received 20grams of garlic plus 1 tablespoon lemon juice every day, The second group only received 20 grams garlic daily, third group received 1 tablespoon lemon juice daily. The fourth group did not receive garlic and lemon juice during 2-monthes of intervention.
Results: Data analysis was done by SPSS (Version 16). Results showed that the mean of total cholesterol, triglyceride and fibrinogen in mixed group decreased after 2-mounthes (p<0.05, p<0.05, and p
Keywords:

The effects of modified diets containing legumes on fasting blood glucose and lipid profiles in patients with type 2 diabetes

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Background: This study compares the effects of modified diets containing legumes on fasting blood glucose and lipid profiles in patients with type II diabetes.
Methods: In this randomized crossover trial,24 subjects with type 2 diabetes in the age range of 50 to 80 years were selected. The subjects were randomly assigned to two groups receiving diets of TLC (control) or the TLC with legumes (replacing meat with 2 servings of legumes in their TLC diet,three days a week). Period of each diet was 8 weeks with a 4 week wash out period. Fasting blood samples were taken to measure the fasting plasma glucose and blood lipid profiles (LDL-C,triglyceride,HDL-C,total cholesterol).
Results: In the TLC diet with legumes,fasting insulin,total cholesterol and triglycerides,compared with the TLC diet was significantly decreased (P<0.05). After 8 weeks intervention fasting plasma glucose and LDL cholesterol in both diets significantly reduced compared with baseline values (P<0.05). In HDL cholesterol,no significant change was observed. Conclusion: Replacement of 2 servings of legumes instead of meat 3 days a week in the TLC diet resulted in improved total cholesterol and triglycerides.
Keywords: type 2 diabetes, legumes, fasting glucose, lipid profile

Effects of coenzyme Q10 supplementation on inflammatory biomarkers and oxidative stress in patients with nonalcoholic fatty liver disease

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Background: Non alcoholic fatty liver disease (NAFLD) is the most common cause of chronic liver injury. Chronic

exposure to oxidative stress leads to depletion of liver antioxidants and abnormal cytokine production; antioxidant therapy is one of the main therapeutic lines in NAFLD. In the current study we aimed to investigate the effect of coenzyme Q10 (CoQ10) therapy on several adipo-cytokines and insulin resistance in patients with NAFLD.

Methods: In the current randomized double blind placebo controlled trial 44 NAFLD patients were enrolled. After randomization into two groups,22 patients received 100 mg/day CoQ10 capsules and 22 patients received placebo daily for 4 weeks. Blood samples were obtained from the patients at the beginning and end of the study to measure serum concentrations of fasting serum glucose (FSG),insulin resistance (IR),vaspin,chemerin,pentraxin 3 (PTX3) and markers of oxidative stress.

Results: After 4 weeks CoQ10 supplementation,total antioxidant capacity (TAC) concentrations significantly reduced in intervention group ($P < 0.05$) but no significant changes occurred in placebo-treated group. In stepwise multivariate linear regression model,changes in serum FSG was a significant predictor of changes in serum vaspin,chemerin and pentraxin 3 ($P < 0.001$).

Conclusions: In conclusion,the present study showed a potential of CoQ10 therapy in improving biochemical variables in NAFLD. Longer studies with higher CoQ10 dose are required to further evaluate this potential benefit.

Keywords: Non alcoholic fatty liver disease (NAFLD),Coenzyme Q10,oxidative stress,insulin resistance.

Evaluation the oxidative stress and plasma total antioxidant capacity (TAC) levels in women with general and abdominal adiposity

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Background: previous studies have shown that general and abdominal adiposity are closely associated with risk of diabetes and cardiovascular disease events. We sought to evaluate the oxidative stress and plasma total antioxidant capacity (TAC) levels in women with general and abdominal adiposity. methods: In this study,160 women 20-45 years old were randomly selected. General information data were gathered from each sample using questionnaires and face-to-face interviews. Venous blood samples were drawn from subjects and plasma was separated. In this study,Oxidative stress levels were assessed by measuring the concentrations of plasma malondialdehyde (MDA). We also evaluated total antioxidant capacity (TAC) of plasma in subjects.

Results: Mean plasma concentration of MDA was significantly higher in overweight and obese women groups compared to healthy women group ($p<0.01$ and $p<0.001$ respectively). Furthermore,plasma TAC levels were significantly lower in obese women compared to healthy women group ($p<0.01$). No significant difference was observed between overweight and normal weight women in plasma TAC levels. In addition,women with central body fat distribution had higher MDA ($p<0.001$) and lower TAC levels ($p<0.01$) compared to normal body fat distribution ($p<0.01$). We also observed that aforementioned relationships remained significant even after adjusting for several confounders.

High protein (HP) & Balanced diets BD lead to weight loss and increase of serum adiponectin in obese and overweight women at aerobic gyms: a randomized clinical trial

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Background: Obesity is a disorder that can lead to the several chronic and degenerative diseases like diabetes (type II), cardiovascular disease, hyperlipidemia, and cancers. Balance of daily energy intake is essential for weight loss. The optimal ratio of Carbohydrate, Protein and Fat content in a diet is contraventional. There are evidences that energy-restricted regimes with lower contents of carbohydrates and higher proteins are effective for weight reduction. Decrease of adiponectin is associated with metabolic syndrome, obesity, insulin resistance and body fat content. Weight reduction is positively associated with levels of serum adiponectin. This trial aimed to assess effects of high protein (HP) (45% carbohydrate, 25% protein, and 30% fat) and balanced diets (BD) (55% carbohydrate, 15% protein, and 30% fat) on weight loss and plasma adiponectin levels in overweight and obese women who do aerobic activity. The study was 8-week trial that consisted of 56 women with BMI ≥ 25kg/m2, aged 20-46 years that were randomly assigned to intervention (HP and BD groups). We collected demographic data at baseline. Body weight and adiponectin levels were measured at the baseline and after 8 weeks of intervention. Dietary intakes were also collected during the study by using 3 days food record. We used SPSS software (version 18) for data analyzing and Nutritionist IV for dietary intakes analyzing. Body weight with adherence of HP and BD diets decreased significantly, however; these reduction in HP group was more than another group (P

Keywords: diet, adiponectin, body weight

Identification of the relationships between basal metabolic rate (BMR), serum amino transferees and lipid profiles in patients with nonalcoholic fatty liver disease (NAFLD)

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Background: Nonalcoholic fatty liver disease (NAFLD) is a common hepatic disorder which is diagnosed by changes in the lipid profile and liver enzyme. The severity of diseases ranges from simple steatosis to steatohepatitis (NASH), cirrhosis and even hepatocellular carcinoma (HCC). The aim of study is to identify the relationships between basal metabolic rate (BMR), serum amino transferees and lipid profiles in patients with nonalcoholic fatty liver disease (NAFLD).

Methods: In this cross-sectional study was participated 151 individualsincluding 75 NAFLD patients and 76 healthy subjects between 20 and 50 years with BMI: 25-39.9 kg/m2. Lipid profile, hepatic transaminase and BMR was measured after 12 hours fasting in two groups.Statistical analysis was performed with SPSS 16.0. Results: Mean serum concentrations of ALT, AST and triglycerides in NAFLD were significantly higher than healthy group ($P< 0.01$). this study showed a positive relationship between BMR and liver alanine transaminase both case and control groups ($P< 0.01$); While the relationship between BMR and AST was significant only in the control group ($P=0.008$).

Conclusions:the results showed that there are disorders in liver enzymes and lipid profile in patients with nonalcoholic fatty liver and basal metabolic rate can influence hepatic transaminase and some lipid profiles.

Keywords: nonalcoholic fatty liver disease, basal metabolic rate**,** hepatic transaminase, lipid profile

The effects of Resveratrol supplementation on inflammatory biomarkers in patients with Nonalcoholic Fatty Liver Disease

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Background: Although the prevalence of Non Alcoholic Fatty Liver Disease (NAFLD) is increasing rapidly,there is no proven pharmacologic therapy for it. Resveratrol is a polyphenolic compound with antioxidant capacity which has shown beneficial effects on NAFLD characteristics in animal models.To evaluate whether supplementation with Resveratrol can further improve the efficacy of lifestyle modifications on NAFLD management while addressing some of its mechanisms of action.
Methods: In this randomized double blinded controlled clinical trial,fifty NAFLD patients were supplemented with either a 500 mg Resveratrol or a placebo capsule for 12 weeks. Both groups were advised to follow an energy-balanced diet and physical activity recommendations. Serum liver enzymes,lipid profile,inflammatory markers,hepatic steatosis and fibrosis,dietary intake,anthropometric measurements and physical activity were assessed at baseline and the end of the study.
Results: In both groups anthropometric measurements (weight,BMI,waist circumference),ALT,AST,GGT,HDL,steatosis grade improved (P-value< 0.05); Resveratrol supplementation was associated with a significant reduction in liver enzyme ALT,inflammatory cytokines,NF-kB activity,serum Cytokeratin-18,and hepatic steatosis grade as compared to placebo supplementation (P-value< 0.05).
Conclusions: Twelve weeks 500 mg Resveratrol supplementation in addition to lifestyle modification is superior to lifestyle modification alone,for the treatment of NAFLD,at least partially through attenuation of inflammatory markers and hepatocellular apoptosis. More studies with longer duration and different dosage of supplementation are needed to confirm and increase the clinical application of the present results.
Keywords: Nonalcoholic Fatty Liver Disease (NAFLD),Resveratrol,hepatology,Metabolic liver disease,Fibrosis,Steatosis

Effects of high protein and balanced diets on lipid profiles and inflammation biomarkers in obese and overweight women at aerobic clubs: a randomized clinical trial

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Background: Obesity is a growing epidemic disorder in worldwide. It is associated with diseases such as cardiovascular, dyslipidemia, and hypertension. Energy imbalance is the main cause of obesity. One of the major factors in weight loss is managing the total energy intake, but optimal ratio of macronutrients for weight reduction remains unknown. There are evidences that energy-restricted diets with lower levels of carbohydrates and higher levels of proteins are effective for weight loss. C-reactive protein (CRP) and lipid profiles have been proposed as an independent risk factor for heart diseases and have been positively correlated to body fatness and body weight. So, we studied the effects of high protein and balanced diets on lipid profiles, and hs-CRP levels in obese and overweight women.
Methods: Sixty healthy women with BMI ≥ 25kg/m2, aged 20-46 years, enrolled in an 8-week investigation at aerobic clubs. They categorized into two groups (high protein (HP) and Balanced diets (BD)), randomly. Fasting lipid profile and hs-CRP levels evaluated at the beginning and end of the trial. We assess dietary intake by 3-day records during the study and also used SPSS software (version 18) for data analyzing.
Results: Fifty six participants completed the intervention. Concentrations of LDL-C and HDL-C increased significantly in both groups and also circulating TG levels increased in both of intervention and this change in HP group was not significant compared with another group. Whereas, TC concentration decreased not significantly and there were marginally significant falls in hs-CRP levels (P< 0.05) in both diets, however there were no significant changes between groups
Conclusions: Administration of high protein and balanced diets in overweight and obese women with regular aerobic exercise showed improvement in lipid profiles and hs-CRP levels, but there were no significant changes between groups. Trial registration: This trial is registered with randomized controlled trial IRCT201402245062N7
Keywords: Diet, inflammation, lipid profile, CRP

Effects of coenzyme Q10 supplementation on blood pressure in patients with rheumatoid arthritis

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Background: Rheumatoid arthritis is a systemic autoimmune disease that affects not only the joints but also has extra-articular manifestations that can be seen in blood vessels, heart, bones, liver, kidneys, lungs and other organs. Patients with these manifestations have higher mortality. More deaths in these patients are due to cardiovascular diseases. Factors associated with the disease and other cardiovascular risk factors such as dyslipidemia, hypertension and diabetes leads more deaths, 1.5 times the rate of the general population. According to the role of hypertension in the development of complications and increased mortality in these patients, we decided to study the effect of coenzyme Q10 supplementation on blood pressure in patients with rheumatoid arthritis.
Methods: This randomized clinical trial performed in rheumatoid arthritis patients referred to the rheumatology clinic of Imam Khomeini in Urmia. The coenzyme Q10 (n = 25) and placebo group (n = 29) received daily 100 mg of coenzyme Q10 or placebo respectively for two months. Blood pressure was measured at baseline and at the end of study. Data analyzed by SPSS.
Results: The mean age of patients was 50.3±11.5 years. Diastolic blood pressure in the coenzyme Q10 and placebo group was 79.0±6.1 and 82.0±6.3 and systolic blood pressure was 124.0±26.2 and 136.4±22.8, respectively. At the end of the study diastolic and systolic blood pressure was not significant between and within groups.
Conclusion: The findings of this study showed that supplementation with coenzyme Q10 have no effect on blood pressure in patients with rheumatoid arthritis.
Keywords: Coenzyme Q10, rheumatoid arthritis, diastolic and systolic blood pressure.

The relation between water intake, obesity and abdominal obesity

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Background: Although numerous studies have assessed the relation between water intake and obesity, most previous studies were clinical trials that examined the impact of higher intakes of water rather than its habitual intake. In addition previous studies have examined the association with general obesity and limited information on water intake and abdominal obesity are available. The aim of this study was to investigate the relationship between patterns of water consumption and prevalence of general and abdominal obesity in Iranian adults.
Method: In a cross-sectional study on 7847 Iranian adults for general obesity and 5980 subjects for abdominal adiposity, required data on anthropometric measures, sociodemographic information and dietary intakes along with physical activity was accumulated through the use of a pretested self-administered questionnaire. Data about daily water intake and fluid intake with meals was assessed by a self- administered questionnaire. People could report their fluid intake based on 4 glasses. Daily water consumption war reported based on 8 glasses during the day.
Results: After adjustment for potential confounders, subjects who consumed 3-2 glasses of fluids with meals had a 34 percent increased risk for obesity 1.34(1.04,1.59), than those who consumed one cup or less. Subjects who were taking more than eight glasses of water a day had a 78 percent increased risk of obesity, than those who consumed fewer than two glasses of water daily 1.78 (2.94,1.08). Consuming more than four glasses of liquids between meals was associated with increased risk of abdominal obesity 1.99(1.16,3.41),compared with consuming a cup of liquid or less. However, this association disappeared after adjustment for confounders (1.65 (0.81,3.34)).
Conclusion: Consuming more water with meals was associated with an increased risk of obesity and abdominal obesity. Also taking more than eight glasses of water a day, was associated with an increased risk of obesity, compared to less than 2 glasses of water daily.

The relation between water intake, obesity and abdominal obesity

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Conclusion: Consuming more water with meals was associated with an increased risk of obesity and abdominal obesity. Also taking more than eight glasses of water a day, was associated with an increased risk of obesity, compared to less than 2 glasses of water daily.
Keywords:water intake, obesity, abdominal obesity

Protein quality determination of legume based supplementary food formulations

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Background: Although breast milk is adequate to meet the energy and nutrient requirements of an infant up to four to six months of age, thereafter it is insufficient to sustain normal growth and needs to be supplemented with other foods, such as supplementary foods. Inexpensive and available plant protein sources such as legumes can be used in child feeding. Germination of legumes is an applicable and easy method to reduce the antinutritional factors and consequently increase the availability of minerals and digestibility of protein and starch. Objective: The objective of this study was to evaluate the protein quality of formulated supplementary foods by use of bioassay procedures.
Methods: Two weaning foods were formulated with 60% roasted wheat flour, 25% germinated and dehulled green gram flour, 10% skim milk powder and 5% carrot powder (WG); and 60% rice, 25% germinated and dehulled lentil, 10% skim milk powder and 5% carrot powder (RL). The formulated supplementary foods were made to 30% slurry and then roller dried. They were tested previously for nutritional qualities. Sixty weanling rats of albino strain, balanced for sex distribution, 21-23 days of age, were divided with randomized block design to ten groups. They were fed 8% protein reference standard diet for two days. One group of animals received the basal diet (0% protein). Three groups of animals received reference diets containing three levels of skim milk powder (SMP) (3,6 and 9%) and six groups received experimental diets containing three levels of the test materials (3,6 and 9 % of each weaning food). The protein content of formulated diets was analysed by Kjeldahl method. The animals were fed ad libitum for a 14-day experimental period, obtaining weight changes twice weekly and daily food intake. Data were analyzed statistically and relative protein value (RPV), nitrogen growth index (NGI), relative nitrogen growth index (RNGI), net protein ratio (NPR) and relative net protein ratio (RNPR) were estimated.
Results: Relative protein value (RPV) and Relative Nitrogen Growth Index (RNGI) were 0.9, 0.85 and 0.78, 0.95 for wheat and green gram based (WG) and rice and lentil based (RL) supplementary foods respectively. Both supplementary

foods had high Net Protein Ratio (NPR) and Relative Net Protein Ratio (RNPR).
Conclusion: The results confirm that RL supplementary food had higher protein quality but both the formulations can be used safely as weaning or supplementary food.
Keywords: Relative protein value, nitrogen growth index, net protein ratio, legumes, supplementary foods

Molecular mechanisms of vitamin A and the Treg/ Th17 axis in Multiple Sclerosis: a review article

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Multiple sclerosis (MS) is an autoimmune disease is characterized by a degenerative disorder of the central nervous system. Early studies have shown MS as an autoreactive Th1 and Th17 dominated condition. Increased frequency and activity of Th17 cells is accompanied by low frequency and the suppressive function of Treg cells. Unbalanced Th17/ Treg ratio is associated with impaired differentiation from naïve CD4+ T cell precursors. Th17 cell cytokine secretion profile has proinflammatory effects in experimental autoimmune encephalomyelitis (EAE) and MS. In other words, Treg cells and cytokines showed immunoprotective activity and can ameliorate MS disease. Studies supported the importance of Th17/Treg ratio balance and highlighted the pathogenic and protective role of Th17, and Treg cell, respectively. Multiple molecular pathways are suggested for vitamin A function in Th17/Treg balance. Restoration of Th17/Treg balance with vitamin A is of special interest and considered as a promising target for the treatment MS and the control of T-cell mediated autoimmune reactions.
Keywords: Multiple Sclerosis, Vitamin A, Th17, Treg

Calorie Shifting Diet versus Calorie Restriction Diet: A Comparative Clinical Trial Study

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Background: Finding new tolerable methods in weight loss has largely been an issue of interest for specialists. Present study compared a novel method of calorie shifting diet (CSD) with classic calorie restriction (CR) on weight loss in overweight and obese subjects.
Methods: Seventy four subjects (body mass index ≥25; 37) were randomized to 4 weeks control diet,6 weeks CSD or CR diets, and 4 weeks follow up period. CSD consisted of three phases each lasts for 2 weeks,11 days calorie restriction which included four meals every day, and 4 h fasting between meals follow with 3 days self selecting diet. CR subjects receive determined low calorie diet. Anthropometric and metabolic measures were assessed at different time points in the study.
Results: Four weeks after treatment, significant weight, and fat loss started (6.02 and 5.15 kg) and continued for 1 month of follow up (5.24 and 4.3 kg),which was correlated to the restricted energy intake ($P < 0.05$). During three CSD phases, resting metabolic rate tended to remain unchanged. The decrease in plasma glucose, total cholesterol, and triacylglycerol were greater among subjects on the CSD diet ($P < 0.05$). Feeling of hunger decreased and satisfaction increased among those on the CSD diet after 4 weeks ($P < 0.05$).
Conclusion: The CSD diet was associated with a greater improvement in some anthropometric measures, Adherence was better among CSD subjects. Longer and larger studies are required to determine the long term safety and efficacy of CSD diet.
Keywords: Calorie shifting diet, calorie restriction diet, obesity, resting metabolic rate, weight loss

The effect of pretreatment with omega 3 fatty acids on ischemia-reperfusion injury

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Background: Ischemia reperfusion caused when blood supply returns to the tissue after a period of ischemia or lack of oxygen. Ischemia/reperfusion (I/R) injury of the kidney is a common cause of acute renal failure. The effect of pretreatment with omega 3 fatty acids on ischemia-reperfusion injury were evaluated.
Methods: Right nephrectomy was completed on 81 male Wistar rats (255-300g). The rats received omega 3 fatty acids (DHA+EPA 200 mg/kg/day) or distilled-water orally for 14 days before ischemia reperfusion (6,24,48 hour reperfusion) (IR) or sham operation. Serum creatinine (SCr), BUN, creatinine clearance (CCr) and fractional excretion of sodium (FE(N) (a)) were measured. Superoxide dismutase (SOD) and catalase (CAT) activities and renal histological injury were determined.
Results: SCr, BUN and FE (Na) (a) increased 6-48 h of reperfusion ($P < 0.01$). CAT and SOD activities decreased ($P < 0.05$) in the IR group. DHA+EPA decreased SCr and BUN,FE(Na),($P < 0.05$ vs. IR) and increased CAT and SOD activities ($P < 0.05$ vs. IR) for 6-48 h after ischemia. IR induced mild (6 h,$P < 0.05$) and severe (24-48 h,$P < 0.01$) tissue damage. Mild-to-moderate tissue damage was observed in DHA+EPA groups from 6 to 48 h of reperfusion period ($P < 0.05$ vs. IR,24-48 h).
Conclusion: In conclusion, the results suggest that pre-ischemic exposure to DHA+EPA could improve the outcome of early graft function by inhibition of IR-induced oxidative stress and ameliorates renal injury factors
Keywords:omega 3 fatty acids(DHA,EPA), ischemia-reperfusion injury, oxidative stress, acute renal failure

Effect of coenzyme Q10 supplementation on the severity of disease in patients with rheumatoid arthritis

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Background: Rheumatoid arthritis is a chronic inflammatory disease that usually affects joints symmetrically, causing damage to the cartilages and bones, these changes lead to pain and inability. Since rheumatoid arthritis is a chronic disease and has no definite cure, the disease severity in these patients is of particular importance. Medication dose and hospitalization are determined based on the severity of the disease. The aim of this study was to investigate the role of coenzyme Q10 on the severity of disease in these patients.
Methods: This randomized clinical trial was performed on

48 patients with active rheumatoid arthritis referred to the Rheumatology Clinic of Urmia University of Medical Sciences. 24 patients in the intervention group received 100 mg coenzyme Q10 and other patients took placebo for two months. Disease severity was assessed using DAS28; the number of swollen and stiff joints, pain scale (VAS) and ESR were used to determine DAS28. Data were analyzed using SPSS.
Results: Mean age was 50.3±11.8 years. 20 patients in the coenzyme Q10 group and 21 patients in the placebo group were female. Disease severity at baseline was not statistically different between the two groups (coenzyme Q10 and control group 5.12±1.22,4.86±0.92). At the end of the study DAS28 (coenzyme Q10 and control group 2.47±0.80,4.02±1.32) and all components of it, decreased significantly (p=0.000).
Conclusion: The results of this study showed that supplementation with coenzyme Q10 can reduce the severity of disease in patients with active rheumatoid arthritis.
Keywords: Coenzyme Q10, rheumatoid arthritis, severity of disease, DAS28

Evaluate the researches on nutrition and cardiovascular disease during 2006 to 2010 in Iran

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Background: Despite the special attention these years has been done in the development of research in the country, no comprehensive studies on evidence-based of knowledge and priorities for future research to determine the quality of cardiovascular diseases have been published. This study is aim to evaluate the researches on nutrition and cardiovascular disease during 2006 to 2010 in Iran.
Methods: The related articles searched from Iranian Nutrition Sciences Research Bank during 2006-2010 .The articles was investigated for studied population, risk factors, methods of study, intervention . The data were analyzed by using SPSS software.
Results: Among 2495 articles, 170 topics were on the cardiovascular studies that 79 % were published in Persian journals. The studied population of 49.4% of them was on patients and 38% on healthy people and the rest of them were studied on both. Type of research was 37.7% descriptive, 25.7 % of analytical, 8.4 % clinical trial and 28.1% experimental. Among all only one study was longitudinal and the rest were cross sectionals. 43% of the articles were done with the aim of treatment, 42 % on prevention and 15% with rehabilitation purposes .67% of the articles focused on nutritional factors and the rest based on the other factors like smoking, stress, BMI and life style.
Conclusion: Although 36% of deaths in the country was due to cardiovascular diseases but the related study were 6.8 percent. Therefore researches need a comprehensive study along with a planning at national levels in order to have clear evidences and leading to the possible solutions and finally to overcome the problem.
Keywords:cardiovascular, article, journal

Effects of coenzyme Q10 supplementation on overweight and obesity in rheumatoid arthritis patients

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Background: With the increasing prevalence of overweight and obesity is also increasing the number of patients with rheumatoid arthritis. In addition to traditional events such as cardiovascular diseases and metabolic syndrome in the general population, there are also other problems for patients with rheumatoid arthritis as complications of overweight and obesity. Disease severity (DAS) in patients with rheumatoid arthritis is more in overweight and obese than normal-weight patients, and these patients have a lower quality of life. Rheumatoid arthritis patients with overweight and obesity need further anti_TNF medications and improvement in their disease take longer than those with normal weight. The aim of this study was to evaluate the effect of oral supplementation of coenzyme Q10 on BMI in rheumatoid arthritis.
Methods: In this RCT, 54 patients with a mean age of 50.0 ± 11.4 years, were randomly divided into coenzyme Q10 (n = 25) or placebo group. For two months, patients received 100 mg of coenzyme Q10 or placebo every day. Weight and height of patients were measured and BMI was calculated in two steps. Data analyzed by SPSS.
Results: The mean BMI of patients in the placebo and coenzyme Q10 groups at baseline was not different between the two groups (29.77±5.22 and 29.34±5.56 respectively). At the end of the study, contrary to the placebo group the BMI of the patients in the coenzyme Q10 group significantly decreased (28.99±5.44, p=0.01).
Conclusion: Supplementation with coenzyme Q10 can cause weight loss in patients with rheumatoid arthritis.
Keywords: Coenzyme Q10, rheumatoid arthritis, overweight, obesity

Effect of the cumin cyminum L. intake on weight loss, metabolic profiles and biomarkers of oxidative stress in overweight subjects: a randomized double-blind placebo-controlled clinical trial

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Background: We are aware of no study examining the effects of cumin cyminum L. intake on weight loss, insulin metabolism, lipid profiles, biomarkers of oxidative stress and thyroid hormones among overweight subjects. Objective: The current study was performed to determine the effects of cumin cyminum L. intake on weight loss and metabolic profiles among overweight subjects.
Methods: This randomized double-blind placebo-controlled clinical trial was conducted among 78 overweight subjects, aged 18-60 years old. Participants were randomly assigned to three groups receiving: 1) cumin cyminum L. capsule (n=26); 2) orlistat capsule (n=26) and 3) placebo (n=26) three times a day for 8 weeks.
Results: Consumption of the Cuminum cyminum L. capsule compared with orlistat and placebo has resulted in a significant decrease in weight (-1.1±1.2 vs. -0.9±1.5 and 0.2±1.5 kg, respectively, P=0.002) and BMI (-0.4±0.5 vs. -0.4±0.6 and 0.1±0.6 kg/m2, respectively, P=0.003). In addition, taking Cuminum cyminum L., compared with or-

listat and placebo, led to a significant reduction in serum insulin levels (-1.4±4.5 vs. 1.3±3.3 and 0.3±2.2 μIU/mL, respectively, P-interaction=0.02), HOMA-B (-5.4±18.9 vs. 5.8±13.3 and 1.0±11.0,respectively,P-interaction=0.02) and a significant rise in QUICKI (0.01±0.01 vs. -0.005±0.01 and -0.004±0.01,respectively,P-interaction=0.02).
Conclusion: Administration of the Cuminum cyminum L. had no significant effects on FPG, HOMA-IR, lipid profiles, biomarkers of oxidative stress and thyroid hormones compared with orlistat and placebo.
Keywords: cumin cyminum L, weight loss, metabolic profiles, oxidative stress, overweight

The effect of comorbidity on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran
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Background: Protein- energy malnutrition is a complicated, multifactorial and prevalent problem in hemodialysis patients which is directly associated with increased mortality in these patients. This study was performed to determine the effect of comorbidity on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran.
Methods: This cross-sectional study was performed on hemodialysis patients referred to Imam Khomeini hospital (114 patients). In order to evaluate the nutritional status, anthropometric indices (body mass index (BMI), triceps skinfold (TSF) and mid-arm muscle circumference (MAMC) were measured. The patients were divided based on the comorbidity.
Results: Average BMI in the groups with or without comorbidity were 23.2 ± 0.5 and 24.66 ± 1 Kg/m2,average MAMC in the groups with or without comorbidity were 226.3 ± 8.6 and 228.1 ± 3.49 mm, and average TSF in the groups with or without comorbidity were 6.83 ± 0.41 and 9.18 ± 0.85 mm, respectively. Average TSF was significantly different in two groups (P=0.017).
Conclusion: In the present study the average BMI, TSF and MAMC were lower in the group with comorbidity than the group without comorbidity. This difference was significant for TSF. According to other studies, suffering from comorbidity is associated with higher prevalence of malnutrition in hemodialysis patients. Thorough evaluation of nutritional status in these patients, MNT and consult with nutritionist based on comorbidity is advised.
Keywords:hemodialysis, comorbidity, malnutrition indices

Effect of Coenzyme Q10 on Diabetic Neuropathy: A Double Blind Randomized Clinical Trial
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Background: This 12 week randomized placebo controlled clinical trial investigated the effect of Coenzyme Q10 (CoQ10) on diabetic neuropathy, oxidative stress, blood glucose and lipid profile of patients with type 2 diabetes.
Methods: Of the 70 randomized diabetic patients with neuropathic signs, 35 patients received 200mg CoQ10 and 35 received placebo for 12 weeks. Blood sample collection for biochemical analysis and neuropathy tests were done before and after the trial.
Results: There were no significant differences between two groups in terms of mean fasting blood glucose, HbA1c, median secretion of the beta cells and the lipid profile after the trial. The mean of Insulin sensitivity and TAC concentration had significantly increased in the Q10 group compared to the placebo after the trial (P< 0.05). The hs¬CRP decreased significantly in the Q10 group compared to placebo (P=0.001). Neuropathic symptoms and electromyography measurements did not differ between two groups after the trial.
Conclusion: According to the present study, CoQ10, when given at a dose of 200 mg/d for 12 weeks to a group of neuropathic diabetic patients, did not improve the neuropathy signs compared to placebo, although it has some beneficial effects on oxidative stress biomarkers and glycemic control.
Keywords: Diabetic neuropathy, Oxidative stress, blood glucose, lipid profile, Insulin sensitivity

Body contouring devices for obesity treatment
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Background: According to World Health Organization (WHO), overweight and obesity are abnormal accumulation of body fat. Obesity was determined with different parameters such as BMI and waist circumference. Overweight and obesity increase risk of liver, kidney and gallbladder diseases and different cancer such as thyroid, breast, colon, endometrium and prostate. In Iran about half of adults 15 to 65 years are overweight or obese (BMI> 25) (42.9% of men and 56.9 % women). Various methods can be used to treat obesity, including diet therapy, exercise, behavior therapy, pharmacotherapy and surgical methods. Nowadays the non-invasive devices are used for body contouring. Types of Devices Various devices are made with six different techniques: Suction-Massage Device (Endermologie), Suction-Massage and Thermal Devices (Triactive, Smoothshapes),Radiofrequency Energy Devices (Velasmooth, Thermage, Accent, Titefex),High-Frequency Focused Ultrasound Energy Devices(Ultrashape,Liposonix) ,Cryolipolysis Energy Device (Zeltiq), Low-Level Light Laser Therapy Device (Zerona). These devices are non-invasive technologies that reduce weight and body contouring that lead to kill fat cells and fat excretion through the lymph, improving cellulite and forming the body. Treatment period includes several weeks to several months and is most effective when combined with a proper diet and appropriate physical activity. Few side effects have been reported regarding the use of them. Most of them (except Titefex and Ultrashape) are FDA approved.
Methods: We systematically searched electronic databases including PubMed, ISI, Science Direct, EMBASE, Web of Science and SCOPUS from 1987 to 2013.
Conclusion: These devices are not effective alone and should be associated with physical activity and diet. Body contouring devices use for local fats and BMI
Keywords: Noninvasive Body Contouring, cellulite, Fat Reduction

Body contouring devices for obesity treatment
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Background: According to World Health Organization (WHO),overweight and obesity are abnormal accumulation of body fat. Obesity was determined with different parameters such as BMI and waist circumference. Over-

weight and obesity increase risk of liver,kidney and gallbladder diseases and different cancer such as thyroid, breast,colon,endometrium and prostate. In Iran about half of adults 15 to 65 years are overweight or obese (BMI> 25) (42.9% of men and 56.9 % women). Various methods can be used to treat obesity,including diet therapy,exercise,behavior therapy,pharmacotherapy and surgical methods . Nowadays the non-invasive devices are used for body contouring. Types of Devices Various devices are made with six different techniques: Suction-Massage Device(Endermologie),Suction-Massage and Thermal Devices (Triactive,Smoothshapes),Radiofrequency Energy Devices (Velasmooth,Thermage,Accent,Titefex),High-Frequency Focused Ultrasound Energy Devices(Ultrashape, Liposonix),Cryolipolysis Energy Device (Zeltiq),Low-Level Light Laser Therapy Device (Zerona). These devices are noninvasive technologies that reduce weight and body contouring that lead to kill fat cells and fat excretion through the lymph,improving cellulite and forming the body. Treatment period includes several weeks to several months and is most effective when combined with a proper diet and appropriate physical activity. Few side effects have been reported regarding the use of them. Most of them (except Titefex and Ultrashape) are FDA approved.

Materials and Methods: We systematically searched electronic databases including PubMed,ISI,Science Direct,EMBASE,Web of Science and SCOPUS from 1987 to 2013**.**

Conclusion: These devices are not effective alone and should be associated with physical activity and diet. Body contouring devices use for local fats and BMI

Keywords: Noninvasive Body Contouring,cellulite,Fat Reduction

Effectiveness of theory-driven educational program to improve iron intake for pregnant women

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Background: Iron deficiency anemia is one of the most common nutritional problems during pregnancy. Recently, theory-driven education has been highlighted as a cost-effective strategy to reduce both its prevalence and complications. The aim of this study was to evaluate Effect of education on iron intake of pregnant women.

Method: in this quasi –experimental study,80pregnant women referring d to urban health centers in Shoushtar in 2014 were recruited and randomized in to control and experimental groups. A questionnaire containing data on demographic variables and 3-day recall form were applied to gather data. Data analysis was done using chi-square, t-test and Wilcoxon test in SPSS 16 and N4.

Result: the mean age of women was 26.7±5.6 and mean gestational age was 16.6±1. Although before intervention no differences in terms of demographic characteristics and iron intake status could be found (p>0.05) between two groups, after the intervention, however mean intake of iron, vitamin c and folic acid in experimental group were significantly higher than those obtained by control group (P.…

The Effect of Chlorella Vulgaris supplementation on anthropometric measurements and tumor necrosis factor -α on Non-alcoholic fatty liver disease (NAFLD) patients

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Background: Nonalcoholic fatty liver disease (NAFLD) is a complex disorder that is characterized by fat accumulation in exceeding 5-10% hepatocyte. Inflammation is considered as major contributor in the pathogenesis of NAFLD. Lifestyle modifications are initial step in treatment of NAFLD. Beside Lifestyle modification certain functional foods such as microalgae and bioactive food components have received considerable scientific attention due to their benefits on obesity and inflammation. The aim of this study was to investigate the the Effect of Chlorella Vulgaris supplementation on anthropometric measurements and tumor necrosis factor -α on Non-alcoholic fatty liver disease (NAFLD) patients. Methods: This double-blind randomized placebo-controlled clinical trial was conducted on 70 NAFLD patients confirmed by ultrasonograohy. The subjects were randomly allocated into two groups: 1) "intervention" (n=30) received 400 mg/day vitamin E plus four 300 mg tablets of C.vulgaris before breakfast (1 tablet),lunch (2 tablets) and dinner (1 tablet) and,2) "placebo" (n=30) received 400 mg/day vitamin E and four placebo tablets per day for 8 weeks. Anthropometric measurments (weight,height,waist and hip circumferences) and biochemical parameters including Alanine aminotransferase (ALT),Aspartate aminotransferase (AST),Alkaline phosphatase (ALP) and Tumor necrosis factor-α (TNF-α) as well as liver ultrasonography were assessed at baseline and after 8 weeks.

Results: After the intervention weight,waist and hip circumferences showed significant decreases in both groups compared to baseline (P<0.05) and waist to hip ratio decreased only in intervention groups (P<0.05). The mean change in weight was statistically significant between the groups (p=0.01). No significant changes was observed in TNF-α level in both group,while intra- groups changes in TNF-α level was significantly significant (p=0.024). ALT and ALP decreased significantly in both group and AST decreased in intervention group (P<0.001). Among the liver enzymes only ALP reached statistically significant level between two groups (p=0.04). Improvement in liver echogenicity in the intervention and the placebo group were 58% and 42% respectively.

Conclusion: Finding of this study suggest that C.vulgaris is decreased anthropometric measurements,TNF-α level and could be considered as an effective supplement in liver function

The correlation between dietary interventions with Chronic Fatigue Syndrome

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Background: Chronic Fatigue Syndrome is a common disease that is increasingly growing incidence in recent decades and for which there is no effective treatment. The aim of this study is to review the benefits of dietary interventions in reducing the symptoms of this syndrome.

Methods: In order to search articles,the words Chronic Fatigue Syndrome,Fibromyalgia,Diet and Food in data bases include PubMed,Science direct,Scopus between the years 2009 and 2014 were used. The articles that were directly related to the topic of this review were selected.

Results: Dietary interventions are often safer and less expensive in compared with standard drug therapy. Moreover,these interventions can also be controlled

by patients themselves. The prevalence of food allergies and food intolerances in patients who suffer from Chronic Fatigue Syndrome are higher than the general population,therefore,most of the restrictions are applied on dairy products and cereals. Since there is not a homogeneous pattern of food avidness hence dietary restrictions should be based on food allergies and food intolerances. Significant reduction in pain and stiffness scores was to shown by using the phytonutrient rich Medical Food compared with the control groups having a vegetarian diet is effective for improving the symptoms of this syndrome. Some data suggested that nutritional deficiencies are involved in causing the disease Such as inadequate intakes of magnesium,selenium,zinc,iodine,iron,melatonin,vitamins and branched chains amino acids. Consequently,nutritional supplementation is necessary,although another study using a broad-spectrum nutritional supplement for the treatment of symptoms associated with the disease did not support the benefits of supplementation.

Conclusion: further research are needed in order to find potential benefits for patients who suffer from Chronic Fatigue Syndrome. Due to the dominant situation of oxidative stress and lower antioxidant capacity in these patients having low levels of certain nutrients such as magnesium and selenium,it seems a series of interventions which will get dietary antioxidants increases are effective in reducing the symptoms of this syndrome**.**

Keywords: Chronic Fatigue Syndrome,Food,Nutrition

Relationship among sera lipoprotein abnormalities in healthy individuals with background of diabetic sibling

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Background: As the prevalence of lipoprotein abnormalities in adolescents is increasing dramatically,the identification of relevant risk factors is a major public health challenge. The aim of this study was to investigate whether a family history of diabetes could be a risk factor for lipid abnormalities in healthy individuals**.**

Methods: This study is a cross-sectional case control study. 179 men and women were studied in two equal-member groupsThe serum concentration of oxidized-low density lipoprotein (LDL),Apo B100 and insulin were measured by enzyme linked immunosorbant assay technique and TG,Chol,HDL-C,FBS and GTT by enzymatic methods. The LDL-C level was calculated using the Friedewald formula**.**

Results: The results show that there were no significant variation in the amount of plasma FBS,GTT,Cho,TG,LDL and HDL between the two groups,whereas a significant increase was found in the amount of insulin (P = 0.02),Apo B100 (P = 0.001),OX-LDL (P = 0.001) and HOMA-IR (P = 0.03) in the case group as compared to the control group.

Conclusion: We conclude that a family history of diabetic parents can lead to lipid parameters abnormalities and CVD risk factor via aggregation of inherited defected genes.

Keywords: lipoprotein,Diabetes,Adolescents

Relationship between Eating Attitudes and age in primary school children in zahedan at 2012

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Background: Eating attitudes relate to ones thoughts, feeling, beliefs and concerns about food and eating. Young children are very susceptible by surrounded factors. These directly affect to attitudes and concepts of themselves. Body image dissatisfy and disordered eating attitude have been found in children. This study aimed to evaluate the associations between Eating Attitudes and age in primary school children**.**

Methods: We did a cross-sectional study of 490 randomly selected 7-11year-old school children in Zahedan. Age was determined through interviews with children and children Eating Attitudes assessed by the childrens version of the Eating Attitudes Test (ChEAT).

Results: The children with a mean 9.6 age had negative attitudes and positive attitude was seen in the children with a mean 9.25 years. significant difference between them was observed (P=.005).

Conclusion: The positive eating attitudes was seen in lower age**.**

Keywords Eating Attitudes, gender, primary school children

Nutritional Challenges in cancer patients and their families: a qualitative study

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Background: Cancer is a term used for group of diseases that abnormal cells divide without control and are able to invade other tissues. Cancer curative therapies have lots of side effects for patients like weight loss, appetite loss, pain, diarrhea, constipation, vomiting, nausea, anemia, changes in throat, alopecia, infections, fatigue and neuropathy. Nutrition and patient's diet in this period have an important role in side effect management. In according to lack of knowledge about cancer and its curative plane before it gets start and nutrition confusion in patients and their family in this period, this qualitative study planned to explore perceived nutritional needs and knowledge in patients with cancer and their families to help dietitians in preparing educational booklets and design nutritional workshops to improve their nutritional knowledge and the ways of side effects control.

Methods: This is a qualitative research conducted through thematic analysis approach. This study was organized in EntekhabPalliativeCareCenter in 2014. Purposive sampling was conducted. 12 patients with one caregiver (24 participants) involved in this study.

Results: Data analysis showed that nutrition problems faced by patients fell into 2 main categories. These categories included Nutritional Confusions and Financial Problems in Food Supplies. Nutrition Confusion as a main category includes 3 subcategories: What Should I Eat 1) Before treatments, 2) During treatments, 3) After treatments.

Conclusion: The results showed that Nutritional Confusion was the most important challenge of the patients and their families. Patients mentioned that it is related to low level of knowledge and controversial information they receive from different sources like people, internet, books. If necessary knowledge about treatment side effects and the ways of manage them with nutritional tips, their nutritional challenges can be notably reduced. Financial Problems in Food Supplies was another main category in this study was related to expensive cancer treatments and nutritional and money management comments in this field can decrease

worries in treatment period. These results can be helpful for dietitians without any work experience with cancer patients.

Keywords: Nutrition, knowledge, Cancer, Treatments, Qualitative

General and abdominal obesity in adolescents Shiraz and its relation to food intake

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Background: Obesity is one of nutrition-related diseases which predisposes one to more serious chronic diseases. Accumulation of fat in abdominal area,which is known as abdominal obesity,is additionally associated with increased risk of some diseases,including hypertension and cardiovascular diseases. In this study,we investigated the prevalence of general and abdominal obesity and explored possible associations between dietary intakes with obesity and hypertension in a sample of Shiraz adolescents.

Methods: Participants were 673 adolescents (341 male and 332) aged 12-19 years which were selected from 20 middle schools and high schools by multistage stratified cluster random sampling. Height,weight,waist circumference,and blood pressure were measured. Dietary intakes were assessed with a 130-item food frequency questionnaire. Z-scores of body mass index (BMIZ) were calculated with Epi-Info software. BMIZ > 1 was considered as obesity. Abdominal obesity and hypertension were defined by comparing waist circumference and blood pressure with corresponding standards for adolescents. Data were analyzed with SPSS version 16.

Results: Prevalence of general and abdominal obesity was 52.8% and 12.2%,respectively,and there was not a difference between males and females. With increasing age,the prevalence of general obesity decreased (p=0.004) but abdominal obesity did not change significantly. High systolic and diastolic blood pressure was prevalent in 24.2% and 32% of students respectively.

Conclusion: The rate of high systolic and diastolic blood pressure was significantly higher in males than females. Hypertension strongly correlated with both types of obesity

The effect of supplementation with red grape seed extract on antioxidant status, lipid peroxidation and lipid profile in type 2 diabetic patients

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Background: Diabetes mellitus is agent of oxidative stress. Again oxidative stress intensify diabetic disorders. We aimed to find out: Whether grape seed extract (GSE) supplementation have affects on antioxidant status,lipid peroxidation,serum lipid profile,Fast Blood Sugar and Glycosilated Hemoglobin in patients with type 2 diabetes?

Methods: During a randomized,triple blind clinical trial,48 adult subjects with type 2 diabetes were supplemented with 200 mg/day of GSE or placebo for 8 weeks. Fasting blood samples were obtained at the beginning and the end of study to determine lipid profiles [Triglyceride (TG),Total Cholesterol (TC),Low-Density Lipoprotein Cholesterol (LDLC),High-Density Lipoprotein Cholesterol (HDL-C)],Fast Blood Sugar (FBS),Glycosilated Hemoglobin (HbA1C),Total Antioxidant Capacity (TAC),Superoxide Dismutase (SOD),Glutathione Peroxidase (GPX) and Malondialdehyde (MDA). Weight,Body Mass Index (BMI),dietary data with 24-h dietary recall for three days at the beginning and end of the study were recorded. Dietary data were analyzed with Nutrition 4 software. Results were expressed as means ± SD. Statistical analysis was conducted on SPSS.17 software Independent t test to compare results between two groups in different times and with paired t test to compare differences within groups.

Results: At the end,any significant changes seen in TG,TC,LDL-C,FBS and HBA1C and between two groups no significant differenses (befor and after) shown. The levels of TAC and HDL-C decreased significantly respectively from 0.72±0.17 to 0.69±0.7 mM Fe(□□)/l

Keywords: Grape seed extract, diabetes, Lipid, total antioxidant capacity, lipid peroxidation.

Relationship between central obesity and type 2 diabetes in veterans with amputations

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Background: Veterans due to inactive life styles and different drugs consumption have more risks of obesity and related diseases. Few national data exist about the obesity and the resulting health burden among veterans. The aim of this study was to assess the association between body mass index and waist circumference with diabetes type 2 in Iranian veterans .

Methods: In a case-control study, 22 diabetic male disabled veterans as the case group and 21 non diabetic ones as the control group, referred to multi disciplinary weight disorders clinic of SasanHospital were studied. Weight, height and waist circumference, were measured by standard methods and body mass index was calculated and then compared in the two groups. Demographic data were collected by a questionnaire. Type 2 diabetes mellitus was diagnosed by the presence of fasting glucose ≥126 mg/dL or 2hpp≥200 or by the use of antidiabetic drugs.

Results: 14% of total samples were overweight (25≤BMI<30) and 81.4% were obese (BMI≥30). The mean of weight, waist circumference and BMI was significantly higher in case group (p<0.05). Regarding risk assessment for type 2 diabetes only BMI showed significant effect by logistic regression. Conclusion: This study shows a high prevalence of overweight and obesity and a positive rela-

tionship between general and central obesity with type 2 diabetes in disabled veterans.
Keywords: Obesity,Body mass index, Wais circumference, Diabetes, Veterans

Monitoring the levels of urinary iodine in school children aged 8-10 years in EastAzerbaijanProvince in 2013

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Background: Iodine deficiency disorders were known as a major health and nutritional problems in Iran.Although, iodine deficiency in Iran has been controlled since 1995 and WHO has been declared Iran as acountry without iodine deficiencysince 1379, iodine deficiency can never be eradicated andthe risk of potential return remains high. Therefore, iodine periodic monitoring is necessary in control and prevention programs.Considering this and taking into account that the principle way to ensure adequate iodine in iodized salt is determination of urinary iodine excretion, in this study, the levels of urinary iodine in school children aged 8-10 years in East Azerbaijan Province in 2013 was investigated.
Methods:In this cross sectional study, 305 urine samples were collected from students aged 8-10 years in the province. Clustered sampling was used to select students and 10 cc of urine were collected from each student.Urinary iodine were assessed using oxidation method with ammonium sulfate and quantitatively measured by spectrophotometry. The results were analyzed using SPSS software.
Results:The mean and median of urinary iodine were 19± 9.6 and 18.6 µg/dl, respectively. Urinary iodine was not less than 2 µg/dl in any samples.Urinary iodine less than 5and 5-10 µg/dl were found in 1.32% and 10.82% of samples respectively. In 80% of samples, the iodine concentration was 10-29 µg/dl.
Conclusion: The results of this study showed that the iodine deficiency disorders control programs through salt iodization has been very effective. Considering the median urinary iodine in the students, this province can be considered as free of iodine deficiency disorders.
Keywords: Urinary iodine, students, East Azerbaijan

Investigation carbonated drinks consumed in urban and rural households in EastAzerbaijanProvince

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Background:According to statistics,Iran has the highest consumption of carbonated drinks.Consumption of soft drinks causes obesity and diseases related to obesity,tooth decay and heart disease,calcium loss,arthritis and osteoporosis. This study was designed to investigate the consumption of carbonated beverages in rural and urban regions of the east Azerbaijan province.
Methods:In this survey the population was the households in urban and rural areas of east Azerbaijan province. Cluster sampling with equal sizes was used and a total of 57 clusters with 8 subjects were studied in urban (38 cluster) and rural (19 cluster) areas. The data in this study collected using a structured questionnaire and interviews were done in the household.Statistical analysis was performed using SPSS version 13.0.
Results:In households,7.9 percent (8.7% in urban samples and 11.3% in rural samples) consumed carbonated drinks on a daily basis. The sample used carbonated drinks Weekly was 19.8% (20.3% in urban and 18.9% in rural) and the sample used carbonated drinks rarely was 46 percent (46.7 in urban and 44.7 in rural areas). 24.6% of the population (24.3% in urban samples and 25.2% in rural samples) did not consume soft drinks.
Conclusion: The results of this study showed that consumption of carbonated drinks is high in households and educational programs are necessary to replace soft drinks with water or yogurt drinks.
Keywords: carbonated drinks,households,East Azerbaijan

Development and implementation of management training package for shopping (buying, storing, cooking and eating) in Qazvin

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Background: Nutrition is one of the fundamental aspects of social welfare,health and life. Nutrition management means observance of scientific principles in planning diets of family members. It includes purchasing,preservation,cooking and consuming food in a way to meet people's nutritional demands and to prevent them from being afflicted with the diseases caused due to malnutrition. People have to consume the four major food groups that can satisfy man's nutritional needs. However,40% of the daily energy a man takes comes from the consumption of sugar and oil that are not categorized under the four main groups. Nutrition Education is one of the ways that can correct people's diet and decreases the diet related diseases. The major points that can help managing family diet address the four stages of purchasing,preservation,cooking and consumption.
Methods: To understand the status quo of family diet management in this province,four methods were applied. Two FGD sessions were held in Ghazvin and in Alborz city,attended by a nonhomogeneous population and a brainstorming session was also held which was attended by the nutrition specialists of the cities. Findings of the researches conducted in and out of the province,on family nutrition were studied. A questionnaire was designed and completed by 30 families selected on a random basis in three cities of Takestan,Alborz & Ghazvin and the results were extracted.
Results: The most important findings about family diet management were specified in short in a table and were published in a book containing 22 pages of colored pictures. Moreover,a 32-minute film was prepared on family diet management.
Conclusion: The previous studies and the present one revealed that the nutritional pattern of people in this province is improper. People do not know about the four major food groups and hence they face deficiency of micronutrients. The previous studies proved deficiency of micronutrients such as iron,zinc,calcium,vitamins B1,B2,and D. 20% of the population may be unable to purchase food however a large population has no problem in procuring food items though their main problem is that they do not have the knowledge nutrition. In some cases even when they have the knowledge they are not inclined to use it and it seems that nutritional concepts should be instructed to people in simple words.
Keywords: Nutrition,Management,Family,Educational Package

Assessment of household food insecurity in Germi city in 1393

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Background: insecurity is the lack of access of all people at all times to enough food for a healthy lifestyle is defined,a chain that has experience anxiety about food at household level begins to emerge starvation progresses. This study was conducted to measure household food insecurity in Germi city.
Materials and Methods: In this cross-sectional study of 100 households are randomly selected from patients referred to the provincial hospital hot. Data collection tools included urban and rural general,the number of household members,number of people in the household,gender of household head,education of household head,occupation of head of household,and household food insecurity scale questionnaire of nine questions (HFIAS) Household Food Insecurity Access Scale was . After determining the rating of food insecurity,households in the four safe,unsafe mild to severe food insecurity were classified insecure medium.
Results: 23% of households were food secure. Food insecurity mild,moderate and severe,respectively,22%,33% and 22% of households respectively.
Conclusion: Food insecurity in households Germi city is very common and more families are living in a state of moderate food insecurity
Keywords: food insecurity,food security,household

The study of the effects of a needs- evaluating – based instructional program ; on performance of the old people of Borujen county in maintaining the healthy life pattern in year 2013

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Background: Old age is a natural process which several factors may influence its quality and only via a healthy method of life one can pass this phase of life healthily and with enjoy and satisfaction.Today,according to world health organization reports,the population of old people in the world is growing more and more thanks to the health factors. Also in Iran it is being predicted that the 4000000 population of old people will grow to ten million in next 20 years. Therefore preparing,maintaining and promoting the old people health is one of the problems of health organizations in most countries specially in developping countries and confronting it needs accurate and proper programs and policies therefore optimal and good management in planning the needs- evaluating – based instructional programs,seems essential .
Materials & Methods: The present study was fulfilled to investigate the effects of needs- based instructional programs in improving the method of life. Data analysis was done via SPSS software. The research findings indicated that the most common diseased among the under –study old people were high blood pressure, cardiovascular diseases, asthma and skeletal(bone) diseases.
Conclusion: The results showed that the male old people performance in the fields of sports activities and movabilities had been significantly improved compared to female gender. On the other hand taking measures in order to the lost weight showed a greater increase in the old women comparing with the old men. We can discuss that administrating the educational program on the old people needs,significantly improves the old people healthy life method.
Keywords: health education,needs evaluation,elderly,healthy life method

Vitamin A supplementation and Interleukin 1α in obesity

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Background: Obesity is considered as a chronic low grade inflammatory disorder. Inflammation in obesity is strongly associated with the development of insulin resistance. It has been shown that vitamin A and its retinoid derivates reduces inflammatory biomarkers synthesis. In this interventional study we investigate the effect of vitamin A supplementation on the serum Interleukin 1 (IL-1 β) in obese individuals.
Materials & Methods: This study has been conducted on 50 women aged 20-52 years who were obese (Body mass index (BMI): 30-39.9 kg/m2). They were divided into two groups: vitamin A group (group A) included obese subjects received 25000 IU retinyl palmitate (n=27) and placebo group (group P) included obese subjects received placebo (n=23) daily for 4 months. Weight,height,Waist circumference and hip circumference were measured and BMI and WHR were calculated. Serum concentration of IL-1 β was measured by Enzyme-linked Immunosorbent assay.
Results: Mean weight,BMI,waist circumference,hip circumference and waist to hip ratio in obese groups was significantly higher than non- obese group before and after intervention. Baseline concentrations of serum IL-1β was not significantly different between groups (Group A: 3.58 ± 0.36; Group B: 3.16 ± 0.25). There was a significant decrease in serum IL-1 β concentrations in vitamin A treated group but not in placebo group (IL-1β concentrations after intervention: Group A: 2.45 ± 0.25; Group B: 2.80 ± 0.24 P value 0.001 and 0.19 respectively).
Conclusions: In the present study,vitamin A supplementation reduced the serum IL-1 β in obese and individuals. This confirms the anti-inflammatory effects of vitamin A in obese individuals.

Determination of the Anthropometric Index and Food Pattern in the Fasting men in Khvormuj

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Background: The Fasting is a religious duty and ideological belief that is obligatory for all healthy and mature Muslims. In Ramadan month,the type and amount of received energy can be changed in most of Muslims. The foods recommendations are focused on the moderate consumption and moderation with diversity as the consumption of basic food groups are significant to be healthy. In this month, the received foods are usually less than the typical days. With regard to this fact, the present study was conducted to determine the Anthropometric Index and Food Pattern in the Fasting men in Khvormuj.
Materials & Methods: The sample was 70 fasting men referred to the mosques of Khvormuj city to pray God. They

were selected by the simple sampling. Their health status was evaluated by one questionnaire and also they were asked about their decisions to fast in the whole of Ramadan. In order to determine their diet status, the 24 hours Dietary recall questionnaire for three days before the Ramadan month and the last three days after Ramadan was applied. Also, the Anthropometric status (weight,Height,Waist size) was measured before and last week of the Ramadan month. In order to analyze the diet,NUT4 software and for statistical analysis,SPSS 16 software and Paired T- test were applied.

Results: According to the diet comparison of fasting men in Khvormuj before and after Ramadan,it was indicated that the consumption of fruit was raised and the consumption of bread,grain and oil was decreased. The total of used calories was decreased. Also,about the Macronutrients, the percentage of received carbohydrates from the total of energy increased and the percentage of protein and fat from the total of energy decreased. The intake rate in most of vitamins in B group was lowered. By evaluating the Anthropometric status, there was a significant decrease in weight,waist size and BMI.

Conclusion: The Islamic fasting is considered as a useful method to improve the diet habits and weight loss. The required trainings to the fasting people about the food groups and how to use them in these days can be helpful to prevent them from overeating, eating with anxiety and anorexia by a regular program. AS a result of this, the food groups are consumed according to the individual's need to see the least alternations in the fasting people in this month.

Effects of the daily consumption of synbiotic bread on insulin metabolism and serum hs-CRP among diabetic patients: a double-blind randomized controlled clinical trial

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Background: To our knowledge,no reports are available indicating the effects of synbiotic bread consumption on insulin metabolism and serum high sensitivity C-reactive protein (hs-CRP) among patients with type 2 diabetes mellitus (T2DM). Objective: This study was conducted to evaluate the effects of the daily consumption of synbiotic bread on insulin metabolism and serum hs-CRP of patients with T2DM.

Materials &Methods: This randomized double-blinded controlled clinical trial was performed among 81 diabetic patients,aged 35-70 years old. After a 2-wk run-in period,subjects were randomly assigned to consume either synbiotic (n=27),probiotic (n=27) or control bread (n=27) for 8 weeks. The synbiotic bread was consisted of Lactobacillus sporogenes (1×108 CFU) and 0.07 g inulin per 1 g. The probiotic bread was consisted of viable and heat-resistant probiotic,Lactobacillus sporogenes (1×108 CFU) per 1 g. Patients were asked to consume the synbiotic,probiotic and control breads three times a day in a 40 g package. Fasting blood samples were taken at baseline and after a 8-wk intervention for quantification of insulin metabolism and serum hs-CRP levels.

Results: Compared with the control and probiotic breads,consumption of the synbiotic bread resulted in a significant reduction in serum insulin levels (-3.2±5.4 vs. 0.6±4.7 and -0.3±3.4 μIU/mL,respectively,P=0.007),HOMA-IR score (-1.5±2.7 vs. 0.4±3.5 and -0.2±1.6,respectively,P=0.032) and HOMA-B (-7.2±16.3 vs. 0.7±8.2 and -0.7±10.8,respectively ,P=0.047). No significant effect of the synbiotic bread consumption on FPG,QUICKI and serum hs-CRP levels was seen compared with the control and probiotic breads.

Conclusion: In conclusion,consumption of the synbiotic bread for 8 weeks among patients with T2DM had beneficial effects on insulin metabolism,but did not affect FPG and serum hs-CRP levels.

Effects of the daily consumption of synbiotic bread on lipid profiles of diabetic patients: a double-blind randomized controlled clinical trial

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Background: To our knowledge,no reports are available indicating the favorable effects of synbiotic bread consumption on blood lipid profiles among patients with type 2 diabetes mellitus (T2DM). Objective: This study was conducted to evaluate the effects of the daily consumption of synbiotic bread on blood lipid profiles of patients with T2DM.

Materials &Methods: This randomized double-blinded controlled clinical trial was performed among 78 diabetic patients,aged 35-70 year old. After a 2-wk run-in period,subjects were randomly assigned to consume either synbiotic (n=26),probiotic (n=26) or control bread (n=26) for 8 weeks. The synbiotic bread was consisted of Lactobacillus sporogenes (1×108 CFU) and 0.07 g inulin (HPX) as prebiotic per 1 g. The probiotic bread was consisted of viable and heat-resistant probiotic,Lactobacillus sporogenes (1×108 CFU) per 1 g. Patients were asked to consume the synbiotic,probiotic and control breads three times a day in a 40 g package. Biochemical measurements including blood lipid profiles were conducted before and after 8 weeks of intervention.

Results: Consumption of the synbiotic bread,compared to the probiotic and control breads,led to a significant decrease in serum triglycerides (-26.7±60.3 vs. -31.6±80.0 and 33.0±85.9 mg/dL,respectively,P=0.005),VLDL-C (-5.3±12.1 vs. -6.3±16.0 and 6.6±17.2 mg/dL,respectively,P=0.005),total-/HDL-C (-0.5±0.8 vs. -0.6±1.1 and 4.1±1.1,respectively,P=0.002) and a significant increase in serum HDL-C levels (2.2±6.8 vs. 2.2±8.0 and -3.1±7.5 mg/dL,respectively,P=0.01). No significant effect of synbiotic bread consumption on FPG,total-,LDL-C and Non-HDL-C levels was seen compared to the probiotic and control breads.

Conclusion: In conclusion,consumption of the synbiotic bread for 8 weeks among patients with T2DM resulted in a significant decrease in serum TAG,VLDL-C,total-/HDL-C and a significant rise in serum HDL-C levels compared with probiotic and control breads,but did not affect FPG,total-,LDL- and Non-HDL-C levels.

Dietary flavonoids intake, serum total antioxidant capacity levels and inflammation status in relation to depression scales in University male students

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Background: Oxidative stress and inflammation have been reported to be higher in subjects with depression, but its relation with dietary flavonoids intake and total antioxidant capacity (TAC) levels remained unclear. The aim of present study was to assess the association between dietary flavonoids intake, TAC and inflammation status with depression scales in young male students.
Methods: This research was a case-control study on sixty male university students (30 students with depressive symptoms and 30 age-matched healthy controls). A validated semi-quantitative food frequency questionnaire (98 items) and 2-day 24-h recalls were used for dietary assessment. Major depressive disorder (MDD) scales were assessed using a Persian version of the Beck Depression Inventory-II (BDI-II). Serum TAC and erythrocyte sedimentation rate (ESR) levels were also measured.
Results: MDD subjects consumed less anthocyanidins ($p<0.001$), flavan-3-ols ($p<0.05$), flavanones ($p<0.01$) and flavones ($p<0.001$) than the controls. A significant positive correlation was observed between dietary TAC scores and total flavonoids intake ($r=0.682$, $p<0.001$). Moreover, depressed group had lower serum TAC levels than controls ($P<0.05$). There were no significant differences in ESR levels between the study groups. In hierarchical multiple regression models, daily servings of nuts and seeds (beta=-0.401, $p<0.01$) and dietary flavones (beta=-0.358, $p<0.05$) were shown as possible risk factors for depression.
Conclusion: The Lower dietary intake of flavonoids and serum antioxidant status in students with depression suggests paying more attention to dietary modifications regarding consumption of flavonoid-rich food items.
Keywords: Antioxidants; Depression; Flavonoids; Inflammation; Oxidative stress.

Household food security in Iran: systematic review of scales, prevalence, influencing factors and outcomes

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Background: Food and nutrition are basic needs of human society. Fulfilling this need lies in concept of food security. There are two main prerequisites for food security in any society: Ensure the availability and accessibility of food in society and ensure the ability of households to obtain food. Household food security means all family members have access to enough food for their minimum amount of necessary requirements. With a systematic review approach, this article wants to investigate the scales, prevalence, contributing factors and consequences of household food security in Iran.
Methods: Proceedings of the Persian writers on household food security without limits of time, place and language publishing was searched thorough informative databases of PubMed, Elsevier , SID, Medlib, Magiran, Iranmedex, Irandoc, Google Scholar using "food security, food insecurity, associated factors, prevalence, causes, women, children and Iran" as search keywords.
Results: Six scales for assessing household food insecurity have been used in Iranian studies. According to various studies, regardless of the scale used, the prevalence of food insecurity was about 20 to 60%; and in female-headed households and low-income communities, 75 and 86% have been reported. Reduce variation in food consumption and intake of essential micronutrients, poor nutritional status of infants, inconsistent effects on body mass index and weight of children, adolescents, women and men were the studied consequences of food insecurity.
Conclusion: Household food security is considered as an indicator of individual and family health which can be measured to help policy makers and other institutions to design, monitor and evaluate programs and interventions. At national and provincial levels, there are good policy and practices in this field .Due to nutritional transition, increased urbanization and demographic changes in Iran, investigating food security status at the individual and family level, influencing social and cultural factors, its consequences, Design, implement and evaluate proper interventions need further consideration by policy makers, government officials and experts in the country.
Keywords: Household food security, prevalence, influencing factors, consequences, Iran.

The relationship between inflammation, oxidative stress, and metabolic risk factors in type 2 diabetic patients

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Background:3-5.2 percent of people worldwide suffer from diabetes which is one of the most serious metabolic disorders resulting in an increase in inflammatory biomarkers (e g: interleukin-6, and Tumor necrosis factor-alpha, C-reactive protein. The aim of this study was to investigate the relationship between inflammation, oxidative stress and fasting blood glucose, lipids and anthropometric parameters in patients with type 2 diabetes.
Methods: This study was conducted as a cross-sectional study in Tehran through 2009-2010 in 45 men and women 65-35 years with type 2 diabetes. Blood glucose, lipid profile, C-reactive protein, and malonedialdehyde were measured. Independent sample T-test and linear regression analysis were used.
Results: Fasting blood glucose, Malonedialdehyde, Total cholesterol and body mass index were higher in women than in men, there was no difference between two sexes in other factors. Malonedialdehyde, neither directly, nor after adjustment for sex was not related to Fasting blood glucose, Total cholesterol, Triglycerides and anthropometric indices (weight, body mass index, and body fat mass).
Conclusions: This study showed that the mean body mass index, total cholesterol, and Malonedialdehyde are higher in diabetic women than in men. Type 2 diabetic patients should pay special attention to the control of inflammatory factors to accelerate treatment process and prevent complications due to inflammations.
Keywords: Type 2 Diabetes Mellitus,Inflammation, Fasting Blood Glucose, Body Mass Index, Cholesterol

The relationship between inflammation, oxidative stress, and metabolic risk factors in type 2 diabetic patients

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Conclusions: This study showed that the mean body mass index, total cholesterol, and Malonedialdehyde are higher in diabetic women than in men. Type 2 diabetic patients should pay special attention to the control of inflammatory factors to accelerate treatment process and prevent complications due to inflammations.
Keywords: Type 2 Diabetes Mellitus,Inflammation, Fasting Blood Glucose, Body Mass Index, Cholesterol

Effects of probiotic supplementation on markers of glycaemia and body composition in prediabetic patients: A Randomized Clinical Trial

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Background: Anti-diabetic and anti-obesity effects of probiotics have been evaluated in several animal and human studies. The present study aimed to evaluate the effects of probiotic supplementation on glycaemia and body composition in prediabetic patients and compare these effects with placebo.
Methods: Sixty prediabetic patients were randomly assigned to take either probiotic or placebo capsules once a day for 8 weeks. Data regarding age, sex, disease history, taking drugs and supplements as well as height was measured at the baseline. Dietary and physical activity data were gathered at the baseline and every four weeks. Patients' weight as well as components of body composition, including, lean body mass (LBM), total body water (TBW) and percent of body fat (PBF) were determined using Body Composition Analyzer, at the baseline and after 8 weeks of trial. Laboratory tests including fasting plasma glucose (FPG) and glycosylated hemoglobin (HbA1c) were assessed at the baseline and after 8 weeks of intervention. Data analysis was conducted using SPSS 16 software.
Results: Probiotic consumption contributed to marginally significant reduction in fasting plasma glucose (FPG) (p=0.08), while, glycosylated hemoglobin (HbA1c) levels did not change significantly. BMI was reduced in both probiotic and placebo groups, significantly and probiotic group had significant higher reduction in BMI in comparison with placebo group.
Conclusion: In conclusion, administration of multispecies of probiotics for 8 weeks in prediabetic patients might have beneficial effects on some markers of body composition (BMI), but not glycaemia.
Keywords: Probiotic, Body composition, Glycaemia, Prediabetes, Randomized clinical trial

Snacking behavior, diet quality, and abdominal obesity among female adolescents in Isfahan-Iran

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Background: High prevalence of obesity in the pediatric age groups draws attention to lifestyle factors including diet and physical activity. Data on obesity in adolescent and their snacking behavior are conflicting. This study aimed to assess the association of snacking behavior, diet quality and abdominal obesity among female adolescents in Isfahan-Iran.
Methods: This cross-sectional study was carried out among 265 female Isfahanian students who were chosen using a systematic cluster random sampling. Dietary intake was assessed using a validated self-administered semi-quantitive food frequency questionnaire included 53 food items. Snacking behavior was defined by healthy snack score.
Results: Individuals who consumed healthy snacks more than 4 times a day had significantly lower weight, BMI and waist circumference compared with those who had lower healthy snack score (p<0.001). Decreased consumption of healthy snacks and less frequent snacks were significantly associated with a greater chance of being overweight, obese and centrally obese among adolescents (OR=2.11; 95% CI= 1.04-4.03, P_{trend}=0.03).
Conclusion: More frequent consumption of healthy snacks is associated with decreased prevalence of obesity, overweight and abdominal obesity in adolescents. Further studies, in particular of prospective nature, are required to examine this association in other populations.
Keywords: Snack, diet quality, healthy snack score, obesity

Pomegranate intake in relation to prostate cancer in Iranian men: a case-control study

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Back ground: Prostate cancer is the most frequent cancer among males in economically developed countries. Among the several risk factors that have been suggested

for prostate cancer, only age, ethnicity, and family history of prostate cancer are well-established and primary prevention of this disease is limited. Prior studies had shown that dietary intake could be modified to reduce cancer risk. Most of the data in this area have been drawn from Western world studies and there isn't enough published data about dietary pattern and cancers in developing countries. We conducted this study to examine the association between pomegranate intake and the risk of prostate cancer in Iran.
Methods: We conducted a hospital-based, case–control study to examine the association between pomegranate intake and the risk of prostate cancer in Iran. Cases were patients aged 40–78 years who were admitted to 'Labbafi-Nejad Hospital' with incident, histologically confirmed cancers of the prostate. Cases were diagnosed not before 6 months of the interview, with no history of cancers of other sites. Controls were patients (43-71years) who were admitted to the emergency service of the same hospital without neoplastic conditions and long-term modification of diet. Cases and controls were frequency matched according to the age (10-year groups). A total of fifty patients with prostate cancer and a hundred controls underwent face-to-face interviews. We assessed participants' dietary intakes during the past year by using a valid and reliable semi-quantitative food frequency questionnaire (FFQ). This FFQ consists of 168 food items with standard serving sizes, and we asked participants to specify their consumption frequency for each food item on a daily, weekly, monthly or yearly basis. We converted these data to daily frequencies and then to the daily grams of food intake, using the manual for household measures**.** Proportional hazards regression methods were used to assess the associations between pomegranate intake and prostate cancer risk. The SPSS version 16 was used for analyzing the data.
Results: We observed a strong significant inverse association between Pomegranate intake and the risk of prostate cancer (high 2nd median vs. low 1st median, OR =0.12, 95% CI = 0.04- 0.39).
Conclusions: The results of the present study suggested that Pomegranate intake might be associated with prostate cancer. We can suggest intake of pomegranate to prevent the incidence of prostate cancer.
Keywords: prostate cancer; diet; Pomegranate; case control study

Cabbage intake in relation to prostate cancer in Iranian men: a case-control study

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Back ground: Prostate cancer is the most frequent cancer among males in economically developed countries. Among the several risk factors that have been suggested for prostate cancer, only age, ethnicity, and family history of prostate cancer are well-established and primary prevention of this disease is limited. Prior studies had shown that dietary intake could be modified to reduce cancer risk. Most of the data in this area have been drawn from Western world studies and there isn't enough published data about dietary pattern and cancers in developing countries. We conducted this study to examine the association between Cabbage intake and the risk of prostate cancer in Iran.
Methods: We conducted a hospital-based, case–control study to examine the association between Cabbage intake and the risk of prostate cancer in Iran. Cases were patients aged 40–78 years who were admitted to 'Labbafi-Nejad Hospital' with incident, histologically confirmed cancers of the prostate. Cases were diagnosed not before 6 months of the interview, with no history of cancers of other sites. Controls were patients (43-71years) who were admitted to the emergency service of the same hospital without neoplastic conditions and long-term modification of diet. Cases and controls were frequency matched according to the age (10-year groups). A total of fifty patients with prostate cancer and a hundred controls underwent face-to-face interviews. We assessed participants' dietary intakes during the past year by using a valid and reliable semi-quantitative food frequency questionnaire (FFQ). This FFQ consists of 168 food items with standard serving sizes, and we asked participants to specify their consumption frequency for each food item on a daily, weekly, monthly or yearly basis. We converted these data to daily frequencies and then to the daily grams of food intake, using the manual for household measures**.** Proportional hazards regression methods were used to assess the associations between Cabbage intake and prostate cancer risk. The SPSS version 16 was used for analyzing the data.
Results: We observed a strong significant inverse association between Cabbage intake and the risk of prostate cancer (high 2nd median vs. low 1st median, OR =0.12, 95% CI = 0.04- 0.39).
Conclusion: The results of the present study suggested that Cabbage intake might be associated with prostate cancer. We can suggest intake of Cabbage to prevent the incidence of prostate cancer.
Keywords: prostate cancer; diet; Cabbage; case control study

Effect of cinnamon on lipid profile, liver enzymes, insulin resistance and hs -CRP inflammatory factor, in patients with nonalcoholic fatty liver disease

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Backgrounds: Non-alcoholic fatty liver disease (NAFLD) is the most prevalent cause of hepatic injury in the world. Modulating the insulin resistance and oxidative stress is one of the most important therapeutic strategies for this disease. This study aimed to investigate the hypothesis that supplementation with cinnamon, exerts an insulin sensitizer effect in patients with NAFLD.
Methods: In a double-blind, placebo-controlled trial with 2 parallel groups, 50 patients with NAFLD, were randomized to receive daily supplementation with either 2 capsules of cinnamon (each capsule contain 750 mg cinnamon) or 2 placebo capsules daily for 12 weeks. Both groups were advised a balanced diet and physical activity during the intervention.

Results: A significant decrease in HOMA (Homeostatic Model Assessment) index, FBS (fasting blood glucose), total cholesterol, triglyceride, ALT (alanine aminotransferase), AST (aspartate aminotransferase), GGT (gamma glutamine transpeptidase), and hs-CRP parameters were seen in treatment group ($p<0.05$), whereas there was no significant change in serum HDL level ($p = 0.103$). In both groups LDL decreased significantly ($p<0.05$).
Conclusion:the study suggests that taking 1500mg cinnamon daily may be effective in improving NAFLD characteristics.
Keywords: NAFLD, cinnamon, insulin resistance, liver enzymes, lipid profile, human.

Dietary patterns in relation to prostate cancer in Iranian men: a case-control study

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Back ground: Prostate cancer is the most frequent cancer among males in economically developed countries. Among the several risk factors that have been suggested for prostate cancer, only age, ethnicity, and family history of prostate cancer are well-established and primary prevention of this disease is limited. Prior studies had shown that dietary intake could be modified to reduce cancer risk. Most of the data in this area have been drawn from Western world studies and there isn't enough published data in developing countries. This study aimed to examine the association between dietary patterns and risk of prostate cancer in Iran.
Methods: We conducted a hospital-based, case–control study. Cases were patients aged 40–78 years who were admitted to 'Labbafi-Nejad Hospital' with incident, histologically confirmed cancers of the prostate. Cases were diagnosed not before 6 months of the interview, with no history of cancers of other sites. Controls were patients (43-71years) who were admitted to the emergency service of the same hospital without neoplastic conditions and long-term modification of diet. Cases and controls were frequency matched according to the age (10-year groups). A total of fifty patients with prostate cancer and a hundred controls underwent face-to-face interviews. We assessed participants' dietary intakes during the past year, using a valid and reliable semi-quantitative food frequency questionnaire (FFQ). This FFQ consists of 168 food items with standard serving sizes.Factor analysis was used to detect dietary patterns. Multivariate logistic regression was used to estimate odds ratio (OR) and 95% confidence interval (CI).The SPSS version 16 was used for analyzing the data.
Results: We defined two major dietary patterns in this population: 'western diet'(high insweets and desserts, organ meat, snacks, tea and coffee, French fries, salt, carbonated drinks, red or processed meat) and 'healthy diet' (high in legumes, fish, dairy products, fruits and fruit juice, vegetables, boiled potatoes ,whole cereal and egg). Both healthy andwestern pattern scores were divided into two categories (based on medians).Higher healthy pattern scores were significantly related to decreased risk ofProstate cancer (high 2nd median vs. low 1st median, OR =0.05, 95% CI=0.01- 0.27). An increased risk of prostate cancer was observed with the western pattern (high 2nd median vs. low 1st median, OR = 12.68, 95% CI= 2.72- 59.01).
Conclusion: The results of this study suggested that diet might be associated with prostate cancer.
Keywords: prostate cancer; diet; case control study

Black Tea and Coffee intake in relation to prostate cancer in Iranian men: a case-control study

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Back ground: Prostate cancer is the most frequent cancer among males in economically developed countries. Among the several risk factors that have been suggested for prostate cancer, only age, ethnicity, and family history of prostate cancer are well-established and primary prevention of this disease is limited. Prior studies had shown that dietary intake could be modified to reduce cancer risk. Most of the data in this area have been drawn from Western world studies and there isn't enough published data in developing countries. This study aimed to examine the association between black tea and coffee intake and the risk of prostate cancer in Iran.
Methods: We conducted a hospital-based, case–control study. Cases were patients aged 40–78 years who were admitted to 'Labbafi-Nejad Hospital' with incident, histologically confirmed cancers of the prostate. Cases were diagnosed not before 6 months of the interview, with no history of cancers of other sites. Controls were patients (43-71years) who were admitted to the emergency service of the same hospital without neoplastic conditions and long-term modification of diet. Cases and controls were frequency matched according to the age (10-year groups). A total of fifty patients with prostate cancer and a hundred controls underwent face-to-face interviews. We assessed participants' dietary intakes during the past year by using a valid and reliable semi-quantitative food frequency questionnaire (FFQ). This FFQ consists of 168 food items with standard serving sizes. Proportional hazards regression methods were used to assess the associations between black tea and coffee intake and prostate cancer risk. The SPSS version 16 was used for analyzing the data.
Results: Both black tea and coffee intake scores were divided into two categories (based on medians). Higher black tea intake scores were significantly associated with increased risk of Prostate cancer (high 2nd median vs. low 1st median, OR =2.9, 95% CI = 1.01- 8.79). We observed a non-significant positive association between coffee intake and risk of prostate cancer.
Conclusion: The results of the present study suggested that black tea intake might be associated with prostate cancer.
Keywords: prostate cancer; diet, black tea; coffee; case control study

Apple intake in relation to prostate cancer in Iranian men: a case-control study

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Back ground: Prostate cancer is the most frequent cancer among males in economically developed countries. Among the several risk factors that have been suggested for prostate cancer, only age, ethnicity, and family history of prostate cancer are well-established and primary prevention of this disease is limited. Prior studies had shown that dietary intake could be modified to reduce cancer risk. Most of the data in this area have been drawn from Western world studies and there isn't enough published data in developing countries. We conducted this study to examine the association between apple intake and the risk of prostate cancer in Iran.
Methods: We conducted a hospital-based, case–control study to examine the association between apple intake and the risk of prostate cancer in Iran. Cases were patients aged 40–78 years who were admitted to 'Labbafi-Nejad Hospital' with incident, histologically confirmed cancers of the prostate. Cases were diagnosed not before 6 months of the interview, with no history of cancers of other sites. Controls were patients (43-71years) who were admitted to the emergency service of the same hospital without neoplastic conditions and long-term modification of diet. Cases and controls were frequency matched according to the age (10-year groups). A total of fifty patients with prostate cancer and a hundred controls underwent face-to-face interviews. We assessed participants' dietary intakes during the past year by using a valid and reliable semi-quantitative food frequency questionnaire (FFQ). This FFQ consists of 168 food items with standard serving sizes.Proportional hazards regression methods were used to assess the associations between apple intake and prostate cancer risk. The SPSS version 16 was used for analyzing the data.
Results: We observed a strong significant inverse association between apple intake and the risk of prostate cancer. (high: second median v. low: first median, OR 0.16, 95% CI 0.05, 0.5) .
Conclusions The results of the present study suggested that apple intake might be inversely associated with prostate cancer.
Keywords: prostate cancer; diet; apple; case control study

Status Of BreastFeeding In Children Under 2 years and Continued BreastFeedingMothers According toProvince and Country IrMIDHS 2010

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Background: Breast milk is undoubtedly a great blessing from God that all the needs of a disabled person at birth and during the first 2 years he has prepared the most healthy, the most recent, most available and food fullest child**.** Breast milk combined with its exceptional and unique characteristic mental health guarantee to ensure and maintain the child's mother last decade, substantial progress in basic science and clinical medicine have occurred**.** Understanding the characteristics of breast biology, physiology, mode of production, secretion and transport of milk can be an effective aid for all doctors in any specialty. Appropriate complementary feeding and maternal nutrition is key to improving child survival interventions that are potentially life they keep about 20% of children under 5 years.Breastfeeding eradication hunger, ensuring universal primary education, promoting the empowerment of women's equality, reducing child mortality (up to 13% with promoting breastfeeding mommy to 6 percent by improving complementary feeding appropriately reduced), improving maternal health, combating malaria the HIV / AIDS and other diseases.This study aimed to determine the status of breastfeeding in children under 2 years and continued breastfeeding mothers in the province and based on the results of 89 years took IrMIDHS**.**
Methods: This study is a cross-sectional study in 89 countries completed a questionnaire designed and extracted
Results: Based on the percentage of children under 6 months of exclusive breast feeding in the entire country, 53.13, 58.76 province - the percentage of breast milk as a staple food in children under 6 months, 70.72, 75.2-percent of children who start in 8-6 months food supply solid, semi-solid or soft have 83.93, 69.78-percent of bottle-feeding, 31.15, 34.64 province-feeding duration of 21.3 months, the province, 21.04-start time of breastfeeding (within the first hour after birth 68.7, 64.81 province-children who are breast-fed 97.44, State-98.36 have been reported.
Conclousion: Breastfeeding status than the national average in East Azerbaijan province in supplementary feeding, bottle feeding, breastfeeding duration, start time of breastfeeding (within the first hour after birth) is less than the program interventions so planning at the macro level, such as generalized skin to skin contact programs, promotes natural childbirth, enhancement Baby-Friendly hospitals, set up lactation rooms in public places such as railway, airport, etc, parental education and family about the hazards bottles and method of complementary feeding and maternal and child health in the community will have better results**.**
Keywords: Breast feeding**,**IrMIDHS**.**

Quality of life and its relationship to the healthy eating index among elderly people

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Background: The purpose of the study was to determine if there is a relationship between quality of life (QOL) and healthy eating index (HEI) in healthy elderly people living in the urban areas of Markazi Province, Iran.
Method: A two-stage stratified sampling design was adopted for the survey. The HEI 2005 scores were calculated based on three 24-hour dietary recalls and the SF-36 questionnaire was used to assess QOL. The body weight and height of the subjects were measured and body mass index was computed.
Results: Men had significantly higher quality of life in all dimensions and components compared to women ($p<0.01$) while there was no sex difference in the HEI scores. The HEI score was positively correlated with the QOL total score ($p<0.05$) and its physical health dimension ($p<0.01$) in which the significant correlation was eliminated after ad-

justing the data for age and gender. The HEI and QOL scores had no significant relationship with BMI.
Conclusion: The findings of this study do not show a significant relationship between the quality of diet assessed by the HEI and the QOL in elderly people. We suggest that researchers design comprehensive food guidelines and related Iranian eating indexes in order to precisely assess the dietary pattern of Iranians.
Keywords: Aging, Elderly, Health,Healthy Eating Index, Quality of life, Nutrition

The effect of magnesium supplementation on primary insomnia in elderly: A double-blind placebo-controlled clinical trial
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Background: Nearly 50% of older adults have insomnia, with difficulty in getting to sleep, early awakening, or feeling unrefreshed on waking. With aging, several changes occur that can place one at risk for insomnia, including age-related changes in various circadian rhythms, environmental and lifestyle changes, and decreased nutrients intake, absorption, retention, and utilization. The natural N-methyl-D-aspartic acid (NMDA) antagonist and GABA agonist, Mg2+, seems to play a key role in the regulation of sleep. The objective of this study was to determine the efficacy of magnesium supplementation to improve insomnia in elderly.
Methods: A double-blind randomized clinical trial was conducted in 46 elderly subjects, randomly allocated into the magnesium or the placebo group and received 500 mg magnesium or placebo daily for 8 weeks. Questionnaires of insomnia severity index (ISI), physical activity, and sleep log were completed at baseline and after the intervention period. Anthropometric confounding factors, daily intake of magnesium, calcium, potassium, caffeine, calories form carbohydrates, and total calorie intake, were obtained using 24-h recall for 3 days. Blood samples were taken at baseline and after the intervention period for analysis of serum magnesium, renin, melatonin, and cortisol. Statistical analyses were performed using SPSS19 and P-values < 0.05 were considered as statistically significant.
Results: No significant differences were observed in assessed variables between the two groups at the baseline. As compared to the placebo group, in the experimental group, dietary magnesium supplementation brought about statistically significant increases in sleep time (P = 0.002), sleep efficiency (P = 0.03), concentration of serum renin (P < 0.001), and melatonin (P = 0.007), and also resulted in significant decrease of ISI score (P = 0.006), sleep onset latency (P = 0.02), and serum cortisol concentration (P = 0.008). Supplementation also resulted in marginally between-group significant reduction in early morning awakening (P = 0.08) and serum magnesium concentration (P = 0.06). Although total sleep time (P = 0.37) did not show any significant between-group differences.
Conclusion: Supplementation of magnesium appears to improve subjective measures of insomnia such as ISI score, sleep efficiency, sleep time and sleep onset latency, early morning awakening, and likewise, insomnia objective measures, such as concentration of serum renin, melatonin, and serum cortisol, in elderly people.
Keywords: Dietary supplementation, elderly, insomnia, magnesium

Assessment the relationship between maternal employment and maternal education levels with overweight and dietary pattern in children aged 4-7 years in Tehran,Iran
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Background: In most developed and developing countries,during childhood obesity has increased rapidly. Changes inpatterns of family life may contribute to the rising prevalence of childhood obesity. Our objective was to examine the relationship between maternal employment and maternal education levels with overweight and dietary pattern in children aged 4-7 years.
Methods: In a cross-sectional study,a total of 200 children (4-7years) were selected,who half of their mothers hadjob and another ones were housewife,using a cluster sampling. Dietary intake was assessed by a validated semi-quantitative food-frequency questionnaire. Physical and screen-based activities were collected by a validated physical activity questionnaire and general information about maternal education and employment were assessed by demographic questionnaire. Weights and heights were measured to calculate BMI. The BMI number was plotted on the CDC BMI-for-age growth charts for children to obtain a percentile ranking.A P-value<0.05 was considered statistically significant.
Results: Mean±SD age was 5.24±0.82.7.6% underweight,72.5 normal weight,19.3% overweight and 0.6% Obesity was seen according to the BMI. Mean±SD BMI/age children in maternal employment group and housewife group were 47.21±31.24 and 4.30±32.66 respectively. The dietary intake analysis showed that children who had working mothers,intake lower fruits,vegetables and dairy of food groups in compare with another. Moreover,intake of meat groupwas higher in children with house wife mothers in compare with children who had working mothers.
Conclusion: These findings provide some evidence that childhood obesity was associated with maternal employment status but it needs more studies with cohort design. Due to the increasing levels of maternal education and maternal employment and because of less attention to the childhood obesity and food intake in children,awareness and will of the general public must increase to permit the changes necessary to prevent childhood obesity. Key Words:Body Mass Index; dietary factors; children; maternal employment
Keywords:body mass index, dietary pattern, maternal employment

Evaluation of effect of Pistacia atlantica subsp.kurdica essential oil on inhibition of Aspergillus flavus in vapour phasis
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Introduction and Objectives: Aspergillus fungus normally have irreversible effects to humans and animals. This fungus micotoxins can infect the food and cause cancer,liver disease and mutations. Varius chemical anti fungal are mainly used against fungus which have many side effects,for human,s health and on the other hand fungus may become resistant to chemicals. Varius medicinal plants have been used against fungal infection for thousands years. The tree of Pistacia atlantica subsp.kurdica is one of the plant species of Zagros mountains of Kurdistan in particular,that is

the source of gum that the Pistacia atlantica essential oil is achieved through industrial processing operation. This essential oil ((Pistacia atlantica subsp.kurdica)) or turpentine is known as an antimicrobial compound against many microorganisms. The aim of this study was to evaluate the ability of this extract to inhibit the growth or killing of Aspergillus flavus.

Methods: In this study,the antifungal effect of different concentrations of volatil essential oil of Pistacia atlantica,was evaluated against mycotoxin producer Aspergillus flavus (5004PTCC:),by the paper disk method (determination of inhibition zone diameter),and the minimum inhibitory concentration (MIC) and minimum bactericidal concentration (MBC).

Results: The minimum inhibition zone diameter of fungal growth was 52.128 % and the minimum inhibitory concentration was 500 mg /l. After complete evaporation of the oil,fungi starts to grow again,illustrating the fungistatic effect of essenial oil,not the fungicide effect.

Conclusion:The results of this study showed that the essential oil can inhibit the growth of Aspergillus flavus. The use of this essential oil as a healthy and safe method for inhibiting the growth of fungus is recommended.

Evaluation of risk of tetracycline residue (TET) intake via milk consumption amongst different age groups of human consumers

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Background: The abundant use of tetracycline antibiotics in veterinary medicine may result in the presence of their residues in milk at unsafe concentrations,which can adversely affect public health. The aim of the current study was to evaluate the risk of tetracycline residue (TET) intake via milk consumption amongst different age groups of human consumers in Iran.

Methods:To quantify the drug residues,HPLC analysis was performed under isocratic conditions using UV detection at 355nm. Milk consumption patterns were determined using a recent nutrition survey in Iran. The average concentration of total TETs in milk was determined to be 252.41µg/kg,which is approximately 2.5 times greater than the maximum residue limit (MRL) set by codex. Of the four different tetracycline antibiotics analyzed,oxytetracycline had the highest share (86%) of the determined contamination. Daily exposure to TETs through milk was estimated to range from 50 to 91 µg. Risk characterization of dietary exposure to TETs residue via milk intake in different age groups showed that within the infant group,the estimated daily exposure for the high consumers was 60% of the defined acceptable daily intake (ADI).

Conclusion: although the total exposure to residues of tetracyclines is low in the society but it should be noted that differences in the sensitivity of individuals to these antibiotics and the role of these residues are in the development of antibiotic resistance.

Keyword: Risk assessment,Tetracycline,Milk,and Exposure.

The prevalence of antibiotic residues in pasteurized and sterilized commercial milk available in Shahrekourd and their changes by season and heat process

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Background: In this study,the prevalence of antibiotic residues in pasteurized and sterilized commercial milk available in Shahrekourd,Iran,was investigated. In addition,the influence of seasonal temperature changes on the prevalence of contamination was studied.

Materials and Methods: Commercial milk samples of 187,including 154 pasteurized and 33 sterilized,milk samples were collected from the market between early January 2012 and late July of the same year. The presence of antibiotic residues was detected using the microbiological detection test kit,Eclipse 100,as a semiquantitative method.

Results: The results showed that 37 of the samples (19.8%) have contained antibiotic residues above the European Union Maximum Residues Limits (EUMRLs),of which 28 samples (14.97%) were found to be contaminated but at the concentrations below the EUMRLs. There was no significant difference between the contamination rate of pasteurized and Ultra High Temperature (UHT)sterilized samples. Similarly,variation of weather temperature with seasons had no effect on the contamination prevalence of milk samples ($P > 0.05$).

Conclusion: Based on the result of this study,antibiotics residues were present in the majority of milk samples. Neither the season nor the type of thermal processing of the commercial milks had noticeable impact on the prevalence level of the milk samples. However,an increasing trend of prevalence level for antibiotic residues was observed with increasing the temperature through the warm season.

Keywords: antibiotic residues, milk, heat process

The Evaluation of Status and the Main Factors on the Mothers Awareness and Performance during the Complementary Nutrition Period of Infants 6-24 Months Referred to the Clinics in Bavanat Town.

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Background: The highest growth rate occurs in the infants below one year and the malnutrition in these ages has irreparable effects on the growth and development of kids. The lack of awareness of mothers and inappropriate behavior about the kid's nutrition are the main reasons of malnutrition .The aim of this present study were determining awareness and performance of mothers about supplemental nutrition for the kids 6-24 months.

Methods: This cross-sectional study was conducted on the mothers of kids 1-2 years old referred to the clinics. 196 mothers were selected by the randomly Cluster Sampling. At first, two questionnaires (Performance & Awareness) were designed. The Performance Questionnaire contained two parts general questions (such as the age of mother, education,…) and the special questions contained the performance of mothers during the supplemental nutrition of children (such as the initial time of supplementary nutrition, the method of preparing food …). The Awareness Questionnaire was the same as the Performance Questionnaire. For reducing errors, the Performance Questionnaire was completed first. The Performance and Awareness Questionnaires contained 23 and 21 questions respectively. In order to score, for the correct and false answers, the num-

bers 1 and 0 were used respectively. The Performance questionnaire was considered as follow: the scores more than 20 = Excellent, 16-20 = Good, 12-16 =Fair, less than 12=Weak. The Awareness questionnaire was also considered as follow: 15-21=Good, 10-15=Fair and less than 10=Weak. In order to analyze the data, SPSS19.statistical method include: descriptive- analytic test, Chi-Square, Paired t-tests.

Results: 64% mothers were in 20-29 years old .54% had the education higher than diploma, 73.7% had the private house, 43.4% had one child, 91.4% were housekeeper and 64.1% had the middle financial status. The awareness and performance status of mothers were determined as follow: 3.5% weak, 16.2% fair and 80.3% excellent and from the performance point of view , 10.6% weak , 18.2% fair, 33.2% good and 37.9% excellent. There was a direct relation between the awareness and performance status (P=.000) .There was a relation between the education level of mothers and the awareness - performance status (P=.029). There was no relation between the number of children, the mother's occupation, age, housing and economic status with the awareness and performance (P>.05).

Conclusions: The awareness and performance levels of mothers were nearly good. But in order to improve their awareness and performance, it was suggested to arrange the training classes for mothers.

Keywords: supplemental Nutrition, Mother's Awareness, Mother's Performance, Infant

Estimation of the Dietary Intake of Table Salt by the Population of Shiraz (Iran) Using Duplicate Portion Sampling

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Background: Cardiovascular diseases (CVDs), particularly hypertension (HTN), issupposed tobe one leading causes of health burden both developed and developing countries. Since sodium chloride (NaCl) intake is considered to be one of the most common contributors of HTN, we decided to investigate the daily intake of NaCl, using duplicate portion sampling (DPS) combined with instrumental analysis, in Shiraz population and also to compare it either with the dietary reference intake (DRI) or mean daily salt intake of western societies.

Methods: The duplicate diet samples of 21 different breakfasts, lunches and dinners (in 2 replicates), prepared for 7 consequent days of patients with no particular nutritional requirements, were collected from the kitchen at Namazi hospital, Shiraz, Iran, and transferred to food chemistry laboratory at refrigerated temperature. Concentration of NaCl was measured according to AOAC method. Data was then analyzed using SPSS 16.0.

Results: The average daily intake of NaCl in Shiraz population was estimated to be 9.89±1.53 g (7.90-11.43 g) which is far from the adequate intake (AIs) of sodium chloride (2.9-3.8 g) set by institute of medicine (2004) and almost equal to the mean daily salt intake of western countries (10-12 g per capita).

Conclusion: Regular assessment of the mean daily salt intake of Shiraz population as well as concurrent education is recommended for reducing salt consumption and subsequently partial management of HTN.

Keywords: salt, dietary intake, duplicate portion sampling, cardiovascular disease, hypertension.

Daily Dietary Intakes of Zinc and Copper Assessed by Duplicate Portion Sampling Combined With Either Instrumental Analysis or the Use of Food Composition Tables

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Background: Estimation of essential element intakes, including zinc (Zn) and copper (Cu), has been in the center of attention mainly due to their critical role in a large variety of enzymes involved in body metabolism. Furthermore, the accuracy and precision of various methods of estimating are different. Thus, the objective of this study was to assess the dietary intakes of Zn and Cu by adults living in Shiraz using duplicate portion sampling (DPS) method and also to compare the results determined by 2 different procedures: DPS combined with either instrumental analysis or the use of food composition tables (FCTs) as well.

Methods: The duplicate diet samples of 21 different meals (7 subsequent day), prepared for patients with no specific nutritional requirements, were collected from the kitchen at Namazi hospital, Shiraz. The concentration of Zn and Cu was determined using either a polarograph or FCTs. The mean daily intakes of these 2 elements then calculated and compared with the recommended amounts proposed by the US Food and Nutrition Board (2001). Data were analyzed using SPSS 16.0.

Results: The results of the daily Zn intake from both methods were not significantly different (9.39 ± 4.99 mg/day for DPS and instrumental analysis and 11.40 ± 1.09 mg/day for DPS and FCTs; *P*=0.530) and were higher than the RDAs recommended for adult males and females except the average daily Zn intake level measured by the instrumental analysis which was lower than the RDA established for a male adult. Daily dietary intake of Cu determined by instrumental analysis was significantly lower and closer to RDA for adult subjects compared with the value estimated by FCTs (1.19 ± 0.44 mg/day for DPS and instrumental analysis and 2.72 ± 0.11 mg/day for DPS and FCTs; *P*=0.001).

Conclusion: The accuracy of the 2 methods used for estimation of Zn intake was similar. In the case of Cu, the use of referred food composition tables, in which the influence of environmental conditions and dietary habits of meal preparation on the Cu content of foods is not taken into account, overestimates daily dietary copper intake. The average dietary intake of Cu by adults living in Shiraz is close to the recommended levels and for zinc, the risk of deficiency was found in adult males. Thus, regular monitoring of different minerals in various populations and improving programming seems to be crucial.

Keywords: zinc, copper, dietary intake, DPS, FCT.

Understanding of the Old Metabolic Disorders: The Stimulating Action of Insulin-Mediated Disorder Caused By Saturated Fatty Acids with Micro RNA Mediation

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Background: Micro RNA, the non-coding ribonucleic acid nucleotides in length are equal to 25-18 nucleotides that are conservedevolutionarily and as a source of activation or inactivation of genes, play an important role in stimulation of insulin.
Methods: Two studies about: Saturated Fatty acids and Suppression of Insulin Receptors by Expression of Micro-RNA had been done previously and their results have been used to prepare the following abstract.
Result: Saturated fatty acids and high fat diet cause liver cells for Expression of miR-195. Ectopic expression of miR-195 leads to the suppression of insulin receptors and impaired insulin stimulation of glycogen synthesis in cells of Hep- G2. These findings suggest that saturated fatty acids cause deregulation of miR-195 and result in impaired insulin sensitivity of the liver. Changes in diet of Mice to high saturated fat cause an expression of 195 Micro RNA and leads to the Reduction in Insulin Receptors. Similarly, in the other metabolic sectors the suppression or expression causesmodification of the receptors function.
Conclusion: Modification in insulin secretion indicates that: Fundamental research and its technological application are key to the future treatment of metabolic disorders by the expression or silencing of the involved gene.
Keywords: Micro RNA, saturated fatty acids, Insulin Receptor

Nutritional Status and Body Image Perception in Female Students of Tabriz University

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Background: Obesity is one of the main public health problems both in developed and some developing countries. Balancing energy intake with energy expenditure is necessary in preventing obesity and also understanding the effects of body image perception on caloric intake and physical activity levels may helpto prevent obesity. Body image has been defined as a person's perception, feelings and thoughts about her or his body, evaluation of body attractiveness and emotions associated with body shape and size. The difference between the perception about current body and the desired body can cause body dissatisfaction. As body dissatisfaction is noted a risk factor for eating disorders, it is necessary to emphasize about the importance of assessing and reducing this dissatisfaction. Identifying the strategies that reduce body dissatisfaction and increase body esteem could complete treatment effects.
Methods: This Cross sectional studywas conductedon 189 female students of Tabriz University aged 18-35 years. Participants were asked to completed-self-report Exerciseand, Body Image Perception Questionnaires.Dietary intake of participants was assessed by three-day 24-hour dietary recall.Weightand height were measured using standardized procedures and equipments.
Results: The BMI calculated for these participants presents that 9.5% were underweight, 71.9% were normal, 15.9% were overweight and 2.6% were obese. The results presents that 15.7% of the participants had the opinion that they were underweight, 57.6% normal and 26.8% overweight.Answers to the question about their satisfaction about their body shape have presented that 30.6% of the participants were content, 45.9% were semi-content and 23.5% were non-content about their body shape. There is a strongand significantrelationship ($p<0.001$) between the participants' BMI and their perceptions about their body images ($r=0.309$).Most of the participants have consumed 10-15 grams protein (53.5%),7-10 grams saturated fatty acids (44.3%),7-10 grams mono unsaturated fatty acids (36.4%),55-60 grams carbohydrate (30.1%), 10-20 grams dietary fiber (51.1%) per a day.We have found no significant relationship between micro and macronutrients and the participants' opinions about themselves.
Conclusion: This study underlines the importance of being aware of the relationships between body image and BMI and the need for nutritional education programs with the emphasis of body image perception.
Keywords: nutritional status, female students, dietary intake, body image perception, BMI

The Relationship of Food Insecurity and Socio-Economic Factors with Metabolic Syndrome in Adult Iranian Women

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Background: Food insecurity is defined as the limited or uncertain availability of enough food for an always active and healthy life. Metabolic syndrome includes clustering of Insulin resistance, central obesity, dyslipidemia, and hypertension. Recent studies show high prevalence of food insecurity and metabolic syndrome in different cities of Iran. The objective of this study, was to examine food insecurity and metabolic syndrome association in women.
Methods: A case-control study was conducted on 130 women between **30-60 years old** with metabolic syndrome as cases and 130 women without metabolic syndrome as controls referred to clinics of hospitals affiliated with Shiraz University of Medical Sciences. The metabolic syndrome was defined according to Adult Treatment Panel III guidelines. General, Demographic and socioeconomic Characteristics and food insecurity status were assessed, using general, demographic and socioeconomic characteristics and 18-items USDA household food security questionnaires, respectively. Chi-square, t-test and multiple logistic regression tests were applied using SPSS16.0 and Stata11SE statistical software.
Results: The prevalence of food insecurity was 69.2% in cases and 45.4% in controls. Food insecurity, menopausal

status and BMI higher than 25 were significantly associated with metabolic syndrome (P<0.05).
Conclusions: Apparently, food insecurity is an important risk factor for metabolic syndrome. Health Planners should pay attention to improve food security status in society especially among women.
Keywords: Food Insecurity, Socioeconomic Factors, Metabolic Syndrome, Women

The Relationship of Physical Activity, Menopausal Status and Body Mass Index with Metabolic Syndrome in Iranian Adult Women

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Background: Metabolic syndrome is a multi-factorial disorder, and most of its components (Insulin resistance, central obesity, dyslipidemia and hypertension) are associated with lifestyle factors such as weight control, diet and physical activity. The objective of this study, was to examine the relationship of physical activity, menopausal status and body mass index (BMI) with metabolic syndrome in Iranian adult women.
Methods: A case-control study was conducted on 130 women between 30-60 years old with metabolic syndrome as cases and 130 women without metabolic syndrome as controls referred to clinics of Shiraz University of Medical Sciences. The metabolic syndrome was defined according to Adult Treatment Panel III guidelines. General Characteristics and physical activity were assessed, using general questionnaire and physical activity questionnaire based on metabolic equivalents (MET), respectively. Chi-square, t-test and multiple logistic regression tests were applied using SPSS16.0 and Stata11SE statistical software.
Results: The results showed that the variables occupation status, level of education, household income , number of children, weight, body mass index, menopausal status and sleep activity score between cases and controls were significantly different (P<0.10). So cases were more housewives, menopause, had lower educational level, lower household income, more number of children, higher body mass index and sleep activity score than controls. Multivariate logistic regression analysis showed variables including menopausal status and BMI higher than 25 were significantly associated with metabolic syndrome (P<0.05).
Conclusion: The study showed that overweight and obesity and menopausal status can be risk factors of metabolic syndrome so it is essential that Health Planners should develop programs for weight loss and delayed menopause in women.
Keywords: physical activity, menopausal status, body mass index, metabolic syndrome, women

Review the Anthropometric and Nutrition students in the city of Ghouchan 1392-1393

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Background: The prevalence of underweight and obesity in childhood is associated with increased risk of chronic diseases in adulthood and stunting the development of impaired behavior. Assessment of nutritional status in childhood because of the extent of physical and behavioral changes during adolescence is of great importance. Malnutrition, including obesity, underweight, overweight and stunting in childhood mortality indicators in determining the types of disease in adulthood is effective**.** This study was conducted to determine the nutritional status of their children's anthropometric indicators.
Methods: This study is a retrospective study in which the results of Preliminary evaluation results 3303 at the first-grade students in the 1393-1392 academic year beginning primary school that has been done by Health care providers in the city was Ghochan.. Data collected from students' health certificates and were analyzed by statistical software.
Results: 3303 base of students entering first-grade girls 1566 (47.4%) and 1737 boys (52.5 percent) are more boys than girls in the crowd are that it represents. In general stunting rate of 0.36%, this is urban region 0.36% and is higher than in rural areas. The obese BMI (z-score2) with 1.2% among urban girl's students had the highest percentage also poor diet with 3.45 % was observed .
Conclusions: Stunting urban area and rural area is higher than sons. Rates of overweight and obesity in urban areas and among girls than boys are due to high rates of eating disorders seems Difference between levels of social, cultural, economic and particularly parents, lack of attention to proper growth and nutrition of children and low parental awareness of the correct patterns of causes of the above problems is growing.
Keywords: Child hood - Anthropometric – Weight- Height

Association between household food insecurity and nutritional status of children aged 7-11 years in Tabriz, Iran

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Background: Malnutrition and growth impairment are among the most common problems in children of developing countries. The variability in child growth across nations is due much more to social, demographic and economic factors than to genetics. Household food insecurity can negatively affect food consumption, including reduced dietary variety, nutrient intake, and nutritional status of household members especially, children.
The aim of this study was to investigate whether household food insecurity is associated with underweight, wasting and stunting as nutritional status indices in a random sample of children aged 7-11 years in Tabriz, Iran.
Methods: This cross-sectional study was carried out from Mar to Jun 2014 in Tabriz, north-west of Iran. Overall, 330 primary school students (170 male, 160 female) aged 7-11 years were selected using systematic cluster sampling. After obtaining of written informed consent, the data were collected using socio-economic questionnaires, 7-item food security questionnaires and face-to-face interviews with children and their mothers. In addition, weight (Wt) and height (Ht) of the children were measured and com-

pared with standard charts issued by the National Center for Health Statistics (NCHS). The nutritional status was determined based on weight for age (Wt/A), height for age (Ht/A), and weight for height (Wt/Ht) indices. Underweight, wasting, and stunting were defined based on the Z-score cut-off point of Wt/A, Wt/Ht and Ht/A under -2SD from median of the reference population (NCHS), respectively.
Results: According to NCHS standard, 23% of the children were underweight (Wt/A), 15.7% stunted (Ht/A) and 21.2% wasted (Wt/Ht). Furthermore, 30% of children were in food-insecure households. There were significant associations between household food insecurity and underweight (p=0.001), stunting (p=0.035) and wasting (p=0.019).
Conclusion: Food insecurity appears to be related to growth impairment among primary school children in Tabriz. Furthermore from the results, it is evident that malnutrition is still a major public health problem among children due to household food insecurity. Intervention strategies and programs should be developed to target the food insecurity preventable risk factors.
Keywords: Nutrition status, food insecurity, children, Tabriz

Household food security status and associated factors among primary-school students in Tabriz, Iran
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Background: Food security defined as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life. A household is considered food insecure if it does not have the financial means to access enough food for all household members to sustain active, healthy living. Food security is especially important for children because their nutrition affects not only their current health, but also their future health and wellbeing. Previous studies that used various data sources suggest that children in food-insecure households face elevated risks of health and development problems, compared with children in otherwise similar food-secure households.
The aim of present study was to determine food security in households with children and some socioeconomic factors associated with food insecurity among primary school students in Tabriz, north-west of Iran.
Methods: This cross-sectional study was carried out from Mar to Jun 2014 in Tabriz, Iran. A total 330 primary school students (170 male, 160 female) aged 7-11 years were selected using systematic cluster sampling. After obtaining permission from Education office, explanation the nature of study for managers and obtaining of written informed consent, Socio-economic questionnaires, 7-item food security questionnaires and FFQ were filled out during face-to-face interviews with children and their mothers.
Results: The prevalence of household food insecurity according to the 7-item food security questionnaire was 30%. Food insecurity was positively associated with family size (p<0.05) and negatively associated with household economic status (p<0.001). However, there was not a significant relationship between food insecurity and parental education level and their job status. Moreover, students living in food-insecure households more frequently consumed bread (p<0.01) while they less frequently consumed meat, fruits and dairy products (p<0.05).
Conclusion: Food insecurity was prevalent among households in Tabriz, and food security status was associated with socio-economic factors. Students who belonged to food-secure households more frequently consumed healthy foods, whereas those living in food-insecure households more frequently consumed cheap foods. Efforts to improve food insecurity of low income households undergoing nutrition transition should address availability and accessibility to healthy food choices.
Keywords: Food insecurity, children, Tabriz

The effect of education based on health belief model of nutritional behaviors associated with gastric cancer in housewives of Isfahan city.
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Background: The planning of educational programs to inform the people about the prevention of diseases such as cancers is necessary. With considering the high incidence and mortality rate and costly and difficulty screening of gastric cancer in Iran, this study was conducted to determine the effect of educational interference based on HBM on knowledge, attitudes and practices of housewives about nutritional factors associated with gastric cancer.
Methods: In this quasi experimental study, 84 of housewives from Isfahan participated and were randomly categorized into two groups (experimental and control groups). Before the performing of educational program based on HBM, the self-structured, valid and reliable questionnaires were completed by the groups. Then, the experimental group received the educational program about the correct nutritional behaviors in the form of lecture, group discussion and questioning and answering in 4 sessions and the non-intervention group did not receive the education. Both groups completed the questionnaires 2 months after the intervention. Data were analyzed using SPSS18 by Mann-U-Whitney, t student and paired t test and p<0/05 considered significant.
Results: The mean age was 34.11 ± 6.23 in intervention group and 34.21± 6.5 years in non-intervention group and the difference was not significant. There was not also a significant difference in knowledge, perceived susceptibility, perceived severity, perceived benefits, perceived barriers, perceived self- efficacy and practices of women before the intervention (p>0.05), but difference was significant after the intervention (p<0.001).
Conclusion: Health education based on HBM increases the knowledge and improves the attitudes and practices of housewives women with regard to nutritional factors for prevention of the gastric cancer.
Keywords: Education, Nutrition, Gastric Cancer, Health Belief Model

Effect Supplementation Beta alanine, Citrate sodium, Beta alanine plus Citrate sodium on Lactate, Bicarbonate ,Heart Rate, PH and Performance in men indoor rock climbing.
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Background: The purpose of study was to determine the

Effect suplemention beta alanine, citrate sodium, beta alanine plus citrate sodium on lactate, bicarbonate ,heart rate, PH and performance in men indoor rock climbing.

Methods: Rock climber men age**(23,53±3,63)** height **(173,3±4,89)** weight**(63,42±4,46)**was randomized divided in to the 4 groups with 8 memberes : beta alanine 6.4 gr.d- ,citrate sodium 500 mg.kg.d- , beta alanine6.4 gr.d- and citrate sodium 500 mg.kg.d- for 5 days,placebo (starch 2 g.d- for 5 days).

The tests was done in 2 session. first test included one ascent hard route with grade5.11 c (system YDS) on the indoor climbing wall .The blood sampling was taken before ,after and 30 minutes recovery for measure lactate, bicarbonate ,PH and for measuring Heart rate and record time use polar clock with heart rate detector before start climbing until rest time.over 5 days every groups consumed their supplements. then second test was repeated with the same condition in the first test. For determine effect independent variables on associated variables using klmografsmirnov(k-s) and for examine changes associated variables in 4 groups use variance mixed and for compaire difference between groups in pre-test and post-test use paire T test with a=0,05.

Results: The use supplementation beta alanine, citrate sodium and beta alanine plus citrate sodium in days have no significant effect on lactate, bicarbonate.heart rate,PH and performance in men indoor rock climbing.

Conclusion: However, consumption of these supplements were effective in most studies,but using them in short time were not efficient. in the future, scientists should study more about changing time and dosage of beta alanine –citrate sodium in rock climber.

Keywords: Beta alanine, Citrate sodium, Rock climbing, Hard route, PH, Bicarbonate, Lactate, Heart rate.

Effects of leucine and hydroxymethylbutyrate supplementation on indices of muscle damage after eccentric resistance exercise

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Backgroound: Some food supplements play a vital role in both the synthesis and catabolism of protein so theycan affect the exercise-induced muscle damage. In the present study the effects of leucine and hydroxymethylbutyrate(HMB) supplementation on muscle damage indices after eccentric resistance exercise was studied.

Methods:36 untrained man(age 20.8±1.4 years, height 172.26±4.16 cm, weight 71.23±5.46kg, body mass index 24± 2.45 kg and body fat 13.3±2.5 percent), randomly divided into three groups of leucine (n=12), HMB (n=12) and placebo (n=12), respectively.30 minutes before aneccentric resistance exercise, the three groups respectively received 50mg/kg/bw leucine, HMB and maltodextrin in form of a drink. Muscle damage wasinduced based on Laroucheplan (2005), using the knee flexor machine and led emphasis on the eccentric compartment. Just before, 24, 48 and 72 hours after exercise, 5ml venous blood were taken in order to measure enzymatic activity of creatine kinase (CK) and lactate dehydrogenase (LDH).Data were analyzed using analysis of variance (ANOVA)with repeated measurement and the Bonferroni post hoc test. Data analysis was performed using SPSS version 16.

Results: At the time of measurement after the test, the activity of CPK and LDH in both supplementation groups was significantly less than placebo group ($p<0.05$). But between the supplement groups showed no significant difference in this respect.

Conclusion: This study showed that taking 50 mg/kg/bw leucine and hydroxymethylbutyrate (HMB) 30 minutes before an eccentric resistance exercise reduced enzyme creatine kinase and lactate dehydrogenase activity in serum of subjects were studied. The absence of significant differences between the two groups could be due to effects of supplementation timing.

Keywords: muscle damage, eccentric contraction, leucine, hydroxymethylbutyrate

Effect of eight weeks hydroxymethylbutyrate supplementation on indices of muscle damage after leg press resistance exercise

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Background: Delayed onset muscle soreness (DOMS), presumably occurs due to the destruction of muscle cells. The aim of this study was to determine the effects of eight weeks hydroxymethylbutyrate(HMB) supplementation on indices of muscle damage and perceived exertion in untrained young men after one session leg press resistance exercise.

Methods: In a double-blind and randomized manner, Forty untrained volunteered young males (age 20.4±1.2 year, height 174±3.3 cm, weight 74.36±2.9 kg, BMI 23.7±1.7 kg/m^2, and body fat percent 15.2±1.1) were divided into supplement group(n=20) and placebo group(n=20), respectively. Both groups consumed 3g/day HMB and maltodextrin prior to resistance exercise for 8 weeks, respectively. 7 days before the test, 1RM (leg press) was measured in the preparatory meeting. Muscle damage was induced using a leg press exercise with weights equivalent to 75% 1 RM in six set until severe exhaustion. Muscle damage was measured by PAS scale, and blood creatine kinase level(CK) was determined before, 0, 24, 48, and 72 h after exercise. Range of motion was measured by Goniometer. Data were analyzed using analysis of variance (ANOVA) with repeated measurement and the Bonferroni post hoc test. Data analysis was performed using SPSS version 16.

Results: Levels of creatine kinase and muscle soreness at 24, 48 and 72 h after exercise in the supplement group was significantly lower than placebo group($P<0.05$) and range of motion at 24 hours before activity was significantly higher in the supplement group($P<0.05$).

Conclusion: This study showed hydroxymethylbutyrate supplementation in these popululion decreased serum creatine kinase and increased the range of motion of the knee joint. Use of the HMB possibly can repair cell wall damage during the activities.

Keywords: muscle damage, HMB, resistance exercise.

Authors Index B

Check the palm olein oil, canola oil and a combination of both on the level of acrylamide potato chips

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Background: Acrylamide has been classified as a probable carcinogen by the International Agency for Research on Cancer. It is formed in many starch –rich foods and particularly high levels of acrylamide have been found in potato crisps and potato chips. Regarding to having cancerous effect in acrylamide and enormous usage of producing chips industry and its daily progress, its necessary to decrease it in these products. The aim of this study was to investigate the effect of frying oil type on acrylamide formation in fried potatoes in Palm olein , Canola oil and the blend of them on a laboratorial scale.
Materials and Methods: The samples of fried potatoes were prepared by frying the slices of Agriya potatoes in Palm olein , Canola oil and the blend of them in the ratio of 50:50 (%v/v) at □180□^□ for 4/15 minutes. The amount of acrylamide in the samples of fried potatoes was determined by GC-ECD.
Results: The examined samples of fried potatoes had significantly ($p < 0.05$) difference with each other for the amount of acrylamide formation. The maximum amount of acrylamide was 1140 ppb in the samples for canola oil and the minimum amount of that was 860 ppb in the samples for palm olein oil. The amount of acrylamide in fried samples in the blended oil was also 952 ppb.This is due to the higher thermo oxidative stability of palm olein in comparison with canola oil and the blended oil.
Conclusion: According to the obtained results, the type of frying oil is an effective factor on acrylamide formation in fried potatoes products. The choice of suitable frying oil that has naturally high thermo oxidative stability can reduce the amount of acrylamide in fried potatoes products. And also blending of Palm olein with canola oil is suggested as a suitable strategy for improving thermo oxidative stability of canola oil and consequently for reducing the amount of acrylamide formation in fried potatoes.
Keywords: Acrylamide, potato chips, canola oil

The antioxidant capacity of selected tropical fruits in comparison with antioxidant potential of date fruits (Phoenix Dactylifera) from Iran

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Background: The phenol content and antioxidant activities (AA) of three tropical fruit pulps namely honey pineapple (Ananas comosus Merr), a Malaysian type of banana (Musa paradasiaca) locally called 'pisang mas', and Thai seedless guava (Psidium guajava L.) were studied. Similarly, AA of the flesh of a number of varieties of 4 types of Iranian date palm fruits varieties (Phoenix dactylifera) including soft dates (SD) (Honey, Bam, Jiroft, and Kabkab dates); semi-dry dates (SDD) (Sahroon, Piarom, and Zahedi dates); and dry date (DD) (Kharak dates) were analyzed. In this study, AA of the fruit pulps extracts were evaluated using ferric reducing/antioxidant power (FRAP) assay, and the free radical scavenging effect on the DPPH radical assays, while the AA of all the date palm fruits were evaluated using Trolox equivalent antioxidant capacity (TEAC) method, 2,20-azinobis (3-ethylbenzothiazoline-6-sulphonic acid) radical cation (ABTS+) assays and the FRAP assay. Furthermore, total phenolic contents (TPC) and total flavonoid contents (TFC) of the tropical and date palm fruits were determined using Folin-Ciocalteau and aluminum chloride colorimetric methods respectively.
Result: Results showed that TPC ranged from 123.21 ± 4.45 to 190.58 ± 4.35 gallic acid equivalents / 100 g (GAE/100 g) for guava fruits; from 24.37 ± 2.45 to 72.21 ± 2.03 GAE/100 g for banana; and from 34.65 ± 3.44 to 54.68 ± 1.79 GAE/100 g for pineapple. Whereas TPC in the date palm fruits ranged from 2.89 to 4.82, 4.37 to 6.64 and 141.35 (GAE)/100 g, while TFC ranged from 1.62 to 3.07, 1.65 to 4.71 and 81.79 mg catechin equivalents (CEQ)/100 g sample for SD, SDD and DD, respectively. DPPH values for honey pineapple, banana and guava fruits ranged from 89.7 ± 0.32 and 65.6 ± 4.10 and 68.6 ± 4.26 % DPPH inhibition respectively. Likewise FRAP values were 4.92 ± 0.11 and 3.23 ± 0.14 and 19.1 ± 0.90 FRAP (l µmol Fe (II)/g) respectively. The AA (ABTS assay) of dates was 22.83–41.17, 47.6–54.61 and 500.33 µmol Trolox equivalents for SD, SDD and DD, respectively. The AA (FRAP assay) per 100 g sample were 11.65–20, 19.12–29.34 and 387.34 µmol FRAP for SD, SDD and DD, respectively. Results showed that high phenol content was significantly correlated with higher antioxidant capacity.
Keywords:Tropical fruits; Date palm fruit; Antioxidant activity; Total phenol contents; Total flavonoid contents

Curcumin enhances the cisplatin-induced cytotoxicity in breast cancer stem-like cells

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Background: Breast cancer is a heterogeneous disease which has various biological subtypes. Triple-negative breast cancer (TNBC) (approximately 15% of all cases of breast cancer) is associated with high rates of relapse following conventional therapies. TNBCs are estrogen/progesterone receptors, and HER2 negative and consequently either hormone therapy or drugs that target HER2 would be inefficient. Therefore, chemotherapy is considered as first-line therapy for treatment of TNBCs. Curcumin (diferuloylmethane), a well-known chemopreventive agent, has been reported to possess antioxidant, anti-inflammatory, antiproliferative, and anticarcinogenic activities, generally free of the deleterious side effects in several different cancers. Cisplatin is one of the commonly used chemotherapeutic agents for treatment of breast cancers and is very toxic at the doses needed to treat TNBC patients. It has been demonstrated curcumin and the cisplatin when given alone has an effect against TNBCs. The sensitizing synergic effect of curcumin with a variety of chemotherapeutic agents on cancer cells apoptosis has been reported. In the present study, we investigated the synergistic effect of nanocurcumin on cisplatin in treatment of MDA-MB-231 (a TNBC cell line with cancer stem cell characteristics).
Methods: Tumor cells growing in RPMI medium were trypsinized, then cells were seeded into 96-well plates, and allowed to attach overnight. Cells were then treated with a series of doses of nanocurcumin, cisplatin and combination of both drugs for 24h. The medium-containing drug was decanted and the LD50 dose (the concentration of drug which causes 50% cell death) of each drug were determined by 3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay. Metastasis investigated utilizing wound healing assay.
Results: 10 µM of cisplatin calculated as LD50 for MDA-

MB-231 which was obtained by MTT assay and 22μM of nanocurcumin calculated as LD50 for MDA-MB-231(for 24 hours). Interestingly, after combination of nanocurcumin and cisplatin, LD50 for cisplatin decreased to 5μM. After combination treatment, metastasis of MDA-MB-231 cells decreased. Discussion: Overall, our results suggest that combination treatment of MDA-MB-231 cells with curcumin and cisplatin improved the cisplatin-induced cytotoxicity on this cell line. Moreover this combination treatment caused significant metastasis abatement. Therefore, curcumin could be an excellent candidate for development of promising therapeutic strategies for treatment of TNBCs.
Conclusion: Our results suggest that treatment with curcumin has the potential to be utilized as a synergistic agent in breast cancer cells treated with cisplatin. More experiments are required to fully elucidate the possible protective role of curcumin in cytotoxic effects of cisplatin.
Keywords:TNBCs, MDA-MB-231, nanocurcumin, Cisplatin, synergic effect

Antioxidants and muscle damage

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Background: Moderate intensity exercise enhances the endogenous enzymatic antioxidant defense system. The increase in antioxidant capacity in Heavy and prolonged high-intensity exercise is not sufficient and may result in the breaking capacity of detoxification reactions of compounds of oxygen to the body. It has been proven that after intense exercise Instead of increasing the antioxidant capacity the lipid peroxidation and muscle damage occurs. Consumption of antioxidants enhances the antioxidant status and may reduce the damaging effects of radicals during intense exercise .The purpose of this study was to review the studies that examined the association between antioxidant intake and muscle damage.
Methods: In the present study two completely separate searches in PubMed and Google Scholar, Scopus and SID using Keywords antioxidants, muscle injury, exercise, vitamin C, ascorbic acid, vitamin E, extracts of articles with clinical trial similar articles were eliminated and a total of 8 papers were studied.
Results: At present, evidence suggests that dietary supplements containing antioxidants to prevent oxidative stress and muscle damage after exercise is very beneficial.
Conclusions: Some of the studies from Improved indicators of muscle damage in athletes after taking antioxidants have spoken; But there are studies that these effects have not been reported and this need for clinical trials and other studies will tell. It is also recommended that additional studies with larger sample size and with different doses and in different sports athletes will be scrutinized.
Keywords: Antioxidants, muscle injury, exercise, vitamin C, vitamin E

Determination of DNA oxidative stress status and its association with Body Mass Index (BMI) in apparently healthy adolescents

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Background: The involvement of oxidative stress in pediatric diseases is an important concern, but determining oxidative stress status especially through noninvasive biomarkers and its association with lifestyle factors in healthy young subjects has not been well characterized. This study evaluated urinary concentration of 8-hydroxy-2′-deoxyguanosine (8-OHdG),a marker of oxidative DNA damage and its relationship with weight status in a subsample of Karaji adolescents.
Methods: Through a multi-stage cluster sampling, a total of 140 students aged 13-19 were randomly selected from intermediate and secondary schools in different five regions in the city of karaj. Weight, height, BMI, urinary 8-OHdG and Creatinine (Cr) of all participants were assessed. The ratio of urinary 8-OHdG-to-Cr (8-OHdG/Cr) was also evaluated. The results of 8-OHdG/Cr ratio compared within different groups using partial correlation coefficients test. Significance was set at a P value < 0.05
Results: The average level of Urinary (8-OHdG/Cr) was 4.7±4.1. After adjusting for known possible confounders, no significant difference was detected in the urinary 8-OHdG/Cr ratio concentration within age, sex and BMI groups.
Conclusion: The result of the present study provides a basis for future studies on establishment of cut- cut-off points in healthy Iranian adolescents. Furthermore it can be helpful for further investigation about oxidative stress-related health outcomes or future interventions in this field in adolescents.
Keywords: oxidative stress, DNA oxidative damage, adolescents, Body mass index (BMI)

Role of parent's food habits to form of nutrition behaviors in children under 7 years in Tehran, Iran

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Background: Several studies about food habits in diverse population show, early living years play significant role in building of current food habits. Suitable nutrition in children is also influenced by parent's food habits. The aim of study is to survey the role of parent's food habits to form of nutrition behaviors in children under 7 years in Tehran - Iran.
Methods: The study is a Descriptive study. The participants were 19 children under 7 years with their mothers from a kindergarten in the central Tehran. The sampling method was random sampling. The data was collected by food habits questionnaires and implementation of consultation meetings with the mothers. The data analysis was qualitative analysis.
Results: The findings show that 79% children and their parents have eaten enough and variety breakfast, but food choices of children were depended on food choices of parents. In the other meals, the majority of children enjoyed to eat dinner (58%), because the more families could eat dinner together. According to mother opinions, the children enjoy eating macaroni, chicken, fried potatoes, chips and fruit juices. The researchers argue that mother's role is unavoidable in the food preferences among children. Fortunately, the results believe that children tend to drink simple milk (79%). Moreover, their parents lead them to chocolate milk consumption (42%) instead of other flavored milk. Finally, despite popular belief claim that mothers influence on nutrition behavior of children, but the study argues that the fathers have more effects on children's nutrition behaviors.
Conclusion: it seems that the general trainings about promoting healthy nutrition behaviors for parents by mass media can improve nutrition habits and behaviours of pre school children.
Keywords:parents, food habits, nutrition behaviors, children, nutrition improvement, Tehran

Effect of therapeutic dose of vitamin D on serum adiponectin and insulin resistance in vitamin D-insufficient or deficient type 2 diabetic patients

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Background: Lower vitamin D status has been reported in diabetic patients. Serum 25-hydroxyvitamin D and adiponectin were inversely associated with type 2 diabetes and insulin resistance. Vitamin D may involve in regulation of the adiponectin levels, which is directly related to insulin sensitivity. The aim of this study was to investigate the effect of therapeutic dose of vitamin D on serum adiponectin and insulin resistance in vitamin D-insufficient or deficient type 2 diabetic patients.
Methods: This double-blind, randomized, clinical trial was conducted on 81 type 2 diabetic patients with vitamin D level of 10-30 ng/mL. Intervention was 50000 IU vitamin D or placebo once a week for 8 weeks. At the beginning and end of the study, blood samples were collected after 12 hours of fasting and serum glucose, insulin, 25-hydroxyvitamin D, and adiponectin were measured. Insulin resistance was calculated by homeostasis model assessment (HOMA-IR).
Results: After 8-week intervention, serum 25-hydroxyvitamin D significantly increased and reached the normal levels in patients receiving vitamin D and the levels of fasting serum glucose, Insulin, and HOMA-IR were significantly decreased. No significant changes were observed in these levels in the placebo group. Significant differences were observed in mean changes in the above-mentioned variables between the two. No significant changes were found in serum adiponectin in the vitamin D and placebo groups.
Conclusions: Therapeutic dose of vitamin D can improve vitamin D status and glycemic indicators. But it seems that an 8-week intervention period was not sufficient to reveal the possible effects of vitamin D on serum adiponectin levels.
Keywords:vitamin D, type 2 diabetes, insulin resistance, adiponectin

Exercise and silymarin on clotting factors

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Background: Normal physiological process of formation of the blood clot occurs as a result of the activation of blood coagulation pathways. Available evidence suggests that exercise and diet evoke multiple effects on blood hemostasis in normal healthy subjects. The purpose of this study effect of six weeks of aerobic training and silymarin consumption on the coagulation factor VIII and IX on untrained female.
Methods: Thirty-two untrained girls (22.9 ±1.33yrs, Weight 63.71 ± 7.28 Kg, and BMI 24.85 ±2.51 kg.m-2), participated in our study. They were randomly divided into three equal groups, endurance (E) and endurance with silymarin consume (ES) and control group (C) (n=8). The trained group was assigned to a six week aerobic training program (three times/week), with severity 65-80% HRR (Heart Rate Reserve). Silymarin juice was prescribed 50 mg/kg/day. The control group continued their normal lifestyle. Body Weight (BMW), high, resting heart rate (HRrest), Systolic Blood Pressure (BPs), and Diastolic Blood Pressure (BPd) were measured. BMI and Body Fat Percent (FP) were assessed, and clotting factors VIII and IX were measured from blood samples.
Results: Analysis of covariance (ANCOVA) indicated significantly decreased weight, BMI, FP, BPs, but had no significant change in clotting factor VIII, and IX in E and ES group (P≤0.05).
Conclusion: This study suggests that the six weeks aerobic training in moderate severity and combination with silymarin (similar anti-inflammatory) consumption could effect on body composition and BPs, but had no significant change on blood hemostasis in normal healthy subjects.
Keywords: endurance training, silymarin, factor VIII, factor IX, training

Factors associated with overweight and obesity in adolescents: social determinants of physical activity

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Background: In recent decades,the prevalence of obesity among adolescent has risen sharply worldwide. High prevalence of overweight and obesity among adolescent has been reported in developing countries undergoing nutritional transition. Adolescents overweight and obesity usually lead to adulthood overweight and obesity and it is an important risk factor of adulthood chronic diseases such as cardiovascular diseases. The aim of this study was to investigate the prevalence of overweight and obesity and its associated factors amongst Iranian adolescents residing overseas,namely in Malaysia**.**
Methods: Cross sectional study was conducted among 161 adolescents (84 males and 77 females) age 14 to 18 years old attending Iranian Schools in Malaysia. Validated self-administered questionnaires were employed in this study**.**
Results: The study found prevalence of overweight and obesity was 49.7% (male: 52.4%,female: 46.8%). The study also revealed that there were significant association between overweight and obesity with grade of study (χ^2=19.17,p=0.02) and level of physical activity (χ^2=16.15,p=0.001). Among male adolescents there were significant association with parents education (mothers' education: χ2=4.77,p=0.029,fathers' education: χ2=7.5,p=0.006),but there were no association between overweight and obesity among female adolescent with parent education (mothers': χ2=1.4,p>0.23,fathers' education: χ2=1.45,p>0.24). The study also revealed there were no significant association between overweight and obesity with family income in both genders (χ2=0.02,p>0.99).
Conclusion: These finding showed high prevalence of overweight and obesity among Iranian adolescents residing overseas as compared to adolescents at their homeland. Due to important rule of youth obesity on chronic diseases,proper food policy making in order to decrease overweight and obesity among students is highly required.
Keywords: Overweight,Obesity,Coronic Disease, Adolescences

Using health belief model to promote iron deficiency anemia preventive behavior among pregnant women

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Background:Iron deficiency anemia is one of the most common nutritional problems during pregnancy.

Recently,theory –based education has been highlighted as a cost-effective strategy to reduce both its prevalence and complications. The aim of this study was to evaluate Effect of education based on health belief model to promote iron deficiency anemia preventive behavior among pregnant women.

Methods: a quasi experimental study was performed on 80 pregnant women referring to urban health centers of Shoushtar which were selected through random sampling and randomized into experimental and control group. A self-administered questionnaire based on health belief model constructs was applied to gather data. Validity and reliability of the questionnaire were obtained using content validity and Cronbach's alpha or test re test reliability,respectively. Experimental group received 2 educational sessions. Data analysis was done using chi-square,t-test and Wilcoxon test.

Results: the mean age of women was 26.7±5.6 and mean gestational age was 16.6±1. Although before intervention no differences in terms of demographic characteristics and health belief model constructs could be found ($p>0.05$),after the intervention the scores of health belief model were statistically significant between control and experimental groups $p<0.05$). Conclusion: since the results of the study supported applicability of health belief model to promote nutritional behavior in regard to anemia in pregnancy,implementing health belief model-based educational sessions in health centers is suggested to reduce complications of this problem.

Keywords: Pregnancy,Iron deficiency anemia,health belief model

Effects of consumption of probiotics and essential oils mixed soymilk on glucose and lipid and lipoprotein profile in diabetic rats

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Background: Diabetes is a chronic metabolic disease. The growing prevalence and incidence of it throughout the world indicate the importance of finding solution for help to control and reduce the risk of its acute or long-term complications. This study aimed to investigate the effects of probiotic soy milk using Lactobacillus plantarum A7 added with essential oil of C. cyminum on blood glucose,serum lipids profile,body weight and fecal Lactobacilli in diabetic rats.

Materials and Methods: Five groups of diabetic Wistar rats were examined: Control group,Soy milk group,Probiotic soy milk group,Soy milk containing essential oil of C. cyminum group,and probiotic soy milk containing essential oil of C. cyminum group had been intake these products for 30 days. Blood glucose and the serum lipid levels were collected in 10 days intervals.

Results: Probiotic soy milk using LA7 added with essential oil of C. cyminum reduced concentration of blood glucose,total cholesterol (TC),low-density lipoprotein cholesterol (LDL-C),significantly ($P<0.05$). This product had most percent of the changes for increasing of high-density lipoprotein cholesterol (HDL-C) ($P<0.05$).

Conclusions: Mix probiotics and essential oils can apply in innovation and diversity in the food industry with a synergistic effect in enhancing health benefits of this nutrient.

Keywords: soy milk,Lactobacillus plantarum,blood glucose, lipids profile,diabetic rats

Fetus growth centile and gender differences

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Background: anthropometric measurements of fetus is an integral part of most pediatric and many medical examinations. It is often of particular importance in making a diagnosis in the child with developmental delay. Therefore,we aimed to construct the fetal growth chart.

Materials &Methods: A total of 504 ultrasound observations in 156 respondents were collected during pregnancy. Anthropometrics parameters were collected through sonography reports. Monitoring of fetal growth measurements were carried out through centile growth chart. Growth charts comprised of; each fetal measurement for age were abdomen circumference,femur length,biparietal diameter,head circumference and age contain 15 th week till 36 th week of gestational period. To obtain centile growth charts,we adopted different models for different fetus measurements. The degrees of polynomials were selected such that the minimum error or highest precision was met. Grostat II is a statistical package for construction of growth centile models (Healy MJR et al 1988,Ayatolahi SMT et al 2001).

Results: Male fetus had higher head circumference than female,while foetal bipareital diameter in both genders had an increasing pattern. From 27th to 37th week of gestation femur length of female were higher than male. In 50th centile from 21st to 36th male abdomen circumference is higher than female.

Conclusion: The centile chart constructed from these measurements showed the sensible differences among genders. maternal or environmental factors acting early in life may affect the final fetal growth.

Keywords: Pregnancy,fetal biometrical parameters, growth, centils.

Application of the Health Belief Model for Unhealthy Eating Prevention among students

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Background: Unhealthy nutrition increases the risk of diseases incidence. Some researchers suggest that the interventional programs related to the prevention of chronic diseases including preventive nutritious recommendation should be started in schools. our objective was to determine the effect of education has done through health belief model on the student about healthy nutrition in Mashhad-2013.

Methods: This study was experimental research on60 girl students who were selected by multistage random sampling. The instruments used in the current study were per-

ceptions of nutritional assessment questionnaire. In order to analyze the data, SPSS16 package was employed and independent-sample t- test, Chi-square and ANOVA were utilized.

Results: The demographic features of the studied population in the two groups were similar before the intervention (p>0.05). Also before the intervention, the results showed that 15.6% of the experiment group and 12.3% of the control group didn't use to have breakfast. After the intervention, these values were reduced to 11% and 13.6% in the two groups, respectively. Paired T test and Chi-square after the intervention showed a significant increase in mean scores for perceived susceptibility (from 2 to 3/1) , perceived severity (from 4/6 to 9/7) , perceived benefits of (5/3 to 8/2) and perceived barriers (3/4 to 10/6) and efficacy 2/9 to 12/3) was observed in the intervention group .

Conclusion: The results of current study approved the existence of unhealthy nutritious behaviors among the primary school children, and that applying HBM framework was useful to modify some of these behaviors .Our findings also supported the feasibility of an educational health program based on HBM as well as welfare authorities' role in order to induce behavior changes against unhealthy nutrition in students.

Keywords: Unhealthy nutrition, snack food, health belief model, student

Comparison of application of biosensors with other diagnosis methods of pathogenic bacteria in food stuff

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Background: Detection of pathogenic bacteria in order to prevent and detect health problems and food security is of prime importance. Traditional methods of bacterial detection and standards, achievement of results usually takes a few days. Therefore, many researchers have focused their efforts on the development of rapid methods. Introduction of new technologies, especially biosensors, new and promising way forward is up. This article refers to the traditional techniques and recent advances in the diagnosis of bacterial biosensors for the detection of pathogenic bacteria have been proposed**.**

Methods: This study is a systematic review was conducted. Information gathered through library research and field in electronical sources and valid Sources including journal articles related research is conducted. Results: Studies have shown results of using medium and counting colonies have more time to spend PCR But the results are not definitive and resounding. With the help of biosensors as accurate and reliable results are obtained in a much shorter time. Optical biosensors because of the more popular choices, and sensitivity analysis and electrochemical biosensors for rapid detection Trbh work process at the same time, allowing the analysis of turbid samples provides and equipment costs a lot less need.

Conclusions: Optical biosensors may be more sensitive to the high cost and complexity of electrochemical, but they are also given less attention. On the other hand, electrochemical biosensors for detection of pathogens simpler but adequate performance. Finally, to extend the application of biosensors needs to be accurate to the same level of accuracy as the conventional methods cfu / ml 100-10 reach

Keywords: Bacteria Diagnosis, Biosensor , PCR

Fetus growth centile and gender differences

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Background: anthropometric measurements of fetus is an integral part of most pediatric and many medical examinations. It is often of particular importance in making a diagnosis in the child with developmental delay. Therefore, we aimed to construct the fetal growth chart.

Method: A total of 504 ultrasound observations in 156 respondents were collected during pregnancy. Anthropometrics parameters were collected through sonography reports. Monitoring of fetal growth measurements were carried out through centile growth chart. Growth charts comprised of; each fetal measurement for age were abdomen circumference, femur length, biparietal diameter, head circumference and age contain 15 th week till 36 th week of gestational period. To obtain centile growth charts, we adopted different models for different fetus measurements. The degrees of polynomials were selected such that the minimum error or highest precision was met. Grostat II is a statistical package for construction of growth centile models (Healy MJR et al 1988, Ayatolahi SMT et al 2001). Results. male fetus had higher head circumference than female, while foetal bipareital diameter in both genders had an increasing pattern. From 27th to 37th week of gestation femur length of female were higher than male. In 50th centile from 21st to 36th male abdomen circumference is higher than female.

Conclusion; The centile chart constructed from these measurements showed the sensible differences among genders. maternal or environmental factors acting early in life may affect the final fetal growth.

Keywords: Pregnancy, fetal biometrical parameters, growth, centils.

Colors of Fruit and Vegetables and 3-year changes of cardiometabolic risk factors in adults: Tehran Lipid and Glucose Study

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Background and aim: Various fruits and vegetables have different nutrient profiles and phytochemicals and recent investigations have mainly focused on health outcomes of fruit and vegetable subgroups. In this study, we investigated the associations of color's subgroups of fruits and vegetables with 3-year changes of cardiometabolic risk factors.

Methods: This longitudinal study was conducted in the framework of Tehran Lipid and Glucose Study, between 2006-2008 and 2009-2011, on 1272 adults. Total intake of fruits and vegetables and their subgroups have been assessed by a validated semi-quantitative food frequency questionnaire at baseline and second examination. Demographics, anthropometrics and biochemical measures were evaluated at baseline and 3 years later. The associations of cardiometabolic risk changes with fruit and vegetable subgroups were estimated. The odds (95%CI) of cardiometabolic risks per 25g/d, 50g/d or 100g/d fruits and vegetables categories were estimated.

Results: Mean age of men and women at baseline was 39.8±12.7 and 37.3±12.1 years, respectively. In men, higher intake of red/purple fruits and vegetables was related to lower weight and abdominal fat gain; the yellow group was inversely associated with 3-year changes of total cholesterol and HDL-C. Each 25 g/d increase in consumption of green fruits and vegetables decreased the incidence of hypertriglyceridemia by 12% (OR:0.88, 95%CI:0.71-0.99) in men. In women, each 50 g/d increase in consumption of orange

group decreased the occurrence of hypercholesterolemia by 15% (OR:0.85, 95%CI: 0.71-0.99). The odds of overweight after 3-years of follow-up for each 100 g/d red/purple and 50g/d yellow fruits and vegetables was 0.92 (95% CI:0.87-0.98) and 0.78 (95%CI: 0.64-0.97), respectively.
Conclusion: Various fruit and vegetable subgroups based on the colors had different effects on cardiometabolic risk factors.
Keywords: cardiometabolic risk factors, fruits and vegetables, pigmented phytochemicals

Impact of educational program based on BASNEF model on the nutritional behavior and physical activity among Esfahan high school students
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Background: The lifestyle of adolescents is known to be one of major impact on future health status in later adolescent stage. Aim: This study was conducted to test the effectiveness of proper education in adolescent behavior to adopt healthier lifestyle.
Method: The BASNEF (Belief, Attitude, Subjective Norm, and Enabling Factors) was used as an educational model for this study. A total of 237 of obese adolescents aged (16-17) was randomly selected to participate the study. Each participant was required to complete the BASNEF questionnaire and attended 150 minutes of each four educational session .The assessment were made and compared at base line (pre test), one month (post test)and follow up (after three month). Data on physical activity also was obtained. No education unit was given to control group.
Results: Nutritional belief and attitude among participants were significantly increase (p<0.001). The evaluation of attitude toward behavior was also found to be higher but not statistically significant .For control group, no significant changes in all parameters and stages was found (p>0.11). The physical activity the BASNEF scores of experimental group significantly more than the control group respectively was(p<0.001).
Conclusion: The positive outcomes obtained at the end of this study suggest that the BASNEF model is suitable to be used as educational tool to deliver self-consciousness and administration among adolescent. As the adolescent behavior reflects later stage in life style, the longer-term follow up would be good to be continued to provide better insight of the BASNEF effectiveness (with the present data obtained, the new follow up program me BASNEF could be useful to formulate nutritional and educations among teachers and parents in order the bold effect continues
Keywords:BASNEF, physical activity, healthy eating, obesity, over weight

Can BASNEF model Constructs be Predictor of lifestyle self administering behavior in youth?
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Background: youth has an imperative meaning in several ways. It comprises the agreement with healthy or risky lifestyles, which often leads people towards adoption of healthy or risky life style during adult age. Objective: The primary objective of this study was to determine the effectiveness of an educational intervention program based on the BASNEF Model on dietary pattern and physical activity of youths.
Methods: A cross sectional study was carried out among a sample of Esfahan students. This was a quasi-experimental intervention study, implemented during 2010-2011. Study Setting: This research study was carried among students from Esfahan, Iran, an urban district in which majority of the residents are middle class. Participants: A total of randomly selected 288 (later divided into experimental and control groups) high school students aged between 15 and 17 years participated in this study. The sample frame was the list of students in the schools. Intervention: The BASNEF model is a simplified approach to understanding behavior. Subjects completed the BASNEF questionnaire at baseline (pre-test), one month (post test) and three months (follow-up) after the educational intervention. Four educational sessions, each with 120-150 minute duration was held. Analysis: The ANOVA test was used to compare trend of changes. Pearson correlation analysis was used to determine the correlation between components of the BASNEF model. Regression analysis was employed to find out the predicting power of the model.
Results: The nutrition belief and nutrition attitude scores of the experimental group increased significantly in both males and females subjects ($p < 0.001$). After intervention the mean BASNEF scores were significantly more in the experimental group ($p < 0.001$) and participation in physical activity was significantly greater than the control group ($p < 0.001$).
Conclusion: The BASNEF model could be effective in encouraging the adoption of nutrition related behavior and active lifestyles favorable to youth health and well-being.
Keywords: BASNEF, physical activity, healthy eating

The Effect of Ramadan Fasting on IGF-1 and IGFBP-3 in 9-13 Years Old Pre-Menarche Girls
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Background: Metabolic and endocrine effects of fasting have been studied in healthy adults but not on the children in age of puberty. The purpose of this study was to determine the effects of Ramadan fasting on the serum of IGF-1 and IGFBP-3 among girls.
Methods: This cohort study was performed during Ramadan of 2012. Fifty-eight girls aged 9-13 years old were assigned to fasting and non-fasting groups. All measurements were collected before and after Ramadan. Weight and height of the subjects were measured and body mass index (BMI) was calculated. Body composition was measured using bio- impedance analyzer method and tanner stages were determined. Serum IGF-1 and IGFBP-3 were measured using Radio Immunoassay and ELISA kit,respectively. Paired t-test was used to compare result of each group before and after Ramadan. Independent t-test was used to compare two groups together. Tanner stage was adjusted in the generalized linear models.
Results: Ramadan induced a significant decrease on BMI and weight in fasting group (P=0.005,P=0.044,respectively) while a significant increase was observed in non-fasting group (P0.05 for both). However,there was a significant increase on serum IGF-1 levels was found after Ramadan in non-fasting group (P=0.005). Also IGF-1 increased in fasting group (P>0.05).
Conclusions: Findings of the current study demonstrated that fasting has no negative effects on serum IGF-1 and IGFBP-3 among 9-13 years healthy girls before the age of menarche.
Keywords: Ramadan fasting; IGF-1; IGFBP-3; Pre-Menarche

A case-control study on red meat consumption and risk of stroke among Iranian population

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Background: Epidemiologic data on the relationship between red meat consumption and stroke are sparse and inconsistent. Data in this regard are lacking from the Middle-East. We aimed to examine the association between red meat consumption and stroke in a group of Iranian adults.

Methods: This hospital-based case-control study included 195 stroke patients and 195 hospital-based controls. Cases were stroke patients hospitalized in neurology ward of Alzahra University Hospital and control subjects were recruited from patients hospitalized in other wards with no history of cerebrovascular diseases or neurologic disorders. Usual dietary intakes of participants were assessed by means of a validated 168-item semi-quantitative food frequency questionnaire. Total red meat consumption was calculated by summing up the consumption of red, processed and visceral meats.

Results: Participants with stroke were older, more likely to be male and less likely to be obese. Individuals in the highest tertile of red meat intake, were 119% more likely to have stroke (OR: 2.19; 95% CI: 1.33, 3.60) compared with those in the lowest tertile. After controlling for age, sex and total energy intake, the association between red meat consumption and stroke was strengthened (OR: 2.72; 95% CI: 1.53, 4.83). This association remained significant even after further controlling for physical activity and smoking as well as dietary intakes. Additional adjustments for BMI did not influence the association significantly (OR: 2.96; 95% CI: 1.30, 5.60).

Conclusion: Consumption of red meat was associated with greater odds of having stroke in a group of Iranian population.

Keywords: Red meat, stroke, diet, Iran

Determinants of food label use in Iran: A study of consumers at the point of purchase

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Background: Food labeling is found to be a very important public health tool aimed at providing consumers with information which may influence their purchasing decisions. This study has aimed to assess determinants of food label use among consumers in Iran.

Methods: This descriptive cross-sectional study was conducted as point of purchase survey among 2123 shoppers in thirteen chain stores in Tehran, Iran. Convenience sampling was used to collect data from all respondents who agreed to participate. The percentage of interviewees per store was similar among the thirteen stores. Data was collected using a structured questionnaire which sought information regarding the respondent's background, knowledge and usage of information on food labels. All the questionnaires were coded and entered into the computer for analysis using SPSS statistical software.

Results: Results showed that the majority of respondents were female (60%), the youth (56.8%), married (83.2%), and holders of a diploma & higher (81.4%), and 2-4 person household (78.4%). Most of the respondents were in the lowest quartile of knowledge about information on food labels (44.2%). 82.8% of the subjects claimed they read food labels when shopping. The findings revealed the effect of knowledge on the use of food labels. So those in the highest quartile of knowledge about food labels paid more attention to the food labels as compared with those in the lowest classification score of knowledge.

C**onclusion:** This study showed that knowledge of people with information on food labels is very low and nutritional knowledge has a strong effect on nutritional behavior. The results suggest that standardized food label designs, long term nutrition education, and training interpretation of information listed on food labels and the importance of using it in order to select the correct food to reduce the nutritional diseases is necessary.

Keywords: Determinant, Food label, Point of purchase

Aerobic training and salvia officinalis extract on and anabolic and catabolic hormone

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Background: aerobic exercise has been shown to elicit a significant acute hormonal response. It appears that this acute response is more critical to tissue growth and remodelling than chronic changes in resting hormonal concentrations, as many studies have not shown a significant change during aerobic training despite increases in muscle strength and hypertrophy. The aim of this study was the effect of 8 weeks aerobic training with salvia officinalis extract on some of anabolic and catabolic hormone in fat men students.

Methods: 32 of the male students at the University khatam Anbiya as subjects in this study were selected and randomly divided into four groups: a control group, Salvia consumer groups, Salvia consumer groups and exercise group, an exercise group. The experimental group consisted of 8 weeks of aerobic training three times a week. Blood samples from after 12 to 14 hour fast and before and after 8 weeks (48 hours after the last training session) were collected.

Results: the results showed that aerobic training no significantly effect on Thyroid Hormones levels in obesity men students. However, the Salvia consumer groups and exercise group, and exercise group after aerobic training had significantly upper testostron and lower cortisol.

Conclusion: These results suggest that aerobic exercise along with taking Salvia is able to increase the production of testosterone and cortisol levels decrease. However, the effect of Salvia extract on anabolic and catabolic hormones and their potential benefits, there needs to be more detailed and accurate analysis.

Key word: aerobic, salvia officinalis, anabolic ,catabolic

Authors Index C

Serum levels of malondialdehyde and activity of antioxidant enzymes in patients with type 2 diabetes to control blood sugar

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Background: Diabetes Disease and chronic High BS cause an increase in free radicals. Stress oxidative has an important role on the effects on diabetes in short term and long term. This study assesses some oxidant and anti –oxidant markers in diabetics patient with controlled and uncontrolled blood sugar.
Method: 127 patients with diabetes type 2 using BS reducing medicines (67 patients with controlled diabetes and 63 patients with uncontrolled BS) are the samples of this study. Clinical assessment contains height,weight,BMI,systolic and diastolic blood pressure. Biochemistry assessment contains FBS,glycolized hemoglobin,Malonyldialdehyde is serum Catalase and dismutase super anti- oxidant enzyme's functions. To analyzing the data spss (11) and to compare the data of two groups t-test in used.
Results: In uncontrolled diabetic patients type 2, Malonyldialdehyde's mean in serum (2.01±۰,۸۸) was significantly upper than controlled diabetics (۱,۶۳ ±۱,۰۱) (p= ۰,۰۳). In controlled diabetic patients Catalas's function mean (148.126± 42.50) was upper and dismutase super oxidase. (1159.38± 244.31) was lower than controlled diabetes patients (catalas: 136.95± 39.85,dismutase super oxidant: 1171.69± 229.45),these differences are not statistically meaning full.
Conclusion: Malonyldialdehyde in serum in uncontrolled diabetic patients,so uncontrolled diabetes type 2 and chronic high BS,lipid peroxidation increases. The function of catalase in response to free radicals increases,but may decrease as a effect of free radicals,like decrease of dismutase super oxide.
Keywords: type 2 diabetes, malondialdehyde, antioxidant

Comparison of the prevalence of overweight and obesity in the city of Bandar Gaz Staff Health Network During the year 1391-1393

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Background: Overweight and obesity is one of the most common chronic disorders in Our country and development in developing countries is alarming. Physical activity and reduce obesity through Lifestyle Changes Risk Factors increasing prevalence of overweight and obesity With the increase of disease and mortality This study aimed to determine the BMI to assess the health center medical staff working in the city of Bandar Gaz health center been done.
Methods: This cross-sectional study on 95 Personnel census method employed In health centers Bandargaz city health center in spring 1391 and 1393 was performed. Accurately weighed 100 grams employees to help balance the wear was measured without shoes the lightest. Height Use Height gauges standing without shoes was measured to determine the body mass index were analyzed.
Results: Staff studied 95 men and 45 women aged 55 -20 50 PersonnelThe RangeYears,the mean age was 34 years. Average BMI Of 26.16 In 91 to 26.52 in 93 Increased Out in 91 patients with a normal weight of 40% to 35% decline in 93 years. Average Overweight from 40% to 46.25% at 91 years and Degree of obesity increased from 15% to 17.5%. Overweight Individuals PhD From 45% to 50%,BA Of 20% to 35%,resourceful Of 5/37% to 46.15%,Diploma From 6/51 to 55.55% and Individualsunder Diploma from 37% to 40 % Change.
Conclusion: The results showed that the prevalence of obesity and overweight is increasing among the staff. There was a significant relationship between education level and obesity index type so as to reduce the degree of obesity and overweight is increasing. They planned to control body weight with food and take training in order to achieve the optimal BMI Recommended
Keywords: BMI, Obesity, overweight, Bandargaz

Investigating the Prevalence of Iron Deficiency Anemia in Pregnant Women in Rural Bandargaz City In 2012

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Background: Anemia is the most common problem in pregnant women that leads to early delivery, low birth weight and babies with anemia, this study was to determine the prevalence of anemia in pregnant women in the rural city of Bandar Gaz during the first half of 1391.
Methods: This study is retrospective analytical descriptive, so, hemoglobin from 134 pregnant women with less than 11g/dlit in the first and third trimester and less than 10.5 g/dlit in second trimester that indicates anemia. SPSS software was used for analyzing the results.
Results: The findings showed that 11.2% of subjects in third trimester and 29.1% in first trimester have different degrees of iron deficiency anemia .subjects average age was 26, accompanied by 3% of babies with low birth weight (less than 2500 g). No difference were found between Sistani and Persian races.
Conclusion: Considering the fact that anemia can be prevented by proper training and proper nutrition .it can be significantly decrease by care and attention to see mental and physical health of mothers and their newborn.
Keywords: anemia, pregnant women, hemoglobin

The study of the awareness of how to maintain and consume the oil and salt by people referred to health centers and health homes in Bushehr in 2013.

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Background: due to the high prevalence of chronic diseases such as hyper lipidemia, hypertension, stroke and cardiovascular diseases, determination of people's awareness about the way of maintain and consuming of oil and salt among people referred to health centers and health homes has a strong importance. We study the awareness of how to maintain and consume the oil and salt among people aged 18 to 65 years old referred to health centers and health homes in Bushehr in 2013.
Methods: we used descriptive observational study designs and simple random for sample selection with n= 978 sample size among people in age of 18 to 65 years old. We used questionnaires contained of questions to evaluate

the awareness about the way of oil and salt maintenance and consumption (iodine salt and non iodine) by people. The informations were entered to SPSS-16 software and became analyzed.

Results: according to results the people who consume iodine salt were 97/6. % which was significantly related to age and sex ($p<0.05$). in this actuarial population the awareness about the way of maintaining the iodine salt in container with lid was 35/7 % , in dark containers 3/7 % and out of direct light reach 5/3 % and proper maintenance (in container with above mentioned features) among people was 3/6%. The maintenance the iodine salt in expose to light and in glassy container was 10/1%. the subjects who used saltcellar on the table was 37/4% which had a significant relationship with age and sex ($p<0.05$) and is more used in men More than women. the use of solid oil, semisolid oil, ghee and Margarine was 9/2% and the absolute use of liquid vegetable oil was 25/3 % and absolute consumption of frying oil was 26/1% that were related to both age and sex again. Maintaining the liquid oil in dark container was 36/8%, out of direct light reach was 10/9% and proper maintenance the liquid oil (in container with above mentioned features) was 3/5 %.

Conclusion: this study indicates that there are more needs to interventions by educating about benefits of iodine salt, not using saltcellar on the table, ways of proper maintenance the iodine salt and liquid oil to people referred to health centers and health homes.

Keywords: oil, iodized salt, cardiovascular, disease, hypertension

The Study of nomad's indigenous food systems: a strategy for improving the health and variety of dietary pattern

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Background: Indigenous food system demonstrating the surrounding local knowledge of foodstuffs. Also, it points out to the recognition, gathering, production and using these foodstuffs in the cultural context of societies. This system is based on the local knowledge for supplying the human survival condition which associates with environmental resources. Introducing the methods and many case studies for gaining the local knowledge and its importance have been debated in the present paper. The food system of Lak ethnic nomads of Lorestan Province is introduced as a field study case of indigenous food system and the practical worth of this knowledge will be argued.

Methods: This research is based on the interdisciplinary approach of studies carried out by CINE Center of McGill University in Canada to use the food patterns of indigenous people all around the world which help these people to preserve their local cultures based on their local food. Ethnography method, participant observation techniques and ethnographic interview are the strategies to achieve the mentioned goals of this study.

Results: Many studies have considered the local food system as a way to solving nutritional problems of indigenous and other communities. Nomad's food system is closely linked to environment. This system offers various lists of foods including fruits, vegetables and protein sources that are free of chemicals. The aspects of health and nutrition are simultaneously considered in local food systems. Based on gender, age and social characteristics, nomads have different access to the food resources.

Conclusion: The results showing considerable variation in food resources and their utilization in different seasons of year. This knowledge is contrived by the local women for production and foodstuffs reservation during diverse times. The Local food system has the capacity of change and improvement of diet and current health situation of societies. It also needs to be pursued the continuation and protection of methods among the nomads and indigenous societies as a priority of health. Decreasing and destruction of this knowledge lead to loss of benefiting from a human heritage.

Keywords: Indigenous food system, local knowledge, food wisdom, Lak ethnic.

Authors Index D

Physical activity and dietary pattern in relation to weight status among adolescent girls

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Background: There are nearly one billion adolescents in the world accounting for 20-25% of the total population in the developing courtiers. This particular group of population is likely to increase rapidly in the next 30 years due to population momentum effect. Nutritional status during adolescence plays an important role in human lifecycle. Healthy eating and physical activity habits formed during childhood can persist into adulthood and prevent or delay premature onset of a number of chronic diseases. The aim of this study was therefore to investigate physical activity and dietary pattern in relation to weight status among adolescent girls in Semnan.
Methods: In a cross sectional study, using two stage cluster sampling 256 adolescent girls were randomly selected from 8 Semnan secondary schools. Height and weight were measured according to WHO protocol and BMI was calculated. Data of energy and nutrient intake was collected by the 24-hour dietary recall and food record questionnaires. The ingredients of the food during the two days were categorized and their values were measured and coded. The data were then analyzed using the locally developed Dorosty Food Processor (DFP) software. The food frequency questionnaire was used to evaluate weekly food consumption. Physical activity was determined using Baecke et al questionnaire. Data were analyzed using SPSS15.
Results: The prevalence of underweight, overweight and obesity according to CDC 2000 reference for BMI-for-age was 5.9%, 11.7% and 4.7%, respectively. The present study showed a significant association between weight status and fast food consumption, daily intake of fat and the percentage of energy intake from fat among adolescent girls. Mean physical activity score was significantly different between underweight, normal, overweight, and obese high school girls (P<0.000). Conclusion: Low physical activity, consumption of fast food and high fat diet are the main problems in the lifestyle of Semnanian adolescent girls. Healthy eating patterns and physical activity should be considered in the promoting healthy behaviors of adolescent girls
Keywords: adolescent girls, dietary pattern, physical activity, weight status

Diet quality in college students in school of Health , Kerman University of Medical Sciences based on Healthy Eating Index 2005

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Background: This study was conducted to assess diet quality in college students in school of health.
Methods: In this cross-sectional study, 229 college students who selected by multistage method were studied . Usual dietary intake was collected using the valid FFQ(Semi Quantitative Food Frequency Questionnaire)in participents . Data entry was done using by spss 18 and data analysis was done by independent sample t.teat and ANKOVA.
Results: Two hundred and twenty nine college students including 151females(65.9%) and 78males(34.1%),mean age of 21.9years were studied. Mean of total fruit score in males and females were 2/72±1/68 and 3/58±2/26 serving /day respectively. A significant difference was observed in two groups(p=0.03). There was no significant difference in two groups in Score of whole fruit , total vegetables , dark gren and orange vegetables and legums, total of grains, whole grains ,milk, meat and beans (ser/day) ,oils(g/day),saturated fatty acid (%),sodium(g/1000Kcal),calorie intake from SFA(%).Total score of HEI 2005 in males and females were 64/21±8/5 and 64/22±9/24 respectively. No significant difference was observed between two groups.Poor f diet (score 70) was observed in 18 persons(18.1%),140(63.3%) and in 63person(28.5%) respectivel. No significant difference was observed between three groups in total vegetables, total grains,milk,sodium and cholesterol.
Conclusion: The result of this show that total intake of fruit in males needed proper education. That was significantly less than females and was less than recommended amount too.The majority of studied students had poor diet and those needed diet improvement.So they that need pay toattention. Only28.5% studied student had good diet.
Keywords: Healthy Eating Index2005,college students

Evaluate the effects of cashew nut intake on fasting serum glucose, insulin and lipoproteins in type 2 diabetes

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Background: Atherogenic dyslipidemia is one the risk factor of cardiovascular disease in type 2 diabetes. Several studies have demonstrated that nut consumption exerts beneficial effects on serum lipid profile. We designed an intervention study to evaluate the effects of cashew nut intake on fasting serum glucose, insulin and lipoproteins in type 2 diabetes.
Methods: In an 8-week randomized parallel clinical trial, 50 patients with type 2 diabetes (34 women and 16 men) were randomly assigned to two groups, using blocked randomization method: the intervention (cashew) and the control (regular diet) groups. Cashew nuts were replaced 10% of total daily calorie intake in the intervention group. Blood samples were collected from fasting subjects at entry and at the end of the study. All dietary data were obtained using 24-hours recalls at baseline, in the middle and at the end of the study.
Results: Mean high density lipoprotein (HDL-C) and insulin concentrations were statistically different between the intervention and control groups (P=0.028 and P=0.023 respectively), while other biochemical indices such as serum glucose; total cholesterol; triglyceride and low density lipoprotein (LDL-C) were not.
Conclusion: The results indicated that replacing 10% of total calorie intake with cashew in patients with type 2 diabetes may increase HDL-C and decrease serum insulin and hence, possibly play an important role in decreasing cardiovascular risk factors in patients with type 2 diabetes.
Keywords: Cashew nut, Type 2 Diabetes, Insulin, Lipo-

protein

Evaluation of the effects of the combination of inulin and oligofructose inflammatory and anti-inflammatory indices in women with type 2 diabetes

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Background: Increased levels of inflammatory markers play an important role in the development of diabetes and its complications. Recently changed intestinal microflora using the prebiotics has been considered as a possible solution to deal with inflammation,insulin resistance and other metabolic disorders in diabetes. Accordingly,the present study is designed to evaluate the effects of the combination of inulin and oligofructose inflammatory and anti-inflammatory indices in women with type 2 diabetes. Methods: This triple blind randomized clinical trial was performed on 52 diabetic women,with 25….
Keywords: Type 2 diabetes, inulin, oligofructose, inflammation, cytokine

Determination the effects of Inulin-type fructans of different degree of polymerization on the blood pressure in women with type 2 diabetes

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Background: High blood pressure plays an important in the development of cardiovascular disease in patients with type 2 diabetes. Animal studies suggest that inulin-type fructans control blood pressure .with a lot of different mechanisms. The present study is aimed to determination the effects of Inulin-type fructans of different degree of polymerization on the blood pressure in women with type 2 diabetes.
Methods: This randomized clinical trial on 76 patients (47.75 ± 8.25 years) with type 2 diabetes was performed. The intervention groups (n = 24 and n = 27) and controls (n = 25) received 10 g/d combination of short-and long-chain inulin-type fructans and received 10 g/d maltodextrin for 8 weeks, respectively. Nutrient intake data was also collected with the use of 3-d dietary record. Blood pressure and anthropometric measurements were performed before and after intervention. Data were analyzed with the use of SPSS software, Paired t tests and analysis of covariance.
Results: After intervention, we did not find changes in type of drugs, physical activity and micronutrients intake of the patient. Significant difference was observed in mean weight and BMI between three groups and the intervention groups compared with the control group. After 8 weeks of supplementation, with adjusting for other confounding factors such as weight and BMI, only the reduction in mean systolic blood pressure was significant in the between the groups. Significant reduction in mean systolic blood pressure of inulin group (-8.50%) and combined with the oligo fructose inulin group (-6.70%) compared with placebo was observed (with adjustment for confounding factors, the weight and BMI). Reduction in diastolic pressure in the intervention groups compared with the control was not significant. No significant difference in mean systolic and diastolic blood pressure was observed between the intervention groups.
Conclusion: Due to the effect of inulin-type fructan in reducing of blood pressure in diabetic patients, these prebiotics could be recommended a therapeutic approach for diabetic patients with hypertensions. To better clarify this issue, further studies in this area is recommended.
Keywords: inulin-type fructans, Oliogofructose, Blood pressure, Weight

The association between serum NGF and BDNF levels with obesity in patients with major depression

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Background: Both depression and obesity are major public health problems. NGF-BDNF/TrkA,B dysfunction has been attributed to pathogenesis of both depression and obesity. Our aim was to investigate the relationship between obesity,food intake and the serum levels of BDNF and NGF among patients with Major Depressive Disorder (MDD).
Methods: Forty-four major depression patients aged 18-65 years old were enrolled in a cross sectional study. Depression was confirmed using criteria from the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV-TR. Three-day food records were obtained during two typical weekdays and one weekend day (3-d food record) to estimate mean energy intake. The serum levels of BDNF and NGF (pg/ml) were assayed using ELISA techniques. Partial correlation was performed to assess the association between serum BDNF and NGF levels with general and abdominal obesity after adjustment for age, sex, and disease duration.
Results: The serum levels of NGF were inversely correlated with BMI (r = -.431,P = 0.032),but the serum BDNF levels were shown to have a positive correlation with BMI (r = .414,P = 0.040) after adjustment for confounding variables. Waist circumference (WC) was not found to be correlated with the serum levels of NGF (r = -.176,P = 0. 291) and BDNF (r = .288,P = .080). The serum levels of BDNF (r = -.184,P= .244) and NGF (r=-.059,P =.712) were not found to have a significant correlation with calorie intake after adjustment for confounding variables.
Conclusion: The serum levels of NGF were inversely associated and BDNF levels were positively associated with general obesity. This study failed to demonstrate an effect of neurotrophic factors on abdominal obesity and calorie intake,but our findings may be limited by the low sample size.
Keywords: Brain-derived neurotrophic factor (BDNF); Nerve growth factor (NGF); Obesity; Major Depression; body mass index (BMI)

Prevalence of Food Insecurity and its relationship with some socioeconomic factors and educational promotion in high school girls, Noshahr

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Background: Food insecurity is related to limitation or unstable accessibility to food for active and healthy life. Food insecurity can affect the individual physical, behavioral, social and mental health status. Knowledge about the prevalence of food insecurity and its risk factors is necessary for developing strategies to combat public

health problems at the community. The study aimed to assess the food insecurity prevalence and socioeconomic status of high school girls in Noshahr.
Methods: A cross-sectional study was conducting on 525 high school students aged 14 through 18 years who recruited from 10 public and private high schools. General questionnaire was used for collecting demographic data. Anthropometric status and Body Mass Index was assessed by measuring, weight, height, waist and hip circumference. Food insecurity was assessed by the 18-item United States Department of Agriculture (USDA). Food intake was determined by a 147-item validated Food Frequency Questionnaire (FFQ). Physical activity was assessed by International Physical Activity Questionnaire (IPAQ). Data were analyzed by SPSS version 16. The statistical difference was considered significant with P value <0.05.
Results: The prevalence of food insecurity in student was 41%. Food insecurity status was significantly associated to neighborhood status, parent's job and education, family economical level, employed family member, and Grade Point Average (PA).
Conclusion: The family economical status was a strong determinant of food insecurity status. Food security seems increase the chance of higher GPA. Comparative studies for providing comprehensive knowledge related to other related factors and educational progress is recommended.
Keywords: Food insecurity, Household Food Security, Socioeconomic status, High school students, GPA

Mineral intake of female and male basketball players

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Background: Dietary composition and quality of nutrition pattern affect athletes performance,recovery rate and their ability to physically and mentally competence. Training and exercise outcome related to nutrients intake of professionals. Aim: This study assessed major mineral intake of basketball players.
Materials &Method: This cross sectional study conducted on 18 male and 10 female professional basketball players. Their nutrients intake of subjects was checked by twenty four hour food recall questionnaire. Data were assessed using Nutrition software (version 4) and their food intake was compared with recommended daily allowance (RDA) with independent-samples T Test,using SPSS software (version 21.0). P value lower than 0.05 were set as statistically significant level.
Results: The average age of male was 15.4±0.7 years and for female was 14.3±.7 years old. Mean (±SD) of iron intake in male and female were 43.36±18.55 g and 18.03±6.17 g,respectively. The average of calcium intake were 1164.4±683 g and 1104±471 gram and mean of two other macronutrients of male and female consumption were 2236±949 g and 1509±668 g for sodium,6188±2117 g and 3404±977 g for potassium,in sequence.
Conclusion: Mean iron,calcium,sodium and potassium intake of professional basketball players were higher in men in comparison with women,significantly. Total daily key mineral consumption was higher than non-athletes in both genders.
Keywords: Mineral intake,basketball players,Isfahan

Finding reasons for the failure of various diets and the effects of life style in weight loss

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Background: According to figures cited by the Deputy Minister of Health and Medical Education in (Azar 1392) December 2013 , 48% of the population were overweight and obesity is the major factor of death of 21,000 people annually in the country. As mentioned, the aim of this study is finding reasons for the failure of various diets and the effects of life style in weight loss.
Methods: The analytical questionnaire has surveyed 400 random samples (no optional) with overweight (including 300 women and 100 men) . The questionnaire focused on the impacts of dietary habits, physical activities , stress and psychological pressures and basically on dietary failures .
Results: Based on the findings, about 90% of the participants do not consider the effects of lifestyle in losing weight . They put themselves on awful various diets and hard physical activities , slimming drugs , extreme measures to lose weight in short time . Although about 62% can achieve the ideal weight, they will gain 50% of their lost weight again .
Conclusions: The most important reasons of failures in slimming diets and lack of maintenance and long-term results is ; one-dimensional view to losing weight regardless of the effects of lifestyle.
Keywords: Weight loss, Diet, lifestyle

Association of dietary energy and macronutrients with physical and cognitive function in the elderly living at nursing homes of Tabriz

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Objective: To investigate the association of dietary energy and macronutrients with physical and cognitive function in the elderly living at nursing homes of Tabriz.
Methods: In total,76 elderly (24 men and 52 women) living at 3 nursing homes (Ana=29,Mehr=19,and Fayyazbakhsh=28) were recruited for this study. Physical and cognitive functions were assessed using the Barthel Index (BI) and Mini-Mental State Examination (MMSE),respectively. Intakes of energy and macronutrients were collected using a three-day weighed food record through direct observation. Pearson Correlation and One-way ANOVA tests were used for statistical analysis.
Results: The mean age of the patients was 75.93± 9.5 years (women: 68.5% and men: 31.5%). The mean score of MMSE and BI was 7.8 ±0.7 and 66.3 ± 36.6,respectively,which were significantly different among the three centers (p=0.03 and p
Keywords: Geriatric,Nutritional intake,Physical function, Cognitive function

Differences in Energy and Nutrient Intakes between Patients with Major Depression and Control Group

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Background: The burden of depression is on the rise globally. The association of nutritional status with major depressive disorder (MDD) has been suggested in a few studies but with controversial results. Therefore, the present study was carried out to measure macro- and micronutrient intake in patients with major depression and to compare them with normal control subjects.
Methods: In this cross-sectional, case-control study, we compared intakes of energy and 26 nutrients computed with the 3day-weighed diet records (3d-WDRs) in 41 patients with major depressive disorder against those of 41 normal control individuals (18-60 years old, matched for age, sex and Body Mass Index (BMI)). Depression was confirmed using criteria from the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV-TR. Anthropometric and Demographic variables were recorded for all participants. Comparisons between groups were performed using parametric (Student's t-test) and non-parametric (Mann-Whitney U-test) tests. The one-sample t-test was used to compare the nutrient intakes of groups with Recommended Dietary Allowances (RDA). P values less than 0.05 were considered statistically significant.
Results: There was no significant difference in demographic variables between groups. Mean daily intake of energy in patients (mean, 1728.24; SD, 333.12) was generally less than that of control subjects (mean, 1974.36; SD, 440.32; p=0.034). We found that means for vitamins B2 (p=0.005), B5 (p=0.028), beta carotene (p=0.043) and magnesium (p=0.034) were significantly lower in the patients with major depression than in the control group. There was no significant difference between the two groups in their intake of macronutrients or other micronutrients besides vitamins B2, B5, beta carotene, and magnesium in 3d-WDRs. Inadequate intake of magnesium, folic acid, pantothenic acid (vitamin B5), and calcium was seen in depressed patients and inadequate intake of omega 3, vitamin E, selenium, copper, and dietary fiber was observed in both groups when compared with the values of RDA.
Conclusions: Nutrition interventions can be inexpensive, safe and acceptable factors to consider when treating patients who are diagnosed with Major Depressive Disorder (MDD).
Keywords: major depression, nutrient intakes

Evaluation of the bio-yeast and baking soda consumption in the bread products in the first six month of 2014 in Guillan province

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Background: One of the key ingredients used in the family food pyramid are bread products, so the quality and safety of these substances in the human diet is very important.
Through the consumption of bread, a significant portion of the nutrient needed by the body like protein, or the starch, and minerals are provided. Some 80% of iron,40% of calcium needed for proper body function are attend through bread. Fermentation process of the bread has been undertaken by two method. A:bio-yeast (Saccharomyces cerevisiae) B:chemical bicarbonate of soda
That in A the production of CO_2 gas leads to better fermentation and higher quality food but in B the spite of the formation and fermentation, is also a disadvantage because of the hazards, including the anemic, hollow bone, indigestion, depression, considering baking soda is potentially harmful to human due to disruption in absorption of iron, calcium and phosphorus, it use in the bakeries has long been abandoned but still many of bakeries illegally use it.
Methods: In this research the prevalence of baking soda consumption in the bakeries in the city of Rasht was studied. The samples collected randomly by the head office Health center was analyzed by PH-METER caliber in the PH 4 and 7 is used.
According to the 2826 standard allowed PH for a variety of breads is as follows: Barbari bread and Lavash and Taftoon: 5-6 Sangak bread: 4/6 - 5/6. If the PH value exceeds the standard value by the device indicates the use of chemical baking soda.
Result: In the first six months of 93,of 219 samples of bread, received from a variety of breads (Sangak 23,Lavash 44,Barbary 139,Taftoon13) a total of 172 of the used yeast and the the rest used baking soda for fermentation. Studies show 114 of Barbari bread,32 of Lavash bread, 23 of Sangak bread and 3 of Taftoon bread were standards.
Conclusions: In general, about one-fifth of the samples used baking soda so according to the disadvantages of the bread with soda, measures should be required to inform the Bakery and consumers regarding its potential hazards.
Keywords: Bread - baking soda - Food Laboratory

Effects of Acrylamide and Vitamin C on Rat Embryonic Development

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Background: Acrylamide (ACR) according to the method of cooking foods is increasingly used and its adverse effects on multiple organ systems have been described sporadically in the literature. This substance can be found in foods that are consumed annually worldwide, such as crisps, bread, biscuits. The purpose of this study was to evaluate the effects of ACR on development.
Methods: Inthis study 20 adult female Wistar rats weighing 180 gr and aged two months were used. Animals were randomly divided into four groups. Female pregnant rats were orally administered 10 mg/kg ACR and/or 200 mg/kg vitamin C (vit C). Pregnant rats were sacrificed on the 15th day of gestation and mother's weight was measured. After that, their fetuses were taken out and were evaluated for fetus number, weight, crown-rump length (CRL). Data were analyzed by SPSS software and by ANOVA and LSD Test. $P<0.05$ considered as statistically significant.
Results: The results showed that ACR decreased fetal weight and CRL, but this reduction in weight P0/001 and the number of embryos with $P<0.05$ was significant.
Conclusion: ACR exhibits a harmful effect on the development, which may be prevented by administration of vit C as an anti oxidant.
Keywords: acrylamide, vitamin c, development, rat embryonic

Authors Index E

No evidence of association between apo E polymorphism and BMI and lipids profile in Turkmen population

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Background: Apolipoprotein E (apoE) is a glycoprotein that bonds to LDL receptors and plays an essential role in lipid transport and metabolism. Apo E has different isoforms. Its terminal amine and carboxyl group may cause molecular ionic changes leading to different serum lipid concentration. The present study purposed to determine the distribution of apoE alleles in a Turkman population and its association with lipid profile.
Methods: In a cross-sectional study, in period of May to August 2011,354 healthy Turkman were recruited. Fasting blood samples were collected for biochemical tests and DNA extracting and stored at -70˚c. Genomic DNA was amplified using PCR-RFLP method. The resulting fragments of PCR product digestion were detected by polyacrylamide gel electrophoresis. Data were analyzed using SPSS software (version 16) .The difference of general characteristics between two genders was tested by the Student's unpaired t test. The association of apoE genotypes/alleles with lipid variables was tested by analysis of variance (ANOVA).
Results: The frequencies of genotypes E2E3 ، E2E4 ،E3E3 ، E3E4 were 20.93,2.32,65.41,11.34 respectively. Two homozygote genotypes E2E2 and E4E4 were not detected in our populations. However total cholesterol, triglyceride, low density lipoprotein cholesterol and high density lipoprotein cholesterol levels were higher in E2E4 genotype, which was not statistically significant. We have not seen significant association between apoE polymorphism with BMI and serum lipid concentration in men or women .
Conclusion: The present study showed that ε3 allele and E3/E3 genotype are the most common allele and genotype while ε2 and ε4 alleles had lower frequencies,respectively. Results didn't confirm any association between apo E polymorphism and BMI and lipids concentration in Turkmen population.
Keywords: Apolipoprotein E; Polymorphysm; Genetics; Lipids

Effects of silymarin supplementation on anthropometric indices, blood pressure and serum hs-CRP levels in patients with type 2 diabetes mellitus: A triple-blind randomized placebo-controlled clinical trial

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Background: Diabetes is a serious metabolic disorder and oxidative stress and inflammation contribute to its pathogenesis and complications. Since silymarin is an antioxidant with anti-inflammatory properties, this triple-blind randomized clinical trial was conducted to evaluate the effects of silymarin supplementation on anthropometric indices, blood pressure and hs-CRP in type 2 diabetes mellitus patients.
Methods: and Materials: Forty type 2 diabetes patients aged 25-50 years old and on stable medication were recruited in the present randomized triple-blinded clinical trial and randomly assigned into two groups. Patients in the silymarin treatment group received 140 mg, thrice daily of silymarin (n=20) and those in placebo group (n=20) took identical placeboes for 45 days. Data on height, weight, waist circumference and BMI were collected at base line and in the end of the study. Fasting blood samples were obtained and hs-CRP levels were assessed at baseline and at the end of the trial.
Results: At the end of study, anthropometric indices including Weight, BMI and waist circumference were reduced significantly by 0.62%, 1.02% and 1.79% respectively in silymarin group compared to placebo (p<0.005). Silymarin supplementation led to a significant reduction in systolic and diastolic blood pressure (p<0.005). There was a significant reduction in hs-CRP levels by 26.83% (p<0.05) in silymarin group compared to placebo group.
Conclusion: Silymarin supplementation may improve inflammatory status and decrease hs-CRP levels and may be effective in improving diabetes complications in type 2 diabetes mellitus patients. More studies are warranted in order to clarify the beneficial effects of silymarin application to control metabolic complications of diabetes
Keywords: Diabetes; silymarin; hypertension; hs-CRP; anthropometric indices

Effects of citrus polymethoxy flavone tangeretin on cancer cells inflammatory pathways

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Background: Polymethoxylated flavonoid "Tangeretin" (5,6,7,8,40-pentamethoxyflavone) is concentrated naturally in the peel of citrus fruits. Tangeretin as an antioxidant exhibit many tumor growth suppressive effects such as anti-proliferative, anti-invasive, anti-metastatic, and antioxidant activities. However, cancer is condition that many inflammatory pathways over activation are critically involves in its initiation, promotion and progression. Thus, safe, inexpensive, and effective new treatments are needed toward inflammatory process in cancer. The aim of this article is surveying the effects of Tangeretin on cancer cells inflammatory pathways.
Methods: This article is a review on articles published in googlescolar and pubmed since 2000. Results: Based on evidences from experimental studies, Cytokines such as IL-1b induces the activation of ERK, p38 MAPK, JNK, and AKT signaling pathways and COX-2 expression in cancerous cells. Tangeretin exerts inhibitory activity against many inflammatory cytokines and signal transduction. It inhibite extracellularsignal-regulated kinases 1/2 (ERK1/2) phosphorylation, Cdk2 and 4 kinase activities, and increase the content of the Cdk inhibitor p21 protein that arrest the cell cycle in critical check points and suppress the tumor cells proliferation and sensitize to apoptosis. Pretreatment of tumor cells with tangeretin inhibited IL-1b-induced p38 MAPK, JNK, and AKT phosphorylation and suppress the COX-2 mRNA gene expression that led to the down regulation the NF-kB signaling pathways, and many inflammatory proteins and cytokines in tumors.
Conclusion: The present review summarizes the anti-inflammatory effects of tangeretin on cancer cells. Tangeretin as a natural component in citrus especially in pells is strong antioxidant that modulates various inflammatory pathways in cancer. It can be used as one source of candidates for the new pharmaceutical drugs is a long list of traditional medicines. To sum it up, tangeretin can potentially control the inflammation, but further studies needed to warranting chemopreventive and therapeutic application of tangeretin in humans.
Keywords: Tangeretin; citrus; cancer; inflammation; cytokine

Effects symbiotic supplement, vitamin E, and their combined effects of serum transaminases and liver Brstvh lipoproteins in patients with non-alcoholic fatty liver

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Background: Nonalcoholic fatty liver disease is one of the most common liver disease in the world. recent studies have shown that NAFLD is associated with increased intestinal permability and small intestinal bacterial over growth, and these factors are associated with the severity of hepatic steatosis. Since NAFLD is rapidly spreading in all communities worldwide, supplementation with symbiotics and changing the gut flora as a novel therapeutic approach is of great importance.
Methods: In a randomized clinical trial,60 patients with NAFLD aged 20-50 years,were randomly divided into four groups, Including vitamin E, symbiotic, vitamin E+ symbiotic and placebo. The levels of AST, ALT, l ipoproteins levels were measured before and after the study. Dietary intake and physical activity levels were evaluated by questionnaires. The Statistical Package for Social Sciences (version 22.0; SPSS Inc.,Chicago,USA) was used for all statistical analyses.
Results: Fifty nine patients (29 women and 30 men) completed the study. All groups were similar in age, and physical activity level. At the end of the study, there were not significant changes in weight, BMI, waist circumference among the groups. The levels of AST and ALT in three groups of probiotic, vitamin E and probiotic + vitamin E decreased. However,this was significant just in the probiotic with vitamin E group. HDL-C level increased non- significantly in all intervention groups. Apolipoprotein B declined siginificantly in both vitamin E and probiotic + vitamin E groups. Other lipid profile indices did not change in any groups.
Conclusion: This study suggested that 8 weeks intake of symbiotic with vitamin E can improve apolipoprotein B,AST and ALT levels in nonalcoholic fatty liver disease patients. Interventions with larger sample size and longer duration are needed to decide about the uses and dosage of probiotics in treatment in nonalcoholic fatty liver disease.
Keywords: Vitamin E, symbiotic

Flavonoids intake and its association with antioxidant statue in reproductive aged women

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Background: Although strong evidence supports the antioxidant potential of flavonoids in vitro,the effect of flavoniods at physiological concentration on overall antioxidant statues in humans is inconsistence. In the present study,we examined the association between total flavonoid consumption as well as its six main subclasses in apparently reproductive age women and serum Total Antioxidant capacity (TAC) in a subsample of reproductive age women.
Methods: Through a multi-stage cluster sampling,a total of 170 women aged 20-48 were recruited from eight health centers (from different regions in Tehran) affiliated to the medical university of Shahid Beheshti. Usual Dietary flavonoid intake was estimated using a semiquantitive questionnaire by matching FFQ food items with the flavonoid values of the updated and expanded USDA databases on flavonoids and isoflavones. Total antioxidant capacity (TAC) was measured by commercially available kit. Energy adjusted flavonoid intake for six main subclasses of flavonoids were assigned as tertile intakes,based on their 33th,66th,99th values,and generalized linear models(GLM) were used to compare mean (±SE) values of TAC across these groups. The significance level was set at 5%.
Results: As dietary anthocyanin intake rose from the lowest to the highest tertile,the multivariate-adjusted mean TAC concentrations increased from 1.008 to 1.209 after adjustment for potential confounding variables(P for trend= 0.033). The highest tertile of total flavonoid intake and theaflavoins had higher mean concentrations of TAC than did the lowest tertile,but there was no linear trend (P≥0.05). **Conclusion:** The findings for the first time demonstrate the attribution of habitual intake of anthocyanins to TAC in young adult women. However,further research is needed to confirm these observed associations.

Keywords: Total antioxidant capacity; Dietary antioxidant; flavonoids

Investigation the relationship between dietary diversity and socioeconomic status in elementary schoolchildren in city of Jahrom

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Background: Obtaining accurate dietary intake is difficult, time-consuming, and expensive.Dietary diversity is a reliable tool to assess diet quality. Dietary diversity score has gained high attention in nutrition and public health fields. The effect of under nutrition physical growth and motor development can be devastating and permanent loss. This study was conducted with the aim to investigate the relationship between dietary diversity and socioeconomic status in elementary schoolchildren in city of Jahrom.
Methods: A cross-sectional study was conducted on 318 students. A number of 169 girls & 149 boys were recruited by random sampling from public and private elementary school. Student's mother was invited to cooperate for filling out the questionnaire. The collection of sociodemographic information was done by a general questionnaire.Dietary Diversity Scores (DDS) were assessed with a single 24-hour dietary recall (24hR), by use of Food and Agriculture Organization (FAO) guideline. All foodstuff are classified into nine groups. DDS were further categorized into three level: Low (DDS≤3),Medium (DDS 4, 5), High (DDS≥6).
Results: The proportion of girls and boys were 53.2% and 46.8%respectively. The mean age of students were 9.5±1.7. The student's family education were relatively high with 39% of student's mothers and 33% of student's fathers with college degree. The distribution of student's grade from grade 1 to 6 were: 16%, 14.5%, 16.7%,20.4%, 19.2%, & 13.2% respectively . All of the students consumed bread & grains, but just 37.7% used green leafy vegetables with 6.6% used fruits and vegetables rich in vitamin A .The consumption of other fruits and vegetables were 90.3%. The percentage of using organ meat, meat & fish, and eggs were 0.6%, %76.4 and 29.9%. High percentage of using beans, nuts & seeds with 63.5%, and high percentage of dairy products with 87.7%. 7.2% of students had low DDS, 64.8% had medium DDS and 28% had high DDS. The mean dietary diversity score was 4.0±1.04 which is medium level. **Conclusion**s: According to the relatively good level of socioeconomic levels, dietary diversity score seems reasonable. Additional intake of green leafy vegetables, low-fat dairy product, and other protein sources with consideration of total energy requirement has potentiality to increase the quality of the diet and improve health status.
Keywords: Dietary Diversity Scores, elementary schoolchildren, food intake, quality of the diet, socioeconomic levels

Determine the relation of feeding practices score to

stunting and wasting in the food-secure and insecure households in Rey County of Iran

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Background: Malnutrition in the early years of life can have many consequences. Feeding practices and food security are associated factors with nutritional health of children. This study aimed to determine the relation of feeding practices score to stunting and wasting in the food-secure and insecure households in Rey County of Iran. Method: This was a case - control study,conducted in the spring of 2011 on 160 >1y children,separately in food-secure and insecure households. An interview was conducted using an 18-item food security questionnaire (USDA),a feeding practices questionnaire (prepared by study team according to WHO indicators or Guiding principles),and also a public questionnaire to extract the information from mothers.
Results: Birth weight,birth order and feeding practices score were significantly associated with nutritional status of children in the insecure households (P value <0.05). However,among food secure households,none of the studied variables were associated with nutritional status of children. Many similar studies have found an association between feeding practices score and nutritional status of children,but none of them have checked the family food security. Conclusion: These results showed the vulnerability of nutritional status of children in food-insecure households compared to food secure households influenced by feeding practices score and other investigated factors. Therefore,improving feeding practices in food-insecure households,can improve nutritional status of the households and reduce direct and indirect Complications of food insecurity.
Keywords: Food security,feeding practices score, malnutrition, children, Rey

Comparison the Peroxide value of crude olive oil and refined olive oilby considering the temperature

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Background: Olive oil is a fat obtained from the olive (the fruit of Olea europaea; family Oleaceae), a traditional tree crop of the Mediterranean Basin. Oxidation stability is a chemical reaction that occurs with a combination of the lubricating oil and oxygen. The rate of oxidation is accelerated by high temperatures, water, acids and catalysts such as copper. Because of the importance of heat we decided to do this study.
Methods: Examples were including crude and refined olive oils of the 4 several brands. First the peroxide value was measured in total samples. And then they transferred in the Oven with cooking temperature (100 ° C) and after a period of 10 min and 20 min, we measured the peroxide value also.
Results: Peroxide value was in the range of 5.4 – 0.8 (meq O2/ kg oil). It was seen in crude olive oil between the initial state and time temperatures in 10 and 20 minutes and also between heat in 10 and 20 minutes p-value was more than 0.05. Also it was seen in refined olive oil between the initial state and heat in 10 and 20 minutes p-value was less than 0.001 but between time temperatures in 10 and 20 minutes p-value was more than 0.05.
Conclusions: In this study, heating dosent leads to a significant increase in peroxide value in crude olive oil. On the other heating refined olive oil resulted in a significant increase in peroxide value. But in the time temperatures between 10 minutes and 20 minutes,there was no significant difference in the number of peroxide.
Keywords: Crudeolive oil, Refined olive oil, Peroxide value

Assessment of body image and some lifestyle factors in non-obese children of public elementary schools in 2nd district of Tehran

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Background: Body image is an important factor in weight control and health and its misunderstandings can lead to incorrect behavior for weight change, as well as depression and low self-esteem. Children and young people in their body development stage are likely to have greater body image disturbance. The aim of this study was to investigate perceptions of body image and lifestyle factors in non-obese elementary school students in Tehran 2District in 1392.
Methods: Height and weight were measured in 1598 children aged 12-9. BMI charts were calculated according to WHO reference BMI-ZS. In the second stage, from 1216 non-obese children were asked to respond questions about demographic characteristics, duration of sleep, time spent watching TV &PC, physical activity and tend to weight loss. For the assessment of body image, Collins Figure rating scales were used. For data analyzing the software SPSS v. 19 was used.
Results: Half of the non-obese children (51.8%) had incorrect body image (BI). 36.7% of the non-obese children had a tendency to lose weight. Among the variables studied, significant correlations (P< 0.05) between BI and sex and girls were 2/47 more likely to have tendency for lose weight.
Conclusion: Like other countries previous studies, results showed that, incorrect body image in non-obese children is common too. Significant correlation observed between children BI and sex, show the importance of notification to gender in nutrition education and better understanding of proper BI concepts in weight and health management.
Keywords: body image, children, Iran, gender, lifestyle

Investigation the relationship between dietary diversity scores and nutritional status of elementary school children in city of Jahrom

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Background: Under nutrition in children is one of the common public health issues in developing countries. The prevalence of childhood obesity has increased all around the world. On the other hand,healthy diet nutrition is one of key component of the health status. Household Dietary Diversity Scores (HDDS),present a good reflection of the dietary quality. The aim of this study was to investigate the relationship between dietary diversity scores and nutritional status of elementary school children in city of Jahrom.
Methods: This was a case-control study involving 148 school children with underweight,stunting,overweight,a nd obesity as case and 170 students with desirable anthropometric status as control group,aged between 7 and 12 years,of both gender from 10 public and private elementary

schools. Anthropometric measurements including weight (in kg),and height (in cm) was measured. WHO AnthroPlus was used to compute the z-scores and percentiles for weight-for-age,height-for-age,and body mass index for-age. Internationally acceptable cutoff points were used for detecting overweight,obesity,underweight and stunting. Dietary diversity scores was assessed with a single 24-hour dietary recall (24hR),by use of Kant method which foods were divided to 5 groups. Metabolic equivalents,or METs,is used to assess the physical activity levels. Data were analyzed by SPSS version16 and P values less than 0.05 were considered statistically significant.

Results: The mean age of the students in case and control groups was 9.8± 1.6 and 9.4± 1.7 years respectively. Underweight with weight-for-age (WAZ) < -2 Z-scores,stunting with height-for-age (HAZ) < -2 Z-scores,and Body Mass Index (BMI)-for-age Z-scores (BAZ) >2 for obesity were defined .The mean of DDS in case and control groups were 3.85±1.16 and 3.74±1.1. There was no difference between the two the groups in dietary diversity scores.

Conclusions: There was no significant relationship between Z-score indices and DDS in case and control group. Further studies are needed to investigate the effect of other environmental factors that improve student health status**.**

Keywords: Dietary Diversity Scores (DDS),Z-score children,anthropometric indices,elementary school children,nutritional status

Effect of Ziziphus Jujube Mill. On dyslipidemic patients- a randomized,double-blinded,placebo-controlled trial

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Background: Ziziphus jujube Mill. belongs to the family Rahamnaceae. It is commonly used in folk medicine for the treatment of some diseases in the world such as diabetes and cardiovascular disease (CVD). This randomized,double-blind,placebo-controlled clinical trial is a study reported the effect of Zizyphus jujuba Mill. on blood lipid profile in diabetic subjects.

Methods: The effect of Whole fruit of Ziziphus Jujuba Mill. supplementation (capsule form,500 mg,4 capsules/day) on blood lipid profile was evaluated for a period of 2 months. Sixtheen diabetic high cholesterol high triglyceride subjects were randomly divided into experimental (n=8) or placebo (n=8) groups. Biochemical measures (lipid profile,Fasting blood sugar,HbA1C,ALT,AST,urea,uric acid,creatinine,total protein,Hb,GSH and LPO),dietary intake (24 hours dietary recall) and blood pressure were measured at base line and at the end of the intervention.

Results: There was a significant reduction in cholesterol (p<0.01),LDL (p<0.01),Triglyceride (p<0.01),VLDL (p<0.05),TG/HDL (p<0.01) and Non-HDL (p<0.05) and CHD risk factors (p<0.001). In the experimental group moderate CHD risk factors significantly (p<0.001) converted to low risk factors. There was no statistically significant in dietary intake before and after intervention. Conclusion: Our results suggest that Ziziphus jujuba Mill. decrease the serum lipid profile level and CHD risk factors in dyslipidemic type-II diabetic subjects which are not associated with dietary changes. It should be noted that dyslipidemia and diabetes are conditions in which herbs are used. Ziziphus jujuba Mill. could be used as anti-diabetic agent in the management of diabetes associated with abnormalities of lipid profiles. Orally administration of Ziziphus jujuba Mill. supplements did not show any side effects on liver and kidney as assessed by biochemical measurements. Besides,Ziziphus jujuba Mill. may potentially be a new beneficial candidate to widen therapeutic options for treating dyslipidemia. The antihyperlipidemic activity of Ziziphus jujuba Mill. was experimentally born out but it has to be standardized for common use.

Keywords:Ziziphus jujuba Mill.,Diabetes mellitus,dyslipidemia

Identifying obstacles to adherence to dietary recommendations in patients with metabolic syndrome following conceptual framework of reasoned action theory

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Backgrounds: The metabolic syndrome (MS) describes a cluster of abnormalities include central obesity,insulin resistance or hyperglycemia,high blood pressure and dyslipidemia. Previous studies show a clear relationship between diet and components of the MS. The aim of the current study was to identify obstacles to adherence to dietary recommendations based on reasoned action theory in MS patients.

Methods: The reasoned action theory served as the framework of this qualitative study. Data collection was conducted through six semi-structured focus group discussions (FGD),from April to Jun 2013. Subjects included 36 married men and women with different levels of education and age range of 20-50 with MS diagnosed based on International Diabetes federation criteria. All the FGDs were audio recorded and precisely transcribed. Thematic analysis method was applied for the content analysis**.**

Results: The study could identify various obstacles to adherence to dietary recommendations. It was revealed that patients with MS have problems in their attitude towards components of the disease in reference to nutrition. In particular,plenty of wrong attitudes were determined regarding fats and oils,salt,dairy products,cereals,fruits,vegetables,sugary drinks and sweets. More interestingly,many subjective norms affects patients' eating behavior were successfully determined.

Conclusion: It is concluded that both wrong attitudes and subjective norms results in unhealthy nutritional behaviors in the MS patients which warrants more and in depth consideration of health education interventions to remove the obstacles identified**.**

Keywords: Obstacles,Dietary recommendations,Reasoned action theory,Metabolic syndrome

Frequency of Nut Consumption and Total and Cause-specific Mortality Risk: Results from Golestan Cohort Study

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Background:

Prospective studies have consistently suggested that higher intakes of nuts are associated with a lower risk of cardiovascular disease and cancer; however,the association between nut consumption and overall and cause-specific mortality has not yet been studied in the low and middle-income countries in Asia.

Methods: The Golestan Cohort Study is a population-based cohort in northeastern Iran in which 50,045 people above the age of 40 have been followed since 2004. Dietary data were collected using a valid semi-quantitative food-frequency questionnaire,and nut intakes were calculated at baseline.

Results: During 342,297 person-years of follow-up,3,565

subjects including 1,553 women and 2,012 men died. Nut consumption was associated with a significantly reduced risk of all-cause mortality. The pooled multivariate hazard ratios for death among participants who ate nuts,as compared with those who did not,were 0.91 (95% confidence interval [CI],0.84 to 0.98) for the consumption of nuts less than once per week,0.77 (95% CI,0.68 to 0.88) for once to three times per week,0.69 (95% CI,0.56 to 0.86) for three to more times per week (P<0.001 for trend). Significant inverse associations were also observed between nut consumption and deaths due to heart disease,cancer and specifically GI cancer.
Conclusion: This study provides further evidence of the inverse relationship between the frequency of nut consumption and the risk of mortality in a developing country. Further research directed at understanding the underlying mechanism by which nuts protect against chronic diseases,also lead to development of novel preventive strategies

Effects of microalgae Chlorella vulgaris Supplementation on Glycemic Status in non-alcoholic fatty liver disease: A Randomized, Placebo-Controlled Clinical Trial

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Background: Non-alcoholic fatty liver disease (NAFLD) is the most common type of liver disease. Using functional food such as microalgae is a new approach for improvement of metabolic disorders and oxidative stress in these patients. This study was aimed at assess the effect of microalgae Chlorella vulgaris (C.Vulgaris) supplementation on glycemic status in NAFLD patients.
Material & Methods: This double-blind randomized placebo-controlled clinical trial was conducted in 70 patients with NAFLD (whose disease was confirmed by ultrasonograohy). The subjects were randomly allocated into 2 groups of intervention (n=35) who received 400 mg/day vitamin E plus four 300 mg tablets of C.vulgaris before breakfast and the placebo who were given 400 mg/day vitamin E and four placebo tablets per day for eight weeks. Anthropometric measurements and biochemical parameters including fasting serum glucose, insulin, alanine aminotransferase (ALT), aspartate aminotransferase (AST), and Alkaline phosphatase (ALP) were assessed at baseline and end of study. HOMA as an index of insulin resistance was estimated.
Results: There were no significant differences between the groups at baseline apart from serum insulin levels and HOMA score. At the end of the trial, serum ALT, AST and glucose decreased and insulin and HOMA increased significantly in C.vulgaris group while no significant change was found in placebo group. Only the changes in serum glucose level and HOMA score were statistically significant between the groups after adjusting for baseline HOMA score (p=0.048, p=0.048, respectively).
Conclusion: The results of this trial indicate C.vulgaris supplementation could decrease weight and improve glycemic status as well as liver function in patients with NAFLD.
Keywords: Chlorella vulgaris, Glycemia, NAFLD, supplementation

Proactive risk assessment of diet therapy and food Supply process in Women Surgery Department of Ghaem education-treatment center in Mashhad, by the Healthcare Failure Mode and Effects Analysis (HFMEA) methodology, 2012-2013

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Background: Good nutrition is effective in assessing patient in hospital and the surgery wards are recognized the riskiest sectors of the hospital.Health care Failure Mode and Effect Analysis is in fact a prospective and systemic approach for identifying failure modes and preventing them before their occurrence, which is specially designed for health care organizations. This study was conducted with the purpose of assessing the Proactive risk assessment of diet therapy and food Supply process in Women Surgery Department of Ghaem education-treatment center in Mashhad, by the Healthcare Failure Mode and Effects Analysis (HFMEA) methodology, 2012-2013
Methods: In this research with a mixed method (qualitative and descriptive cross sectional qualitative), the modes and effects or HEMEA method were defined and analyzed.
To classify failure modes; nursing errors in clinical management model, for classifying factors affecting error; approved model by the UK National Health System, and for determining solutions for improvement; Theory of Inventive Problem Solving, were used.To analyze the qualitative data the descriptive statistics (total score) and for analyzing quantities data content analysis and consensus opinions of team members were employed using Excel software.
Results: 42 failure modes were identified for 15 sub-process of seven steps diet therapy and food Supply process. 11.9% failure modes were considered as non-acceptable risk (hazard score≥ 8) and were transferred to decision tree. The frequency of failure modes were as follow: 18.4% in communication errors, 60% in care process errors, 16.9% in Administrative processes errors, and 4.6% in Knowledge and skill errors. Among 15 Influencing factors, the most common reasons for error were related to team factors (26.6%), and the less common reasons for error were related to equipment factors (6.6%).
Conclusion: The Healthcare Failure Mode and Effect Analysis (HFMEA) method was very efficient in identifying failure modes, determining causes which impact each failure mode, and proposing improvement strategies for diet therapy and food Supply process. Training and auditing should be considered as two main tools for improving the diet therapy and food Supply processes in Ghaem hospital.
Keywords: Risk assessment,Food Supply, diet therapy

Consumption of spicy foods and the prevalence of irritable bowel syndrome

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Background: Limited data are available on the habitual consumption of spicy foods in relation to irritable bowel syndrome (IBS). The traditional Iranian diet contains high amounts of spicy foods, which provides an opportunity to assess consumption of spicy foods in relation to health.
Objective: The current study aimed to explore the association between consumption of spicy foods and prevalence of IBS among Iranian adults.
Methods: In this cross-sectional study, data from 4763 Iranian adult participants were used. Consumption of spicy foods was estimated using a dietary habits questionnaire that included a question on spicy foods consumption: How frequently do you use spicy foods (pepper, curry, ginger, cinnamon and turmeric) during a week? Participants could respond to the question by choosing one of these choices: "never", "1-3 times", "4-6 times", "7-9 times" or "more than 10 times" per week. A modified Persian version of the Rome III questionnaire was used to determine the prevalence of IBS.
Results: IBS was prevalent in 21.7% (18.6% of men and 24.1% of women) of the study population. After controlling for potential confounders including dietary behaviors, those consuming spicy foods ≥10 times/week were 92% more likely to have IBS compared with those who never consumed spicy foods (OR: 1.92; 95% CI: 1.23-3.01, P_{trend}<0.01). The association remained significant even after taking lactose intolerance into account (1.85; 1.18-2.90, P_{trend}<0.01). Stratified analysis by gender revealed that the association between consumption of spicy foods and IBS was not significant in men; however, a significant association was found among women after taking potential cofounders, including meal regularity and lactose intolerance, into account. Those who consumed spicy foods ≥10 times/week were 103% more likely to have IBS compared with those who never consumed spicy foods (2.03; 1.09-3.77, P_{trend}=0.02).
Conclusion: Consumption of spicy foods is directly associated with IBS, particularly in women. Further studies, in particular of prospective nature, are required to examine this association in other populations.
Keywords: Spice, diet, condiments, red pepper, irritable bowel syndrome, functional gastrointestinal disorders.

The relationship between marital status,parity and obesity risk in women

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Background: Marital status is related to morbidity and mortality,however,the relationship between marital status and obesity is not well established. The objective of the present case-control study was to examine associations between marital status and the obesity risk in pre-menopause women.
Methods: Overall,88 obese women aged 20-50 years,and 88 normal weight controls who had referred to Shahid Beheshti Nutrition and Diet therapy Clinic in Iran for weight control were included in the present study. Weight,height,marital status and number of parity of subjects were collected from their medical records. Logistic regression models were used to compute odds ratio (ORs) and 95% confidence intervals (CIs) for the association of marital status and obesity risk.
Results: Results: A positive significant association was found for marital status and obesity (OR: 6.5,95% CI: 2.5–17.5; p= <0.00001). Mean ± SD of BMI was significantly higher in women with more than 3 children in compare to those with one child. Conclusions: Our findings suggest married women and those with higher number of parity are at higher risk of obesity.
key words:marital status,parity,weight,women

The use of irradiation to improve the microbiological safety of ready-to-eat salads and vegetables

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Background: Changes occurring in life and eating styles,as well as demographic changes,have been cited as one of the reasons for the increasing demand for ready-to-use products. in the last decade,ready-to-eat salads and vegetables were gaining increasing importance in human diet. Salads are contaminated with infectious agent that can result from environmental contamination or during preparation of salad. consequently,the microbiological control of ready-to-use salads is very important and absolutely necessary particularly since they are not cooked before being consumed. UV-Irradiation was studied in order to increase the safety of this products. The main objective of this work,to survey the possibility of using irradiation process in ready-to-use salads. The investigated microorganisms in this study were Escherichia coli O157:H7 and Listeria monocytogenes .E. coli O157:H7 was isolated from all the salad vegetables while L. monocytogenes was isolated from only cabbage and lettuce. This research was carried out in order to determine the adequate irradiation dose to assure the hygienic quality of fruits and vegetables,used in preparing salads,without impairing the sensory attributes.
Methods: We searched in the Ovid,Pub Med Trip database,Science direct,Google Scholar,Scopus and other scientific database with key words including irradiation,salad,vegetable,microbiology,sensory,safety and shelf life that resulted in about 50 papers in 2005-2014 years.
Results: The results of this study showed that the minimum disinfection doses proposed for these products are 1.2 kGy for mixed salads. D10 of different pathogens studied were in the range of 0,08-0,33 kGy. E. coli O157:H7 was the most sensitive bacteria to irradiation (0,08 kGy). Irradiation with doses less than 2.0 kGy dose could ensure a 5 log reduction of the most resistant examined pathogen,Salmonella Enteritidis.Quality parameters (sensorial) of carrot and tomato irradiated by doses lower than 2.0 kGy were not significantly reduced. Irradiation with doses lower than 2.0 kGy had no significant effect on sensory quality of ready-to-eat salads.
Conclusion: Since fresh fruits and vegetables are grown, processed or packaged in areas that may be exposed to microbial pathogen contamination,there is an increasing concern that these products may be infected by microbial pathogens. several studies on various chemical and physical methods of decontamination for their efficacy in destroying foodburne pathogens have been made. the results also clearly indicate that UV irradiation effectively decreased foodborne pathogens inoculated on the ready-to eat salad. increased dose of UV irradiation significantly decreased the bacterial populations on ready-to-eat foods. It should be noted that the difference between the 2 pathogens is mainly due to the different sensitivity to the UV treatment. Irradiation is a surface sterilization method. Therefore,the physical location of the microorganisms and the different composition of the foods may also play an important role in the efficiency of the treatment in re-

ducing microbial contamination. this work provides information about safety of these kinds of products,which have quite recently appeared in the market.
Keywords: irradiation,salad,vegetable,microbiology,sensory, safety,shelf life

The association between fruit and vegetable consumption,weight and body mass index in adults

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Background: Fruit and vegetable consumption may affect body weight because these foods are high in water and fiber and low in energy. The purpose of this study was to evaluate the relationship between fruit and vegetable intake and bodyweight in adults.
Methods: Subject of this study were recruited from those who had referred to Shahid Beheshti Nutrition and Diet therapy Clinic to control their weight. Weight and height were measured by standard methods and Body mass Index (BMI) was calculated using the formula weight(kg)/height2(m). Fruit and vegetable intake was assessed using a valid brief fruit and vegetable screener. Intake of fruit and vegetable was considered as "low" if screener score was equal to or less than 11 and "not low" if it was more than 11.
Results: Results: A total of 171 subjects were studied. Mean±SDs of age,weight and BMI were 34.9±11.1 yrs,75.7±16.3kg and 28.3±5.8 kg/m2,respectively. According to fruit and vegetable consumption classification,39% of subjects had low consumption but the consumption of the rest (61%) was not low. Total score of fruit and vegetable screener was positively and significantly correlated to BMI ($r=0.3, p<0.001$). No significant difference in weight was seen between two consumption groups but the BMI was significantly higher in the group with higher intake of fruit and vegetable (29.1±5.5 vs. 27.1±6.1 $p<0.03$). Conclusion: Despite other studies,in the present study consumers of more fruit and vegetable had higher BMIs which may be due to higher total food intake of these subjects. To fully address the correlation of fruit and vegetable consumption to weight,it is necessary to consider total energy intake of subjects
Keywords: body mass, fruit and vegetables, weight

Determination of the association between dietary fructose intake and lipid profile in NAFLD patients.

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Background: Regarding the role of fructose in the synthesis of triglycerides, numerous studies have examined the association between fructose-containing artificial sweeteners and some chronic diseases. However, the role of food sources derived fructose with non-alcoholic fatty liver disease (NAFLD) is rare. Therefore, this study was designed to determine the association between dietary fructose intake and lipid profile in NAFLD patients.
Methods: This case - control study was carried out on 57 patients with NAFLD (confirmed by ultrasonography and elevated liver enzyme levels) and 57 healthy subjects matched for age, sex and body mass index in Sheykh-ol-rais clinic in Tabriz. A97-item food frequency questionnaire and a 3-days food record were used to assess fructose and sucrose. Serum alanine aminotransferase, aspartate aminotransferase, and alkaline phosphatase, triglycerides, total cholesterol and HDL-C were measured and LDL-C was estimated.
Results: The frequency of fruit consumption and total fructose from energy intake were significantly higher in NAFLD patients than the controls (respectively 75.5 vs. 63.4 times per week and P=0.004 and 1.5 vs. 1.2 and P=0.045) whereas no differences were found in the amount of fructose intake. NAFLD patients had higher serum triglycerides (161.22 vs. 131.12 mg/dl and P=0.015) and lower HDL-C levels (47.41 vs. 51.40 mg/dl and P=0.034)than healthy subjects. There was no significant association between fructose consumption, the weekly frequency of fructose-rich food groups and serum triglyceride levels in each group.
Conclusion: The results of this study indicate no effect of between food-sources derived fructose on serum triglyceride level and consequently, pathogenesis of NAFLD.
Keywords: Fructose, Non-alcoholic Fatty Liver Disease, Lipid, Triglyceride.

The effect of resistant starch supplementation on antioxidant status and insulin resistance in overweight and obese adults

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Bachground: The aim of this study was to evaluate whether intake of Hi-Maize 260 resistant starch improves antioxidant status and insulin resistance in subjects with overweight or obesity.
Methods: A randomized, placebo-controlled, double-blind trial was conducted with 21 subjects who were randomly assigned to two groups. Both groups consumed either 13.5 g Hi-Maize 260 (~60% resistant starch) daily or placebo (maltodextrin) for 4 weeks, separated by a 4-week washout period. Fasting glucose and insulin levels, lipid profile and biomarkers of antioxidant status were determined at baseline and at weeks 4, 8, and 12.
Results: Total antioxidant status (TAS) was significantly higher after resistant starch supplementation compared to the placebo treatment after adjusting for baseline values ($P = 0.037$). Resistant starch also increased HDL-cholesterol concentrations ($P = 0.035$). There was no effect on the insulin resistance after supplementation.
Conclusions: These results indicate that consumption of 13.5 g/d Hi-Maize 260 resistant starch may improve antioxidant status in subjects with overweight or obesity, but further studies are needed to investigate the long-term effect on insulin resistance.
Keywords: Resistant starch, Antioxidant status, Insulin resistance, Overweight, Obesity

Bone integrity is affected by endogenous acid production after menopause

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Background: Acid-base homeostasis impacts bone health. Acidosis is associated with negative calcium balance and directly enhances osteoclast activity and bone resorption. The study aimed to ascertain whether dietary acidity (dietary protein intake to potassium intake-ie,estimate of net endogenous noncarbonic acid production (NEAP)) is associated with femoral and spine bone density as well as bone turnover in postmenopausal women with osteopenia.
Methods: The present cross-sectional study was carried out on 51 healthy postmenopausal women aged 45-60 years. Bone mineral density (BMD) was measured by Dual Energy X-

ray Absorptiometry at lumbar spine and total hip. All women were osteopenic according to WHO criteria. Dietary intake was assessed using 2 days 24 hours food recalls. Bone resorption was calculated by measuring carboxy-terminal telopeptide of type I collagen (crosslaps) and bone formation by measuring serum osteocalcin. NEAP was estimated using the following algorithm: NEAP(mEq/d)= -10.2+54.5(Pro/K).
Results: Mean±SD of NEAP was 44.6±18.4 mEq/d. After adjustment for energy intake,higher NEAP was correlated with lower spine and femoral BMD (r= -0.3,p<0.05,for both). No significant correlation was seen for bone turnover markers.
Conclusion: These findings provide evidence of a link between a ratio of lower protein to higher potassium dietary intake (ie,less dietary acid) and skeletal integrity.
Keywords: Endogenous acid production,Bone health, Osteopenic,Postmenopause

Quality assessment of cereal productes supplemented with dietry fibres as functional ingredients

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Background: Dietary fiber is the edible parts of plants or analogous carbohydrates that are resistant to digestion and absorption in the human small intestine with complete or partial fermentation in the large intestine. Deficiency of dietary fiber (DF) consumption is associated with the development of many common diseases through epidemiological and human/animal intervention studies. These diseases include bowel disease,Crohn's disease,colon cancer,constip ation,diabetes,diverticulosis,gallstones,heart disease,high cholesterol,hyperlipidemia,and obesity. Fiber intake could easily be increased by selecting foods naturally higher in fiber and also by addition of fiber to foods. Cereal products are consumed daily by the majority of the population.This review paper investigated the influence of DFs (includes inulin,fructooligofructose,b-glucans,arabinoxylans and resistant starch) addition on the quality and nutritional characteristic of common cereal products such as pasta,bread,muffins/cakes and extruded snacks.
Methods: This case series and literature review serves to illustrate effects of dietry fibre addition on the properties of enriched creal products.
Results: Extensive research has shown fruit and vegetable by-products to be a high source of dietary fibre. Also,their use can impact such functional benefits as gelling,thickening and water binding. It has also emerged that DF concentrates could be used as functional ingredients in food to avoid syneresis,to stabilise products with a high percentage of fat and emulsion and to modify the texture and the viscosity of formulated products by virtue of their high water and oil holding capacity and their rheological properties.
Conclusion: The enrichment of foods with dietary fibres is an effective way to enhance nutritional and physiological aspects and to promote functionality by influencing rheological and thermal properties of the final product. It is needed to work on better understanding both for users and producers of dietary fibre values.
Keywords: dietary fiber,Cereal products,enrichment,nutritio n,quality

Assessing of the effectiveness of interventions to reduce obesity in school children

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Background: According to WHO report by 2020, chronic diseases and specifically obesity will done three quarters of all deaths in developing countries . Childhood obesity increases the risk of early death in adults with acute and chronic mental complications. Iran is one of the countries having the highest childhood obesity rates in the world as other developing countries up to 15%. It is generally agreed that the best solution to overcome the problem of obesity, is prevention of childhood obesity. Conestone of obesity management is proper diet and activity and change life style. The aim of this study was to assess the effectiveness of interventions to reduce obesity in school children in the world.
Methods: We evaluated the world and Iran review articles by searching in Pubmed, Iran Medex, Medlib from2009-2014that assessed the effectiveness of interventions designed to reduce 6-18 years old children obesity in schools. Survey was conducted among 43 Reference ,witch19 studies had our indices.
Results: Most studies have assessed the usefulness of multi sectional interventions with physical activity and lifestyle change and diet.14 review provides strong evidence that school interventions was usefull for reducing childhood obesity particularly programs targeted to children over 10 years old and study duration>6monthes. In Iran, however, positive works had been done in the areas of nutrition, we have just three case-study school.
Conclusion: It appears that school interventions have potential in reducing childhood obesity useful and such programes had done in most countries In our country wich is one of the countries having the highest childhood obesity rates, thes chool situation can be programmed to obesity control.
Keywords: Childhood Obesity, Intervention, Effectiveness

Effects of Hibiscus subdariffa on kidney function, albuminuria, total antioxidant capacity, hypertension and hs-CRP in patients with diabetic nephropathy

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Background: Diabetic nephropathy is the most common cause of renal failure. High blood pressure, specially its glomerular typeis one of the dominant factors in the development of nephropathy in diabetic patients. The present study evaluates the effects of Hibiscus Subdariffaon blood pressure and uriunary albuminin patients withdiabetic nephropathy.
Methods: Curent study was a double-blaind randomized clinical trialon 41patients withdiabetic nephropathy(15 males, 26 females) .Patients were devided in two randomly choosed groups. The first group received herbal supplements of Hibiscus Subdariffa (tablets, 425mgtwice daily) while the other one received placebo. At baseline and at the end of an eighth weeks period, systolic , diastolic bloodpressureand urinary albumin were measured.
Results: At the end ofthe study period, Systolic blood pressure in the Hibiscus group dropped of 135 to119.5 compared to the baseline. The level of reduction was statistically significant (p<0.05). At the end of the eighth weeks, urinary albumin concentration was reduced up to 20mg in the Hibiscus group. The level of reduction was statistically significant(p<0.05). The above mentioned chenges were not observed in the placebo group.
Conclusion:The study showed that Hibiscus Subdariffa supplementation, causes a significant reduction in systolic blood pressure and urinary albumin. Thus, Hibiscus Subdariffa supplementation would be able to slow the progression of dia-

betic nephropathy.
Keywords: Hibiscus subdariffa, albominuria, diabetic nephropathy

Major Barriers Responsible for Malnutrition in Hemodialysis Patients Challenges to Optimal Nutrition
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Background: Nutritional barriers may contribute to malnutrition in hemodialysis patients. Higher rates of morbidity and mortality have been seen in malnourished hemodialysis patients. These patients are faced with different challenges affecting their nutritional status. Objectives: The aim of this crosssectional study was to identify the most important barriers responsible for malnutrition in hemodialysis patients. Patients and
Methods: we randomly selected 250 out of 800 stable hemodialysis patients from three HD centers with an age range of18-85, who had been on hemodialysis for at least 3 months without any acute illness. Each patient was interviewed for evaluating malnutrition subjective global assessment SGA malnutrition inflammation score MIS, and potential medical, behavioral and socioeconomic barriers. Body composition of the patients was also checked through bioelectrical impedance analysis BIA. Routine clinical markers of malnutrition such as serum albumin and total protein were measured using standard automated techniques. Binary logistic regression model was used to find the association between nutritional markers and potential barriers.
Results: Patients with higher SGA had lower knowledge about general nutrition odds ratio 1.3, potassium OR 1.89, difficulty chewing OR 1.16, and shopping OR 1.16. Those with greater MIS scores had poor appetite OR 1.3, depression OR 1.21, and difficulty with cooking OR 1.15. Lower body cell mass was associated with poor appetite OR 0.92 and needed help for cooking OR 0.88. Patients with higher body fat mass index had insufficient general nutrition OR 1.15, and protein OR 1.27, knowledge, and needed help for shopping OR,1.14. Moreover, the patients with higher SGA scores were the ones with older age and longer duration on HD.
Conclusions: Our results showed that three medical barriers including poor appetite, depression, and difficulty chewing , one behavioral barrier poor total nutrition, protein, and potassium knowledge, and one socioeconomic barrier needing help shopping and cooking are independently associated with nutritional markers.
Keywords: Anorexia, Dietary Compliance, Hemodialysis

Assessing of metabolic syndrome components in type 2 diabetic patients based on HbA1c levels
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Background:Type 2 diabetes is one of the most prevalent disease of this century with cardiovascular disease as the main complication which occurs due to metabolic syndrome in long term. The aim of this study is to assess metabolic syndrome components in type 2 diabetic patients based on HbA1c levels.
Methods: In this cross-sectional study after screening 1158 person referred to clinical centers, 204 type 2 diabetic patients were selected and evaluated for anthropometric (weight, height, waist circumference, body mass index) and biochemical (fasting blood sugar, glucose tolerance test, lipid profile and HbA1c) markers and blood pressure. The cut point for categorizing patients in two groups of controlled and uncontrolled was HbA1c 7%. Independent sample t-test was used for comparing markers between two groups. Also the correlation of HbA1c with all markers was checked through pearson coefficient.
Results: In patients with controlled type 2 diabetes serum FBS, GTT, TG, total cholesterol and LDL cholesterol were significantly lower than the patients with uncontrolled type 2 diabetes (P< 0/05). Also a significant correlation was found between HbA1c and FBS, GTT and systolic blood pressure(P< 0/05).
Conclusion: Optimal treatment of type 2 diabetes in a way that reduces HbA1c below 7% would prevent chronic complications of metabolic syndrome and cardiovascular risk factors like total cholesterol and LDL cholesterol.
Keywords: Metabolic Syndrome, Type 2 Diabetes, Cardiovascular Diseases, Athrosclorosis, HB A1C, Blood Sugar

Evaluation of the efficacy of ginger on obesity management: a randomized, double-blind, placebo controlled clinical trial
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Background: Ginger (Zingiber officinale Roscoe) is a widely used spice and medicinal herb. Evidences from the in vitro or experimental studies support the use of ginger as a functional dietary agent for weight management but research in humans is limited. In this regard, the present study was aimed to investigate the effects of 12 weeks ginger supplementation on some obesity related features.
Methods: 80 healthy obese women (aged 18-45 years) were randomly assigned to receive either ginger or placebo supplement as 2 tablets (each 1 g) per day before meals for 12 weeks. Subjects were tested for changes in body weight, waist and hip circumferences (WC and HC) and body composition at baseline and at weeks 4, 8, and 12. The subjects were also asked to maintain their usual dietary habits and activity levels, and use no other dietary supplements during study. Data were analyzed using SPSS software (version 21.0; SPSS, Chicago, IL). Differences between groups from baseline to week 4, 8 and 12 were analyzed using analysis of covariance (ANCOVA) with the baseline scores and energy intake differences employed as the covariates. Repeated measures analysis of variance was also performed to examine within group differences by time. P-value < 0•05 was considered as significant.
Results: There were no significant differences between the two groups at baseline in any of the parameters tested. Ginger supplement resulted in a slight but statistically significant decrease in body weight, BMI, WC, HC, waist to hip ratio (WHR), percent total body fat and total fat mass over 12 weeks as compared to pretest, whereas in the placebo group there are only significant decrease in WC and WHR.
Conclusion: the changes in all of these parameters were statistically significant in ginger group compared to placebo (p
Keywords: obesity, Zingiber officinale Roscoe, clinical trial

Ability of quercetin and rutin to change the binding of 6-mercaptopurine to bovine serum albumin
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Abstract: Binding of a drug to the serum albumins as major serum transport proteins can be influenced by other ligands

leading to alteration of its pharmacological properties. In the present study,binding characteristics of 6-mercaptopurine (6-MP) with bovine serum albumin (BSA) together with its displacement from its binding site by quercetin and rutin have been investigated by the spectroscopic method. According to the binding parameters,a static quenching component in overall dynamic quenching process is operative in the interaction between 6-MP and BSA. The binding of 6-MP to BSA occurred spontaneously due to entropy-driven hydrophobic interactions. The synchronous fluorescence spectroscopy study revealed that the secondary structure of BSA is changed in the presence of 6-MP and both Tyr and Trp residues participate in the interaction between 6-MP and BSA with the later one being more dominant. The binding constant value of 6-MP–BSA in the presence of quercetin and rutin increased. 6-MP was displaced by ibuprofen indicating that the binding site of 6-MP on albumin is site II. Therefore,the change of the pharmacokinetic and pharmacodynamic properties of 6-MP by quercetin and rutin through alteration of binding capacity of 6-MP to the serum albumin cannot be ruled out. In addition,the displacement study showed that 6-MP is located in site II of BSA.

Keywords: Mercaptopurine; Bovine serum albumin; Fluorescence spectroscopy; Quercetin; Rutin; Displacement

The Effect of Nutrition Education Program to Mothers of Children with Cancer Undergoing Chemotherapy on Gastrointestinal Side Effects

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Background: Chemotherapy as a treatment method for the prolongation of life and survival of children as the main treatment of chemotherapy is many side effects and on quality of life and level of patient acceptance and compliance from the patient influence. Gastrointestinal side effects are common. Therefore recognizing these complications and their prevention, in the improvement of treatment and prevention of recurrent of survival of the patient's admission is very helpful.

Methods: This study is a clinical trial with two groups' control and intervention in Dr Sheikh hospital in Mashhad in 2013. 30 mothers of children with cancer undergoing chemotherapy in the intervention group and 30 mothers in the control group were. Protocol and Training Guide care of cancer patients in three empowerment sessions with focus on complications: nausea, vomiting, diarrhea, constipation, loss of appetite were trained on experimental group. The program was developed and based on the Process of empowerment as conceptualized by Gibson's theory program was composed of 4 steps. Data using standard questionnaire chemotherapy side effects in three stages before, during and after the intervention in both groups were collected. Data Using Spss Version 11/5 and Spearman's correlation test and Friedman test one-way analysis were analyzed.

Results: In terms of the proportion of cancer patients, acute lymphoblastic leukemia, acute Meyeloblastic leukemia, lymphoma, Sarcoma and Rhebdomysarcoma, respectively 56/7, 13/3, 10, 6/7, 3/3, 20% of patients had. %61/7 of males and %38/3 were female. The mean age of the patients studied 5/6±3/23 years and the average age mothers for the 32/1±8/08 was.Average side effects in intervention group after the intervention lower than the control group. Nausea was decrease from 53/7% to 26/3%, vomiting from 66/7% to 33/3%, diarrhea from 50% to 10%, constipation from 33/6% to 6/7% and loss of appetite from 93/3% to 36/7%. in intervention group between incidence rate side effect before and after the intervention, significant differences seen(p<0/001).

Conclusions: The educational program can help the main mothers to discover and use critical thinking skills, enhance their ability and increase adherence, which results in decrease. Gastrointestinal side effects in children undergoing chemotherapy.

Keywords: Gastrointestinal, Chemotherapy, Child, Education, mothers

Dietary vitamin D status and lifestyle factors in patients with Multiple sclerosis compared with healthy subjects: A case-control study

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Background: Multiple sclerosis (*MS*) is a chronic a autoimmune disease of central nervous system and optical nerves with demeylination seen as plaques with unknown etiology. However, genetic, history of Epstein–Barr virus infection and also lifestyle factors such as job, educational level, sun exposure and vitamin D deficiency seems to contributed in MS. The aim of this study was to compare dietary vitamin D intake as well as lifestyle factors between MS patients and healthy subjects.

Methods: In this case-control study, 168 MS patients aged 20-50 yrs with Expanded Disability Status Scale (EDSS) less than 6 were selected based on McDonald criteria using simple random sampling from MS Society of East Azarbaijan province of Iran (*Cases*) and 168 healthy subjects from close relatives matched by age (±5 yrs) and gender (*Controls*) were studied. Personal and lifestyle details was collected using questionnaire and a 3-day 24-hr food recall as well as food record questionnaires were completed for each subject to assess daily dietary vitamin D intake using Nutritionist IV software and compared with recommended daily dietary allowances (RDA) values.

Results: Severe deficiency of dietary vitamin D intake (0-2 IU/d) was found in 21.4% and 6.7% of cases and controls, respectively (p=0.041) while no differences was seen in higher intake of vitamin D levels between the groups. After adjusting for the confounders, job and high educational level were significantly associated with MS: i.e. those who were self-employment and with higher than diploma education were more likely to suffer from MS (OR=1.07; CI 95%:1.02-1.985 and OR=1.03; CI95%:1.01-1.47) , respectively.

Conclusion: Dietary vitamin D intake ranged 0-2 IU was statistically significant between the groups. To prevent MS incidence and signs, vitamin D supplementation or educational interventions focusing on adequate vitamin D-enriched food intake as well as suitable sun exposure in not only MS patients but also healthy subjects are required.

Keywords: Multiple sclerosis, lifestyle, dietary vitamin D, sun exposure

Pattern of snack consumption and its relation to weight status among male and female students

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Background: As proper and balanced nutrition plays an important role in health and adverse effects of following improper dietary patterns and meals in life span, particularly in adolescence, on efficacy and health status, this study was carried out to determine snack composition in relation to weight status among male and female students of Tabriz University of Medical Sciences.
Methods: Of all university courses, 354 and 220 female and male students (aged 21.12±1.93 yrs and 21.94±2.3 yrs) were selected using stratified random sampling, respectively. A food frequency questionnaire was completed from each student and weight and height was measured to estimate body mass index (BMI).
Results: Mean BMI in females and males were 21.28 ±2.53 kg/m^2 and 22.32 ± 2.71g/m^2 respectively. Of all, 77.9% of students (75.5% in males and 79.4% in females) consumed snack. The most common snack were chocolate, puffed corn, pastries, fruits and juices, biscuits, , cheese and bread, egg, yoghurt, chips, dried fruits, ready-to-eat foods and coke, respectively. Consumption of junk foods and ready-to-eat foods was significantly more common in males than females. Salty junk foods and ready-to-eat foods in overweight subjects than normal weight students while healthy food habit was found more common normal weight than overweight ones.
Conclusion: Our results indicate that snack pattern is not proper among students and because of high consumption of junk foods and ready-to-eat foods and its relation to chronic diseases in adulthood, educational interventions to improve nutritional status of students in required.
Keyword: Snack, Weight, Junk foods, Students

Sugar-sweetened beverage consumption and risk of metabolic syndrome in Iranian adults

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Background: Metabolic syndrome, a cluster of multiple metabolic abnormalities, is one of the major public health challenges worldwide. Metabolic syndrome (MetS) increases the risk of chronic diseases including cardiovascular disease and diabetes. The current study was conducted to evaluate the association between sugar-sweetened beverage (SSB) consumption and MetS and its components in a representative sample of Tehranian adults.
Methods: For this cross-sectional study, 5852 men and women aged 19-70 years, who participated in the fourth phase of TLGS were recruited. Dietary data were collected using a validated semi-quantitative food frequency questionnaire. The FFQ included questions on the frequency of consumption and usual portion size of SSBs including carbonated drinks and synthetic fruit juices, both of which were combined to estimate the daily intake of SSBs. Metabolic syndrome was defined according to the NCEP Adult Treatment Panel III definition, where a participant must meet ≥ 3 of the following metabolic abnormalities: 1) Impaired fasting glucose, 2) Hypertriglyceridemia, 3) Low HDL-C, 4) Elevated blood pressure, 5) Abdominal obesity. Multivariable linear regression and logistic regression were used to analyze the data.
Results: Mean dietary intake of SSBs was 48.9±77.8 g/d. The mean consumption of SSBs in the first, second, third and fourth quartile categories was 2.6, 13.0, 36.1 and 144 g/d, respectively. Prevalence of the MetS in the overall population was 30.3%. Body mass index and waist circumference was significantly higher in the participant who were in the highest compared to the lowest quartile category of SSBs (P<0.001). Significant positive associations between SSBs and waist circumference, triglyceride level, systolic and diastolic blood pressure in the third and fourth quartile of SSBs were observed after adjustment for all potential confounding variables including age, sex, physical activity, smoking status, education status and energy intake. The risk of MetS in the third and fourth quartiles compared to the first quartile category of SSBs was 1.21 (95% CI=1.01-1.45) and 1.30 (95% CI=1.06-1.58), respectively (P for trend=0.03). Highest consumption of SSBs increased the risk of abdominal obesity by 35% (OR=1.35, 95% CI= 1.12-1.61). The risk of MetS, abdominal obesity, low HDL-C and elevated blood pressure had increasing trend across increasing categories of SSB consumption (P for trend <0.05).
Conclusion: Higher intake of SSBs was associated with the higher risk of MetS in adults suggesting reducing consumption of SSBs or switching from these to natural drinks are practical approaches to prevent MetS.
Keywords: Sugar-sweetened beverages, Metabolic syndrome, Abdominal obesity

Association of sleep duration with quantity of weight loss in adults under a weight reduction diet

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Background: Today, obesity and overweight are among the most important health problems in the world. It is known that sleep duration can affect the usual body weight. The aim of this study was to evaluate the association of sleep duration with quantity of weight loss in adults under a weight reduction diet.
Methods: In this cross-sectional study, 99 participants (15 men and 84 women) who referred to calorie institute to receive a weight reducing food package, were enrolled. The diets' calorie were designed according to each individuals age and anthropometrics measurements minus 700 Calorie. After one month, the effect of diet on weight loss and the relationship between their sleep duration and weight loss were evaluated. Average sleep and physical activity duration recorded according to self report. The sleep duration was categorized as <6 h/day, 6 to 8 h/day and >8 h/day. Data were analyzed using chi-square, paired t test and logistic regression.
Results: weight reduced significantly in both men and women (p<0.001). Participants with higher BMI reduced weight more significantly in comparison to leaner participants. The most weight loss was seen in those who slept less than 6 hours/day followed by those who slept between 6 to 8 hours / day and those who slept more than 8 hours/day , however this trend was not statically significant in ANOVA test (p=0.62).
Conclusion: In this study there was not significant relationship between sleep duration and weight loss in adult under weight reduction diet. Further studies with higher sample size and longer duration are recommended.
Keywords: sleep duration, weight loss, weight reduction diet, BMI

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Isolation and functional characterization of angiotensin converting enzyme inhibitory peptides from simulated in vivo digests of soybean protein

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Abstract: Hypertension is a major risk factor for cardiovascular diseases. One approach in the treatment of hypertension decreases the production of angiotensin II (a potent vasoconstrictor) through inhibition of angiotensin-converting enzyme (ACE), using soybean peptides. Because soybean is not able to exhibit the bioactive effects in the form of parent protein, it was hydrolyzed using pepsin and pancreatin to mimic the digestion process in the gastrointestinal tract, and the hydrolysates were separated into fractions. The ACE-inhibitory activities of the fractions were determined using an in vitro method and the IC50 (peptide concentration that reduced ACE activity by 50%) was calculated. The ACE-inhibitory activities of all fractions were dose dependent and at low concentrations were non-competitive. The radical scavenging activities of the peptide fractions were evaluated. Fluorescence spectroscopy showed that soy protein peptides can induce structural changes in ACE. This study shows that soy protein derived peptides have ACE-inhibitory activity.
Keywords: Soy, Angiotensin converting enzyme inhibitory peptides, Hypertension, Radical scavenging activity, Enzyme kinetics

The effects of Resveratrol supplementation on cardiovascular risk factors in subjects with NAFLD

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Background: Resveratrol is a polyphenolic compound with antioxidant properties. Resveratrol can prevent or slow down the progression of a wide variety of illnesses, including malignancies, neurodegenerative diseases, cardiovascular ailments, ischemic injury, and viral infections. No treatment has yet been approved for NAFLD, and the only recognized management strategies include lifestyle modifications. It has a strong association with central obesity, reduced glucose tolerance, type 2 diabetes mellitus, arterial hypertension and hypertriglyceridaemia. We evaluate whether supplementation with Resveratrol can further improve the efficacy of lifestyle modifications and cardiovascular risk factors on NAFLD patients.
Methods: In this randomized double blinded controlled clinical trial, fifty NAFLD patients were supplemented with either a 500 mg Resveratrol or a placebo capsule for 12 weeks. Both groups were advised to follow an energy-balanced diet and physical activity recommendations. Fasting blood sugar, Insulin, lipid profile, Apo A1, hepatic steatosis, systolic blood pressure, diastolic blood pressure and, dietary intake, anthropometric measurements and physical activity were assessed at baseline and the end of the study. HOMA-IR, HOMA-β and QUICKI were calculated at baseline and the end of the study.
Results: In both groups anthropometric measurements (weight, BMI, waist circumference), ALT, AST, GGT, HDL, steatosis grade improved (P-value< 0.05); Resveratrol supplementation was associated with a significant reduction in liver enzyme ALT, systolic blood pressure, and hepatic steatosis grade as compared to placebo supplementation (P-value< 0.05). Total cholesterol in Resveratrol group significantly increased as compared to placebo group. Fasting blood glucose did not change but serum insulin level in placebo group reduced. In placebo group HOMA-IR and HOMA-β decreased and QUICKI increased, but between groups differences was insignificant.
Conclusion: 12 weeks of Resveratrol supplementation in addition to lifestyle modification can improve some cardiovascular risk factors. More research with longer duration and different dosage of supplementation are needed to confirm the present results.
Keywords:Cardiovascular risk factors, Nonalcoholic Fatty Liver Disease (NAFLD), Resveratrol, hepatology, Metabolic liver disease

Functions of coenzyme Q10 supplementation on liver enzymes, markers of systemic inflammation, and adipokines in patients affected by non-alcoholic fatty liver disease

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Background: Non-alcoholic fatty liver disease (NAFLD) is a chronic liver disorder related to inflammation. CoenzymeQ10 (CoQ10) is a natural compound that has recently been considered as an anti-inflammatory agent. The present study assessed the effects of CoQ10 supplementation on liver enzymes,inflammation status,and adipokines in NAFLD patients.
Methods: Forty-one subjects with NAFLD participated in a clinical trial. The subjects were randomly divided into 2 groups: one received CoQ10 supplements (100 mg once a day),and the other received one placebo for 12 weeks. Blood samples on each patient were taken before and after the 12 week intervention period,for examination of their,liver enzymes (ALT,AST,GGT,and AST/ALT),serum levels of inflammatory marker (hs-CRP,TNF-α and IL-6),and adipokines (adiponectin,and leptin) were determined.
Results: CoQ10 supplementation resulted in a significant decrease in liver enzymes,hs-CRP,and TNF-α over the control group (P <0.05). A comparison of the parameters within groups demonstrated that hs-CRP decreased and serum levels of adiponectin increased in the CoQ group. No changes were observed in serum levels of IL-6. At the end of the intervention,the subjects in the CoQ10 group had significant changes in the grade of steatosis of the liver compared with those in the placebo group (P=0.046).
Conclusion: According to this study,CoQ10 supplementation can significantly improve liver enzymes,inflammation status,adiponectin levels,and the rate of hepatic echogenicity in NAFLD patients and may help prevent the elevation of inflammation in this group of patients
Keywords: Coenzyme Q10; NAFLD; Leptin; Adiponectin; Inflammation

Effect Of Coenzyme Q10 Supplementation On Components Of Metabolic Syndrome In Patients With Non-alcoholic Fatty Liver Disease

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Background: Non alcoholic fatty liver disease (NAFLD) has been considered a benign disease often associated with features of the metabolic syndrome (MetS). One of the most important therapeutic strategies for this disease is modeling components of MetS. Coenzyme Q10 (CoQ10) is a lipid soluble like vitamin,which may modulate the risk of the MetS and NAFLD. The aim of this study was to evaluate effect of CoQ10 on serum levels of triglyceride (TG),waist circumference (WC),HDL-C,fasting blood sugar (FBS) and blood pressure in patients with NAFLD.
Method: This randomized,double-blind,placebo-controlled clinical study was performed among 41 patients with NAFLD two parallel groups,41 patients with NAFLD were randomly to a control group (starch 100 mg/d,n=21) or intervention group (100 mg/d,n=20). The intervention was administered for 12 weeks.
Result: After 12 weeks intervention period,the systolic blood pressure in CoQ10 group compared with control group have a significantly reduction (P= 0.014),and also in the CoQ10 group,a decreased marginal existed in systolic blood pressure (before =123.90±13.05,after=114.89 ±14.21,P value = 0.052),but no significant diastolic blood pressure (P value = 0.392). However,CoQ10 supplementation did not alter the weight,WC,TG,and HDL-C levels (P>0.05).
Conclusion: It seems that the CoQ10 supplementation at dosage of 100 mg ameliorates blood pressure in patients with NAFLD,but this could not reduce the risk of the Mets components.
Keywords: Non alcoholic fatty liver disease,metabolic syndrome,Coenzyme Q10

Effect of vitamin D supplementation on c reactive protein (Crp) in patients with nonalcoholic fatty liver

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Background: Nonalcoholic fatty liver (NAFLD) is the most common chronic liver disease worldwide. It is associated with chronic disorders such as diabetes and heart diseases. Inflammation is one of the basic causes of metabolic diseases. Several studies have shown that vitamin D can reduce inflammation. The purpose of this study was to investigate the effect of vitamin D supplementation on inflammation in patients with nonalcoholic fatty liver disease.
Methods: This study involved 60 NAFLD patients,divided equally into two intervention groups. During 10 weeks,patients in the intervention group receive vitamin D (50000 IU pearl),weekly. Vitamin D levels,C-reactive protein,triglyceride,aspartate aminotransferase (AST) and alanin aminotransferase (ALT) levels were measured at the beginning and end of the study. Data were analyzed using analysis of covariance and regression tests. Analyses were done using SPSS software (version 16). P value lower than 0.05 set as significant level.
Results: Serum 25 (OH) D concentrations increased compared to placebo group (+68±12compared with -1.9±2.44ng/mL; P: 0.001). After adjusting for baseline values, level of ALT, AST, triglyceride and C-reactive protein were reduced in the intervention group compared to the placebo group,but this decrease was not significant between the two groups.
Conclusion: Vitamin D supplementation reduces inflammatory markers in nonalcoholic fatty liver patients with different grades of fat accumulation, in comparison to placebo group. However, further studies with larger sample numbers and a stronger design should be done in this area.
Keywords: Nonalcoholic fatty liver, vitamin D, inflammation

Diet-Induced Epigenetic Changes and Cancer Chemoprevention

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Abstract: The term 'epigenetics' refers to heritable changes that are not encoded in the DNA sequence itself,but plays an important role in the control of gene expression. The three key epigenetic mechanisms include changes in DNA methylation,histone modifications and non-coding RNAs. MicroRNAs (miRNAs),a class of endogenous,single-stranded,non-coding small RNA with 18–22 nucleotides in length,play a critical role in in itiation,progression,metastasis and invasion of cancers. It is widely recognized that deregulation of miRNAs is a hallmark of cancer. The expression of miRNAs can be regulated by several mechanisms,including epigenetic changes. Although epigenetic changes can be inherited in the somatic cells,unlike genetic alterations,these modifications are potentially reversible. Environmental and dietary components are believed to contribute to differences in cancer incidence among populations with different dietary habits. Studies suggest that a large fraction of cancer deaths may be prevented by modifying dietary composition e.g. the content of fiber,fat,cereals,spices,etc. Dietary components not only potentially influence fundamental cellular processes involved in carcinogenesis,but also directly influence epigenetic mechanisms. It has been proposed that dietary modulation of miRNA expression may contribute to the cancer protective effects of dietary agents. Recent data suggest that bioactive dietary components play a role directly or indirectly in the modulation of miRNA expression to regulate carcinogenesis and thereby have chemopreventive potential. Since miRNAs have emerged as critical regulators of genes and proteins,this review discusses the impact of dietary components including micronutrients and non-nutrients on epigenetic alterations especially miRNAs in cancer. Also it emphasizes on promising agents for prevention and perhaps therapy of cancer.
Keywords: Diet,Epigenetics,Cancer,MicroRNAs

The effect of vitamin D supplementation on lipid profile in patients with non-alcoholic fatty liver (NAFLD)

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Background: Nonalcoholic fatty liver disease (NAFLD) is gradually recognized in the world and it is diagnosed as a chronic liver disease that involved at least 25% of population worldwide. NAFLD is correlated with metabolic disorders and CVD progress. Recent finding to decrease heart disease danger with vitamin D supplementation and in several studies, vitamin D supplementation decrease lipid profile. So, the aim of present study is survey effect of vitamin D supplementation on lipid profile in patients with non-alcoholic fatty liver disease.
Methods: This randomized placebo-controlled clinical trial was conducted on 60 patients with NAFLD. That divided equally into two intervention and placebo groups. During 10 weeks, patients in the intervention group receive Vitamin D (50000 IU capsules), weekly. Fasting lipid profile was checked at baseline and after 10 week of the intervention. Ultrasound was done to diagnose non-alcoholic fatty liver disease diagnose. Data were analyzed using analysis of covariance (ANCOVA) test.
Results: Receive of vitamin D supplements caused a significant decrease in total cholesterol level (-4±3 mg/dl, p: .033) and LDL cholesterol level decrease (-4±3.33,p: .045) in intervention group compare to placebo group .We did not find any significant effect of vitamin D supplementation on LDL-HDL ratio and HDL cholesterol.
Conclusion: Vitamin D supplementation may be decrease lipid profile in patient with NAFLD; however further studies with strong design and more samples must conduct to demonstrate the effect of Vitamin D supplementation on inflammation in patients with NAFLD
Keywords: Non-alcoholic fatty liver, vitamin D

The effect of vitamin D supplementation on blood sugar and different indices of insulin resistance in patients with non-alcoholic fatty liver disease (NAFLD)

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Background: Nonalcoholic fatty liver disease (NAFLD) is a chronic liver disease in men and women that can progress to advanced cirrhosis or nonalcoholic steatohepatitis (NASH). Insulin resistance is one of pathological causes of nonalcoholic fatty liver. In a number of studies,vitamin D supplementation decrease insulin resistance. Therefore, the aim of this study was determined survey to effect of vitamin D of supplementation on blood sugar and different indices of insulin resistance in patients with nonalcoholic fatty liver are.
Methods: This randomized placebo-controlled clinical trial was conducted in 60 patients with NAFLD. Patients were randomly assigned to receive either vitamin D supplements or placebo. Patients in intervention group (n = 30) received Perl containing 50,000 IU vitamin D3 (one per week) and those in the placebo group (n= 30) received 10 placebo at the same times. Fasting blood samples were taken at baseline and after 10 week of the intervention. Ultrasound was done to diagnose non-alcoholic fatly liver disease diagnose.
Results: When the analyses were adjusted for Baseline values,cholecalciferol supplementation resulted in increased serum25 (OH) D concentrations compared to placebo group (+68±12compared to -1.9±2.44nm/L; P: 0.001). Intake of vitamin D supplements led to a marginally significant decrease in FBS (fasting blood sugar) (FBS: -12±4 compared to -3±2mg/dL; P,0.055,HOMA-IR: -1.75±.23 compared to .12±.41; P,0.066). Serum calcium is increased in intervention group compared to placebo group (4±.4 compared to-3.2±1 mg/dL; P: .032). We did not find any significant effect of vitamin D supplementation on serum insulin and HOMA-B levels.
Conclusions: Vitamin D supplementation decreased marginally HOMA-IR and FBS concentration in patients with NAFLD; however vitamin D supplementation did not affect on insulin and HOMA-B significantly.
Keywords: Non-alcoholic fatty liver,vitamin D

Overweight and obesity among Ahvaz oil company employees: a cross-sectional study

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Background: Overweight and obesity become a major public health problem in worldwide. Obesity and central obesity are major risk factors for metabolic syndrome which increases risk of many chronic diseases such as type 2 diabetes mellitus,and coronary artery disease,and is associated with cerebrovascular disease and all-cause mortality. In addition,obesity is one of the strongest emerging risk factors for many cancers in many countries. Taking into account the increasing trend of obesity incidence in Iran and important role of it in etiology of chronic diseases,we decided to evaluate prevalence of obesity and central obesity among oil company employees in Ahvaz.
Methods: In this cross-sectional study,508 male employees with mean age of 48.6±9.32 years were recruited from different categories jobs in oil Company. Height,weight,waist and hip circumference of subjects were measured. Body mass index (BMI) and waist to hip ratio (WHR) were calculated. Descriptive statistics were obtained for all study variables.
Result: According to BMI,53.5% of subjects were overweight and 20.7% were obese. Central obesity was observed in 9.7% of subjects as well as 24.1% of subjects were in 96-102 cm range. A total of 508 employees,23.62% and 9.64 % of subjects had WHR 0.96-1 and ≥1 respectively.
Conclusion: On the basis of our results, overweight and obesity were prevalent among employees. Therefore,it is suggested that oil company employees should be made aware of their daily calorie intakes and need to arrange a regular plan for their physical activity and healthy eating habits. In addition,weight management programmers are possible intervention to decrease the prevalence of overweight and obesity.
Keywords: Overweight,obesity,Central obesity,Oil company employees

Effect of vitamin D supplementation on improve-

ment severity of non-alcoholic fatty liver disease

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Background: Nonalcoholic fatty liver disease is a chronic liver disease that can cause liver cancer. Some evidence suggested that vitamin D deficiency is correlated with the prevalence and severity of nonalcoholic fatty liver disease (NAFLD). The aim of this study was to evaluate the effect of vitamin D supplementation on improving severity of fatty liver.
Method: This randomized, placebo-controlled clinical trial was conducted on 60 patients with NAFLD. participants were randomly assigned to receive either 50000 IU/week cholecalciferol supplements (n = 30) or placebo (n = 30) for 10 wk. Fasting blood samples were taken at baseline study and after 10 week of intervention to quantify serum concentrations variables. Ultrasonography was taken at baseline study and after 10 wk of intervention to quantify severity of fatty liver.
Result: When the analyses were adjusted for Baseline values, cholecalciferol supplementation resulted in increased serum 25 (OH) D concentrations compared to placebo group (+68±12 compared to -1.9±2.44nm/L; P: 0.001). Vitamin D supplementation decreased significantly severity of fatty liver in intervention group compared to patients in placebo group.
Conclusions: Our study showed beneficial effects of vitamin D on liver steatosis. More studies are recommended to demonstrate the effect of vitamin D supplementation on severity of fatty liver.
Keywords: Non-alcoholic fatty liver, vitamin D

Evaluation the effectiveness of the wheat-flour fortification program with iron in Lorestan province

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Background: Iron deficiency is the most prevalent nutritional deficiency,especially in children,adolescents and women of reproductive age in the world. Flour fortification program has been selected as a one of the main strategy to combat iron deficiency in Iran. Objective: This study was conducted to determine effectiveness of the mentioned program according quantity of iron in fortified flour samples in Lorestan province.
Methods: In this study,400 samples from March to April 2013 of 12 flour factories were collected. The iron in samples by using spectrophotometry method was measured.
Results: The results of this study showed that the coverage of fortified flour samples in acceptable level was 79.25% (between 30 ppm to 90 ppm) and 20.75% samples were in unacceptable level)less than 30 ppm or more than 90 ppm).
Conclusions: Precise and permanent monitoring on Province flour factories to expand coverage of flour fortification program is recommended.
Keywords: fortification, flour, iron deficiency, Lorestan

Vitamins (E,C,B6,B12 and folic acid) and their association with coronary heart disease in Armenia

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Background: Coronary heart disease (CHD) is the major cause of morbidity and mortality in worldwide. There is experimental and clinical evidence that Vitamins can affect on CHD. Aims of this study were to investigate the association vitamins and CHD among Armenians in Yerevan.
Methods: This study was designed as a case-control study on 320 CHD patients with a diagnosis of CHD less than 6 months (cases) and 320 subjects without CHD (controls) from the hospitals and polyclinics in Yerevan. Dietary intakes with 135 food items over the previous 12 months were evaluated using a semi-quantitative food frequency questionnaire. For each subject,a mean intake according to grams per day of each food was calculated. Then,vitamins based on daily averages in both groups were calculated by Food Processor Software,Ver. 12.
Results: The means of daily intakes of vitamins E,B6,and folic acid were lower in cases,but vitamin C and vitamin B12 did not differ significantly between the both groups. After adjusting for potential risk factors including hypertension,metabolic syndrome (MetS),the family history of CHD,physical activity status,smoking habits,waist circumference,alcohol consumption,we found inverse associations between vitamins E,B6,B12 and folic acid and CHD,while this association was not witnessed for vitamin C.
Conclusions: The intake of vitamins E,B6,B12 and folic acid appeared to be predictors of CHD,independently of other risk factors.
Keywords: vitamins,coronary heart disease,Armenia

Assessment of nutritional status of patients with advance cancer before radiotherapy

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Background: Malnutrition is prevalent in cancer patients and it is one of the major factors in morbidity and mortality. Malnutrition plays an important role in decreased response and tolerance to anti cancer therapy; therefore the aims of this study were to determine nutritional status of patients with advanced cancer prior to radiotherapy.
Methods: Nutritional status of 53 volunteer cancer patients with stage III and IV who referred to radiotherapy center were assessed by Patient –Generated Subjective Global Assessment (PG-SGA) (gold standard method) and percentage of weight loss in six month. If percent of weight change is 10%, then malnutrition was considered

moderate, and more than 10% is severe. Descriptive statistics were obtained for all study variables.
Results: According to PG-SGA, 39% and 13% of patients were moderately and severely malnourished respectively. Also, findings of percentage of weight loss in six month indicated that 21% and 5.6% of patients were moderately and severely malnourished respectively. The median of percentage of weight loss in six month was 6.45(0-32) kg.
Conclusion: The findings of present study showed that prevalence of malnutrition was high in patients with advance cancer. Therefore, for getting the best outcome from treatment nutritional assessment should be an integral part of therapy for every cancer patient and proper nutritional interventions should be made available to the patients before and during cancer treatments. Moreover, the prevalence of malnutrition differed by malnutrition screening tool. Since each method has its own advantages and disadvantages, it seems that a combination of anthropometric, laboratory parameters and a subjective scoring system may be helpful tools in the screening of malnutrition in cancer patients.
Keywords: cancer, patients, malnutrition, PG-SGA, weight loss

Self-Treatment with anti-Obesity medications in Overweight and Obese Women in Tehran-Iran

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Background: Following the failure of long-term weight loss diet and media advertisements about anti-obesity medications, taking anti-obesity drugs are increasing. The aims of present study were to determine the prevalence of self-medication, correlations between self-medication and general characteristic and ways to obtain information about anti-obesity drugs in overweight and obese women.
Methods: A cross-sectional study was carried on 200 overweight and obese women (Body Mass Index=28.36±3.73 kg/m2) aged 20-50 years from April to December 2012. A questionnaire which contained sociodemographic, life styles, self diet management and self medication items was filled out and anthropometric indices were measured. SPSS software version 16 was applied for Statistical analysis. P0.05).
Results: However a significant correlation was observed between age and self medication (r=0.23,P=0.01). Most of the subjects, especially younger women mentioned self-medication for faster losing weight and fitness (64.35%). Herbal supplements were the most commonly used medications in subjects (32.35%). About 60% of women reported that friends and relatives were the main sources of receiving information about anti-obesity drugs.
Conclusion: Self-treatment among women in Tehran-Iran is of concern, due to the high prevalence of self-diet management and tendency of younger women to self-medication for getting body image satisfaction. Therefore, giving more information particularly to young women about side effects of self-treatment is necessary.
Keywords: Self-medication,Self diet management ,Obesity

Effects of supplementation with L-Arginine on antioxidant status in overweight and obese subjects with pre-diabetes: A randomized controlled clinical trial

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Background: Diabetes Mellitus is a metabolic disorder that is increasing in the world. One of the main reasons for progression of diabetes and its complications is reduced activity of antioxidant defenses and high level of free radical production. The aim of present study was to determine effects of supplementation with L-Arginine on antioxidant status in obese subjects with pre-diabetes.
Methods: A double-blind randomized control trial was performed on 46 (24 men,22 women) obese subjects with pre-diabetes. They were divided randomly into two groups. Patients in intervention (n=23) and control group (n=23) received 3 g/day L-arginine and placebo,respectively for 8 weeks. Dietary intake and biochemical measurements ((serum total antioxidant capacity (TAC),Glutathione Peroxidase (GPx) and Superoxide Dismutase (SOD)) were performed at the baseline and after 8-week intervention.
Results: The mean age and BMI of participants were 44.29±8.65 years old and 28.14±1.35 kg/m2,respectively. At the end of study,in both intervention and control group,percentage of carbohydrate decreased and %fat intake increased compared to the baseline (P<0.05). After adjusting for baseline characteristics and dietary intake,among biochemical factors,only serum TAC level showed significant differences at the end of study in the intervention group compared to the control group (p<0.01). Conclusion: 3g/day L-Arginine supplementation can increase TAC level in obese subjects with pre-diabetes.
Keywodrs: Arginine Supplementation,Antioxidant Status,Pre-diabetes

Emotional factor and food choice

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Physiological and psychological mechanisms are reviewed that underlie emotional influences on food choice. Both moods and emotions are considered. Eating a meal will reliably alter mood and emotional predisposition, typically reducing arousal and irritability, and increasing calmness and positive affect. However, this depends on the meal size and composition being close to the eater's habit, expectations and needs. Unusual meals may negatively affect mood. Sweetness, and sensory cues to high energy density, such as fatty texture, can improve mood and mitigate effects of stress via brain opioidergic and dopaminergic neurotransmission. However, adaptation in these pathways, perhaps enhanced by inherited sensitivity, with chronic exposure to such sensory qualities, could lead to overeating of energy-dense foods and consequent obesity. Sweet, fatty foods low in protein may also provide alleviation from stress in vulnerable people via enhanced function of the serotonergic system. Moreover, in rats, such foods seem to act as part of a feedback loop, via release of glucocorticoid hormones and insulin, to restrain activity of the hypothalamic pituitary adrenal axis during stress. However, this effect is also associated with abdominal obesity. In humans, a number of psychological characteristics predict the tendency to choose such foods when stressed, such

as restrained or emotional eating, neuroticism, depression and premenstrual dysphoria, all of which could indicate neurophysiological sensitivity to reinforcing effects of such foods. Greater understanding of such predictive traits and the underlying mechanisms could lead to tailoring of diet to meet personal emotional needs.
Keywords: Stress, Mood, Food choice, Serotonin, Obesity

The effect of deuterium depleted water on oxidative stress induced by acetaminophen in rat
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Background: Detoxification of xenobiotics, drugs and chemical compounds is one of the roles of liver. Acetaminophen converts to its free radical metabolite (NAPQI) by CYP450 that leading to glutathione depletion and liver oxidative damage. Resent study showed some health benefits of deuterium depleted water (DDW) spatially cancer prevention. So, in this study, the effect of DDW on acetaminophen induced oxidative stress was evaluated.
Methods: The mail wistar rats divided into four groups (n=5). The rats in control and treated groups were given natural water and DDW at 30 and 60 ppm respectively for two weeks. All animal except control group treated with acetaminophen 500 mg/kg bw ,(ip) at fifteenth days. Then, the blood was collected by heart puncture and the liver was removed. The level of aspartate amino transferase (AST), alanin amino transferase (ALT), alkalin phosphatase (ALP), bilirubin and total antioxidant activity of plasma (FRAP) were measured in collected plasma. Also, the level of reduced glutathione (GSH) and malondialdehyde (MDA) were measured in liver homogenates.
Results: Measurement of hepatic markers showed that the high dose of acetaminophen leading to increasing of AST activity but there is no significant changes in ALP, ALT and bilirubin levels in treatment groups in compare with control group. Also, the acetaminophen increase the level of FRAP and MDA and decrease the level of GSH in liver homogenates. Treatment of rats with 30 ppm DDW can prevent induction of AST and MDA levels but has no effect on antioxidant factors such as FRAP and GSH**.**
Conclusion: Increased level of MDA and reduction of GSH showed hepatocyte oxidative damages by acetaminophen diminished with DDW treatments. DDW don't change the antioxidant parameters so it may contribute to metabolism and detoxification of acetaminophen.
Keyword: Deuterium depleted water, Acetaminophen, Antioxidant

Dietary energy density and risk of type 2 diabetes in adults participated in the Tehran lipid and glucose study
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Background: Observational studies implicate higher dietary energy-dense (DED) foods predisposes to obesity and may also be associated with risk of type 2 diabetes, but there is limited evidence. Therefore, our aim was to investigate the association between dietary energy density and risk of type 2 diabetes in the Tehran Lipid and Glucose Study (TLGS).
Methods: In this nested case-control study, 178 new onset cases of diabetes in the third and fourth surveys of TLGS was selected. For each case 3 controls were randomly selected from the people who were not diabetic. The cases matched with control within age (± years), sex and following periods. Diet was collected using valid and reliable food frequency questionnaire. DED was calculated as energy (kcal) from foods and beverages (except water) divided by the weight (gram) of foods.
Results: Diet with higher DED was associated with higher calories, total fat, carbohydrate and processed meat intakes and lower fruit and vegetable intakes in men and women (P□0.05). Energy density was positively associated with risk of diabetes in women, only after adjustment for age, smoking, physical activity, family histories of diabetes and total calorie intake (odds ratio 2.28, *P* trend=0.02) or total fat intake (odds ratio 2.15, *P* trend=0.03), this association had not seen in men, even after adjustment for this factors.
Conclusion: In this nested case-control study, there was no association between DED of diet and risk of type 2 diabetes in men. However, in women, after adjustment for confounding factors such as age, BMI, smoking, activity and total calorie or fat intakes, there were positive association between DED and risk of diabetes. Different studies accessed to different result in this ground that it may be because of different ways of energy density calculation or different population of studies. We need more research in this ground.
Keywords: type 2 diabetes, energy density, Tehran Lipid and Glucose Study

Yogurt consumption is inversely associated with the risk of metabolic syndrome: A cross-sectional study in the west of Iran
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Background: Although there are evidence in connection between yogurt consumption with type 2 diabetes mellitus and cardiovascular disease; epidemiologic studies on the relationship between yogurt intakes and metabolic profiles are sparse.
Methods: Our aim was to assess association between total, low-fat, and whole-fat yogurt consumption with the risk of metabolic syndrome (MetS) and its components. We performed a cross sectional study analysis data from Dietary Patterns and the Metabolic Syndrome in Adults from July 2011 to February 2012, a population- based study in Khorramabad city, located in west of Iran. Cur-

rent analyses include 973 adults (aged 18-50 y, 735 females, and 238 males). Persons were selected by using multistage cluster, random sampling method. Dietary intake was assessed with the use of a validated, 168 food- item, self-administrated, semi-quantitative food-frequency questionnaire. Logistic regression adjusted was used for confounding variables.

Results: Mean (±SD) consumption of yogurt among individuals with and without MetS were 4.5±3.9, and 5.8±5.9 servings/week, respectively (p<0.001). These amounts for high –fat yogurt consumption were 2.1±2.9, and 3.1±5.8 servings/w, respectively (p< 0.001). No significant was found regard to low-fat yogurt consumption between subjects with and without MetS.There were inverse significantly relationship between high triacylglycerol concentrations and yogurt consumption after adjusting for age, cigarette smoking, physical activity, history diabetes, heart disease, BMI, energy intake, milk, and cheese intake (β=-0.046, OR=0.96, 95% CI for OR: 0.92-0.99). After adjusting for potential confounders, by differentiation between low- and high-fat yogurts, there was no significant association with Mets. Although low-fat yogurt was significantly correlated with some MetS components (abdominal adiposity, OR: 0.92 P-value: 0.02; FPG, OR: 0.91 P-value: 0.04).

Conclusion: Yogurt consumption is inversely associated with the risk of high triacylglycerol concentration. Low-fat dairy consumption, but not whole-fat dairy consumption, was associated with a lower risk of FPG and abdominal adiposity.

Keywords: Metabolic syndrome, Dairy Product, Cultured Milk Product, Yogurt, Abdominal obesity

The relationship between nutritional knowledge of parents of pre-school children 3-5 years old and the contents of packlunch in nurseries in Ahvaz,Iran,2013

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Background: The intake of food in children attending child care or school has been widely studied. Children are not meeting the recommended intakes published by USDA's MyPyramid. In addition to poor dietary intake,childhood obesity is increased. Regarding with this rise in childhood obesity,early nutritional intervention during childhood may be required. Poor nutrition cannot only cause obesity but also obesity-related diseases. It is important to begin healthy eating during early years to increase chances of lifelong healthy lifestyles. However,at the preschool age these children rely on their parents to provide them with healthy nutrition and food items. Parents can influence their child's eating habits with their nutrition knowledge. Nutrition knowledge of parents can affect the types of food their children eat and improve overall diet quality. However,parents may not use their nutrition knowledge or placing it into practice in their child's packed lunches. Many education interventions have been designed to increase nutrition knowledge of parents and teachers. This study aimed to investigate the relationship between nutritional knowledge of parents of pre-school children 3-5 years old and the contents of packlunch in nurseries.

Methods: In this analytic-epidemiology study 310 children were randomly selected from 15 kindergartens in Ahvaz city,Iran. A consent form was obtained and self-report questionnaire completed by parents. Three-day food records (only for school times) was filled observationally by researchers in nurseries. For statistical analysis One-Way ANOVA and Correlation tests were used in SPSS 16.

Results: 310 childeren (47% females,53% males) with a mean age of 50.26 ± 0.54 monthes were studied. The mean score of nutritional knowledge of parents was 8.8 ± 0.14 (46% of maximum score). Regarding with analysing the consumption of food groups (grains,meat,fruits,vegetables,dairy,oils and sweets) 76 % of children consumed less than 3 food groups and only 24% received three or more of food groups during school times. Nutritional knowledge of parents was significantly associated with consumption of food groups (P = 0.027). Moreover,there was a weak inverse correlation (P = 0.45) between nutritional knowledge of parents and the mean intake of energy (R= -0/043).

Conclusion: Parents' nutritional knowledge was not enough. Since low knowledge may have adverse effects on child's health and nutrition,it is suggested to desing programmes in order to increase nutritional awareness of parents and cargivers of children.

Keywords: Nutritional knowledge, pre-school children, parents, nurseries.

Determination of concentration of nitrate in the onion in 1392 in Urmia by Spectrophotometry

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Background: Iran has one of the best climates in different parts of the world to cultivate a variety of crops,vegetables,cucurbit vegetables in all seasons. Nitrate content is an important factor in determining the quality of vegetables. Intake of nitrate and nitrite,threatens human health. Nitrate itself is not toxic to humans but nitrites of nitrate restoration can combine with amines and obtained nitrosamine formation that is a carcinogen compound for body. Nitroso compounds have several adverse effects including teratogenic effects,formation of met-Hb,adrenal cortex hyperplasia and neoplasia of the stomach. Due to excessive use of fertilizers containing nitrogen to accelerate growth,many vegetables contain a high percentage of nitrate that in many cases,the contents are higher than standard values. The aim of this study was to determine the concentration of nitrate in the onion in 1392 in Urmia.

Methods:In this study,30 samples of onion in Urmia city were randomly sampled by the project partners and transferred to the laboratory and the nitrate content was evaluated by a spectrophotometric method.Nitrate test was done by method there is in National standard No. 4106 and the obtained data were analyzed using by ANOVA.

Results: The findings of this study indicate that high nitrate concentrations in onion production in Urmia (Average: 231.3 mg/kg). All analyzed samples had nitrate levels above the permissible limit defined in the standard No. 16596 (MRL= 90 mg/kg).

Conclusion: Contamination is one of the most important concerns in food hygiene. Since fruits and vegetables are a part of a healthy diet and as the most used food items consumed by a large portion of the community therefore,evaluating the quality and nitrate contamination could be important than anything else. Due to the

high use of this product and the potential risks of nitrate concentration and its relationship to certain diseases and cancers of the digestive system so regular monitoring products supplied by regulatory agencies cause to products to comply with the permissible limit of nitrate concentration by national and international authorities.
Keywords: nitrat, Onion, Spectrophotometry, Uromia

Providing current estimates of wasting and under nutrition in primary school students in Tabriz

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Background: Proper nutrition is one of the major issues in children´s health. Poor nutrition (over nutrition and under nutrition) can be caused the physical and mental problems in children. Many countries experience both types of malnutrition (wasting and obesity). This study was planned to provide current estimates of wasting and under nutrition in primary school students in Tabriz.
Methods: This cross sectional study was conducted among 857 Tabriz residents' primary school students selected through sampling simple random cluster in 1390-1391. BMI was calculated as body weight divided by the square of height (kg/m2). Wasting and under nutrition among children was defined for below the 5th percentile by specific BMI based on NCHS charts. The data were analyzed by SPSS16.
Results: Frequency of under-weight in male and female students was 20.9% and 18.8% respectively. Frequency of under-weight in total study population was 20.1%.
Conclusion: Wasting and underweight in primary school students were considerable among school age children. According to significant impact of childhood weight on adulthood complications,recent challenges inquired in response to local nutrition planning in primary school students.
Keywords: Wasting, Malnutrition, BMI, Primary school children

Determination of the effect of beta glucan on count and percentage of and moncytes in women with breast cancer undergoing chemotherapy: a double blind randomized clinical trial

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Background: Decrease the blood cell counts and hematological parameters are the side effects of cancer treatment such as chemotherapy. Previous studies have demonstrated beta glucan can increase monocyte cells number and activates monocytes as naive immune agents. The aim of this trial was to determine the effect of beta glucan on monocyte number and percent in women with breast cancer undergoing chemotherapy.
Methods: This randomized,double-blind,placebo-controlled clinical trial was conducted on 30 women with breast carcinoma aged 28-65 years. The eligible participants were randomly assigned to intervention (n=15) or placebo (n=15) groups using a block randomization procedure with matching based on age,course of chemotherapy and menopause status. Patients in the intervention group received two 10-mg capsules of soluble 1–3,1–6,D-beta glucan daily and the placebo group received placebo for 21 days,in an interval between two courses of chemotherapy. Monocyte number and percent was measured by CBC and H1 system method at baseline and at the end of the study. The data were analyzed by SPSS16.
Results: After 21 days of the intervention,the mean of monocyte number in beta glucan group increased from 0.43±0.09 to 0.45±0.15 (no× 103/ µl). In placebo group the mean of monocyte counts also changed from 0.39±0.14 to 0.40±0.17 (no× 103/ µl). Percent of monocyte in beta glucan group increased from 7.34±2.83 to 8.86±4.78 % and in placebo group decreased from 7.55±3.70 to 7.11±2.74%. The changes in monocyte number and percent of the participants within the beginning and end of the study in each group were compared by using paired sample t-test. Increase the monocyte number and percent in beta glucan group was not significant,P=0.507 and P=0.183 respectively. In placebo group the changes in monocyte number and percent also was not significant P=0.691 and P=0.475 respectively by paired sample t-test.
Conclusion: The findings suggest that beta glucan causes the non-significant increase in monocyte number and percent in women with breast cancer undergoing chemotherapy. We can conclude that beta glucan may have a positive role for increasing monocytes,but further studies were needed.
Keywords: beta glucan, monocyte, breast cancer

Determination of effect of Beta glucan on hemoglobin level in women with breast cancer undergoing chemotherapy

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Background: Decrease the blood cell counts and hematological parameters are the side effects of cancer treatment such as chemotherapy. Previous studies have demonstrated beta glucan can increase white blood cells and red blood cells in some diseases. The aim of this trial was to determine the effect of Beta glucan on hemoglobin level in women with breast cancer undergoing chemotherapy.
Methods: This randomized,double-blind,placebo-controlled clinical trial was conducted on 30 women with breast carcinoma aged 28-65 years. The eligible participants were randomly assigned to intervention (n=15) or placebo (n=15) groups using a block randomization procedure with matching based on age,course of chemotherapy and menopause status. Patients in the intervention group received two 10-mg capsules of soluble 1–3,1–6,D-beta glucan daily and the placebo group received placebo for 21 days,in an interval between two courses of chemotherapy. Hemoglobin level was measured at baseline and at the end of the study. The data were analyzed by SPSS16.
Results: After 21 days of the intervention,the mean of hemoglobin in beta glucan group decreased from 12.01±1.52 to 11.83±1.15 g/dl. In placebo group the mean of hemoglobin also decreased from 12.20±0.73 to 11.90±0.75 g/dl. The changes in hemoglobin levels of the participants within the beginning and end of the study in each group were compared by using paired sample t-test. Decrease the hemoglobin in beta glucan group was not significant (P=0.304) and in placebo group was significant (P=0.042) by paired sample t-test.

Conclusion: The findings suggest that chemotherapy causes the hemoglobin decrease in both groups,but the decrease in placebo group was significant. We can propose that beta glucan may have protective role for the further reduction of hemoglobin.
Keywords: Betaglucan, Breast Cancer, Hemogluboline

Metabolic and nutritional changes after Roux-en-Y gastric bypass for weight loss in morbidly obese patients: A Prospective study

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Background: The obesity epidemic is increasing worldwide reaching to approximately 300 million people. Bariatric surgery is and effective treatment as intervention of last resort in morbidly obese patients. The effect of bariatric surgery on liver tests and fatty changes after weight loss are controversial. Post-operative levels of trace minerals in patients undergoing bariatric surgery were also investigated.
Materials and methods: Sixty patients who had BMI of more than 40 (or more than 30 with a severe comorbidities due to obesity) and met the surgical indication criteria of bariatric surgery were investigated in a nonrandomized prospective cohort study. Anthropometric changes as well as the improvement or remission of dyslipidemia, trace minerals and liver enzymes were investigated in a series of morbid obese patients submitted to Roux-en-Y gastric bypass surgical procedure through one year of follow-up. Hepatic ultrasonography was performed for all the patients before the operation and during the follow-ups in order to assess hepatic steatosis.
Results: Anthropometric indices including BMI and waist circumference significantly decreased after the surgery and sustained after 1 year of follow-up. SGOT and SGPT as well as total cholesterol, LDL cholesterol and triglyceride were significantly reduced after the surgery. Inversely, HDL cholesterol disclosed a significant rise during the follow-up. All patients who suffered from Nonalcoholic fatty liver disease (NAFLD) at the beginning of the study, were healed after one year ultrasound survey. Among trace minerals, the rates of magnesium, selenium and zinc were lower at one year postoperatively versus preoperatively, however, none of the trace minerals showed significant changes during follow-ups.
Conclusion: Bariatric surgery is a viable option for treatment of NAFLD, in the obese population.
Keywords: weight loss , Roux-en-Y gastric bypass , morbid obesity

Roux-en-Y gastric bypass for weight loss and metabolic advantages in morbidly obese patients: A Prospective study

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Background: The obesity epidemic contributes to increased occurrence of comorbidities such as type 2 diabetes,dyslipidemia and hypertension. Weight loss surgeries have been increased in recent decades due to the world's epidemic of obesity. The effect of bariatric surgery on anthropometric changes as well as type 2 diabetes,hypertension and dyslipidemia was investigated.
Methods: Sixty patients who had BMI of more than 40 (or more than 35with a severe comorbidities due to obesity) and met the surgical indication criteria of bariatric surgery were investigated in a nonrandomized prospective cohort study. Anthropometric changes as well as the improvement or remission of T2DM,hypertension,dyslip idemia,obstructive sleep apnea and biochemical blood indices were investigated in a series of morbid obese patients submitted to Roux-en-Y gastric bypass surgical procedure through one year of follow-up.
Results:Anthropometric indices including BMI and waist circumference significantly decreased after the surgery and sustained after 1 year of follow-up. Type 2 diabetes were significantly improved among diabetic patients. FBS and HbA1C were decreased by 64 mg/dl and 2.5 %,respectively during the study and medical therapy was discontinued after 6 month in all the diabetic patients. Significant decrement of blood pressure were detected among patients with hypertension. Total cholesterol,LDL cholesterol and triglyceride were significantly reduced after the surgery. Inversely,HDL cholesterol disclosed a significant rise during the follow-up.
Conclusion: It is emphasized to consider bariatric surgery as an adjuvant therapy in morbid obesity,which should be used together with best medical therapy.
Keywords: weight loss,morbid obesity,Roux-en-Y gastric bypass

Dietary Energy Density and Risk of Type 2 Diabetes in Adults Participated In the Tehran Lipid and Glucose Study

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Background: Observational studies implicate higher dietary an energy-dense (DED) food predisposes to obesity and may also be associated with risk of type 2 diabetes, but there is limited evidence. Therefore, our aim was to investigate the association between dietary energy density and risk of type 2 diabetes in the Tehran Lipid and Glucose Study (TLGS).
Methods: In this nested case-control study, 178 new onset cases of diabetes in the third and fourth surveys of TLGS was selected. For each case 3 controls were randomly selected from the people who were not diabetic. The cases matched with control within age (± years), sex and following periods. Diet was collected using valid and reliable food frequency questionnaire. DED was calculated as energy (kcal) from foods and beverages (except water) divided by the weight (gram) of foods.
Results: Diet with higher DED was associated with higher calories, total fat, carbohydrate and processed meat intakes and lower fruit and vegetable intakes in men and women (P 0.05). Energy density was positively associated with risk of diabetes in women, only after adjustment for age, smoking, physical activity, family histories of diabetes and total calorie intake (odds ratio

2.28, *P* trend=0.02) or total fat intake (odds ratio 2.15, *P* trend=0.03), this association had not seen in men, even after adjustment for this factors.
Conclusions: In this nested case-control study, there was no association between DED of diet and risk of type 2 diabetes in men. However, in women, after adjustment for confounding factors such as age, BMI, smoking, activity and total calorie or fat intakes, there were positive association between DED and risk of diabetes. Different studies accessed to different result in this ground that it may be because of different ways of energy density calculation or different population of studies. We need more research in this ground.
Keywords: type 2 diabetes, energy density, Tehran Lipid and Glucose Study

Effect of Alkaline Water on the lipid profile of Wistar rats

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Background: Stress Oxidative is the condition that Free Radicals activity rate in body would be more than Antioxidants defense active system. It's expected that Alkaline water has positive and preventive effects on diseases related to stress oxidative like Atherosclerosis and Cardiovascular disease. Alkaline water could be prepared trough both electro-chemical and natural ways and Scavenge oxygen radicals in cell culture. In recent study, we showed the effects of Alkaline water on serum Cholesterol and Triglyceride level in wistar rats.
Methods: In this study 16 male Wistar rats weighing 250-200 g were used. Rats kept at room temperature of 24 ° C and divided randomly into four groups, namely control group, alkali group 1, alkali group 2, and acidic group. Control group for 5 months were fed of standard pellet and tap water pH of about 7.4, whereas alkali group 1 received standard pellet and alkaline water pH 8.5, alkaline group 2 received standard pellets and alkaline water pH 9 and acidic group received standard pellet and water pH 6. After 32 weeks, blood samples were obtained and lipid profile was measured in all groups, the data was analyzed with SPSS statistical software.
Results: relay on obtained results, Cholesterol and Triglyceride concentration in Alkaline water groups to acid water group have been reduced significantly (to less than 0.05), while high-density lipoproteins (HDL) has not significant changes.
Conclusion: Results of this study declare that daily administration of Alkaline water can increase serum Antioxidant capacity improve serum lipid profile and risk of oxidative stress diseases. Therefore, more study and cultural wide programs for Alkaline water usage, would be highly recommended.
Keywords: Alkaline water, Antioxidant, Stress Oxidative, Lipids Profile.

Comparison of the effects of canola oil and rice bran oil consumption on serum malondialdehyde and blood pressure in postmenopausal type 2 diabetic women

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Background: Oxidative stress and hypertension which have closed relationship with incidence ofCVD are so common among the type 2 diabetic patients. We aimed to compare the effects of canola oil and rice bran oil consumption on serum malondialdehyde (MDA) and blood pressure in type 2 diabetic women.
Methods: Seventy-five postmenopausal women with type 2 diabetes participated in this randomized controlled clinical trial. Participants were randomly allocated to one of the three groups including: a control group (balance diet +30 g/day sunflower oil) and two intervention groups (balance diet +30g/day canola oil or rice bran oil).All participants were provided with the oils and asked to add it on their salad or baked foods. At baseline and after 8 weeks height, weight, serum malondialdehyde, and systolic and diastolic blood pressure were measured, also 3-day food records were taken. Data was analyzed using SPSS # 19.
Results: After 8 weeks intervention, reductions of serum MDA (μmol/ml) were significantly higher in rice bran oil group (-2.02±1.22, p<0.001) and canola oil group (-1.43±1.08, p<0.001) compared to the controls (0.45±1.48). Also MDA level decreased significantly in the rice bran oil group compared to the canola oil group (p=0.012).Blood pressure changes were not significantly different among the 3 groups.
Conclusion: Consumption of rice bran oil or canola oil instead of sunflower oil could reduce oxidative stress but has no effect on blood pressure in type 2 diabetic women. Moreover, rice bran oil could attenuate MDA levels compared to canola oil.
Keywords: type 2 diabetes,oxidative stress, blood pressure, canola oil, rice bran oil.

Increased dairy intake via kefir drink or milk consumption in a non-energy-restricted diet causes weight loss in overweight or obese premenopausal women

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Background: Controversy exists regarding whether increasing dairy intake would lead to significant weight loss in the absence of energy restriction. We aimed to determine and compare the weight-reducing effects of increasing dairy intake via kefir drink (a probiotic dairy product) or milk consumption in a non-energy-restricted diet in overweight or obese premenopausal women.
Methods: In this single-center, multi-arm, parallel-group, randomized controlled trial, seventy-five otherwise healthy overweight or obese premenopausal women were randomly assigned to 3 groups, labeled as control, milk, and kefir, to receive an outpatient dietary regimen for 8 weeks. Subjects in the control group received a diet providing a maintenance level of energy intake, contain-

ing 2 servings/d of low-fat dairy products, while those in the milk and kefir groups received a weight maintenance diet, containing 2 additional servings/d (a total of 4 servings/d) of dairy products from low-fat milk or commercial kefir drink, respectively. Anthropometric outcomes including weight, body mass index (BMI), and waist circumference (WC) were measured every two weeks.

Results: Fifty-eight subjects (mean age 35.7 years) completed the study. At 8 weeks, subjects in the kefir and milk groups had marginally, but significantly, greater reductions in weight, BMI, and WC compared to those in the control group (all $p<0.01$). However, no such significant differences were found between the kefir and milk groups.

Conclusions: Increased dairy intake via kefir drink or milk consumption in a non-energy-restricted diet causes comparable small, but significant, weight losses in overweight or obese premenopausal women. However, further studies are warranted.

Keywords Dairy products, diet, weight loss, women, randomized controlled trial

Evaluation of The Metabolic Syndrome Components Among Patients Suffering Non-alcoholic Fatty Liver

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Background: Metabolic syndrome (MeS) results from a variety of metabolic risk factors that gather in a single individual. These metabolic risk factors include insulin resistance, hypertension, dyslipidemia and hyper coagulability. The development of non-alcoholic fatty liver disease (NAFLD) is strongly associated with the MeS and as a matter of fact most of the patients with NAFLD have more than one feature of MeS. The aim of this study is to evaluate the components of the MeS in patients with NAFLD.

Methods: During a 6 month period, Patients diagnosed with NAFLD were entered in this cross-sectional study, aged 16-63 years. The serum levels of triglyceride (TG), waist circumference, HDL-c,LDL/HDL ratio, VLDL, Cholesterol/HDL ratio, VLDL, fasting blood sugar, AST, ALT, blood pressure and weight of patients were measured.

Results: Overall 193 patients (147 males, and 47 females) included in this study. Patients' mean ages were 31.6±10.09 years. Prevalence of MeS among men and women were 46.8% and 10.3% respectively (P <0.001) which indicates significan difference between women and men.The variables of age, FBS, TG, HDL-c, LDL/HDL ratio, VLDL, Cholesterol/HDL ratio, AST and ALT were shown significant differences between the groups with and without MeS.

Conclusion: It seems that the NAFLD is a major component of MeS and the prevalence of MeS in men is much more than women.

Keywords: Nonalcoholic fatty liver disease, Metabolic syndrome, Insulin resistance.

Effect of Coenzyme Q10 Supplementation On Components Of Metabolic Syndrome In Patients With Non-alcoholic Fatty Liver Disease

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Background: Non alcoholic fatty liver disease (NAFLD) has been considered a benign disease often associated with features of the metabolic syndrome (MetS). One of the most important therapeutic strategies for this disease is modeling components of MetS. Coenzyme Q10 (CoQ10) is a lipid soluble like vitamin, which may modulate the risk of the MetS and NAFLD. The aim of this study was to evaluate effect of CoQ10 on serum levels of triglyceride (TG), waist circumference (WC), HDL-C, fasting blood sugar (FBS) and blood pressure in patients with NAFLD.

Methods: This randomized, double-blind, placebo-controlled clinical study was performed among 41 patients with NAFLD two parallel groups, 41 patients with NAFLD were randomly to a control group (starch 100 mg/d, n=21) or intervention group (100 mg/d, n=20). The intervention was administered for 12 weeks.

Results: After 12 weeks intervention period, the systolic blood pressure in CoQ10 group compared with control group have a significantly reduction (P= 0.014), and also in the CoQ10 group, a decreased marginal existed in systolic blood pressure (before =123.90±13.05, after=114.89±14.21, P value = 0.052), but no significant diastolic blood pressure (P value = 0.392). However, CoQ10 supplementation did not alter the weight, WC, TG, and HDL-C levels (P>0.05)

Conclusion: It seems that the CoQ10 supplementation at dosage of 100 mg ameliorates blood pressure in patients with NAFLD, but this could not reduce the risk of the Mets components.

Keywords: Non alcoholic fatty liver disease, metabolic syndrome, Coenzyme Q10

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The effect of pomegranate juice on parameters of Western Ontario and McMaster Universities Osteoarthritis Index in patients with knee osteoarthritis

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Background: Osteoarthritis is the most common joint disease and the leading cause of disability in people, especially the elderly. Recent evidence from in vitro and animal studies suggested that pomegranate juice can be effective in improving clinical symptoms in these patients. Anthocyanins and ellagitanins have been suggested as the effective ingredients. The aim of this study was to evaluate the effects of pomegranate juice on pain, stiffness and physical function in patients with knee osteoarthritis.
Methods: Thirty eight patients with knee osteoarthritis were recruited in this randomised clinical trial. The participants were randomly divided into two groups. Pomegranate juice group (n=19) consumed 200 ml sugar and additives free pomegranate juice daily for 6 weeks. No intervention was done on the control group. The Western Ontario and McMaster Universities Osteoarthritis Index parameters comprise: pain, stiffness and physical function. These variables were assessed at baseline and end of intervention period. Statistical analyse were conducted by SPSS software version17.
Results: Means of pain, stiffness and physical function did not have statistically significant difference between the two groups. After the intervention, the stiffness and limitation of physical function were reduced significantly in pomegranate juice group ($p<0.05$) but pain was not significantly different between the two groups before and after the study.
Conclusions: The results of this study showed that pomegranate juice can reduce joint stiffness and improve physical function in patients with osteoarthritis of the knee.
Keywords: Knee osteoarthritis, pomegranate juice, The Western Ontario and McMaster Universities Osteoarthritis Index

Effect of Early Enteral Nutrition on Clinical Outcomes in an Intensive Care Unit

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Background: There is evidence that early enteral nutrition can improve clinical outcomes in patients hospitalized in the intensive care unit. The purpose of this study was to evaluate the effect of early enteral nutrition on clinical outcomes in medical patients admitted to the intensive care unit.
Methods: This prospective study was performed on 94 patients admitted to the medical intensive care unit (ICU). The patients were divided into two groups according to nutrition onset. Enteral nutrition for group one was started within the first 48 hours of admission to the ICU and group two received enteral nutrition after the third day of admission to the ICU. Patients were monitored for ICU length of stay, organ failure (SOFA score),aspiration pneumonia, duration of mechanical ventilation and mortality.
Results: The average daily caloric intake between the two groups did not differ significantly ($P = 0.4$). Both groups received more than 75% of the calculated required calorie. The mean duration of hospitalization,occurrences of organ failure and mortality were lower in patients who received their calculated daily nutrition during the first 48 hours of admission ($P < 0.05$). Regarding ventilator-associated pneumonia,there was no significant difference between the two groups of early and late enteral nutrition. There was no significant difference between the two groups of early and late nutrition in the duration of mechanical ventilation. Logistic regression analysis showed that late nutrition causes a 3.3 times increase in mortality rate,1.3 times in the length of ICU stay and 1.8 times in organ failure ($P<0.05$).
Conclusions: Early enteral nutrition within 24 to 48 hours of admission to ICU reduces the duration of hospitalization, organ failure and mortality of the medical patients.
Keywords: Enteral Nutrition; Critical Ill Patients; Mortality; SOFA Score

Risk factors related to nutritional health in the elderly covers a number of health center

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Abstracts: In recent years, life expectancy in our country, so that the life expectancy has increased in 1387 compared to 1380 in men and women from 6/67 to 7/71 of 6/73 4/70 years of age reached. Thus, in the elderly population is increasing mainly due to the increase in the quantity and quality of health services in the country. The demographic changes in the population structure observed in other countries, and requires major interventions in the social, economic and political order to meet the urgent needs of this group. Emphasis on proper nutrition for health promotion and prevention of chronic diseases in older age Never Too Late . People in older age groups than other nutritional and health information seeking and need their independence and quality of life. They often need assistance to improve their self-care habits and want to know how they can remain active and eating better.
To determine the prevalence of nutrition-related diseases, including stroke, myocardial infarction, diabetes and osteoporosis in patients over 60 years admitted to health centers Drmanyayn cross-sectional survey research was conducted. Among the seniors studied 7950 subjects (5081 women and 2869 men) were randomly Krdndyafthha for this study was based on questionnaires integrated care for the elderly, were obtained. Our results show that a history of stroke (2%), previous myocardial infarction 5/7%, 16%, diabetes mellitus, history of osteoporosis was 15% in patients. The plan to reduce the mortality rate due to diseases of old age must risk factors for cardiovascular diseases, diabetes and osteoporosis is considered.

Determining the impact of training on knowledge and behaviors preventing hypertension through promotion of nutritional healthin

elderly covered by healthcare center of Ardakan

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Background: Hypertension is one of the chronic diseases. This disease has caused 147 thousands death (Myocardial Infraction) and 42 thousands death (Heart Failure) in United States of America in 2003.identifiying the relationship of nutritional factors with blood pressure is important in a sense that it can be better nutrition guidance for prevention of elderly hypertension and can be used in their treatment. The purpose of the present study is to determine the impact of training on knowledge and behaviors preventing hypertension through promotion of nutritional health.
Methods: The Method in this study is descriptive-analytical in which 70 elderly covered by healthcare center of Ardakan attended. The sampling method is random. The method of data collection is questionnaire (including demographic and knowledge and nutritional behaviors) whose reliability and validity gained before the study started. For data analysis, SPSS software is employed.
Results: The results show that 71/3 % of the elderly agreed that fatty foods can be problematic for them. 75/6 % of them agreed that one of the ways to prevent hypertension is proper nutrition. 52/4% of them disagreed with adding salt to food and 84 % disagreed with using fried food. 45/4 % of the elderly gained their information about nutrition and blood pressure from TV. Independent t-test did not indicate a significant relationship between knowledge and sex.
Conclusion: the results show that publicizing and training is a powerful instrument in preventing hypertension and preserving proper nutrition and nutrition training is recommended in the field of preventing blood pressure in elderly.
Keywords: Education, Behavior, Elderly, Nutrition, Hypertension

Effect Of Islamic Fasting On Glucose,lipid profiles And BMI In Obesity

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Abstract: Fasting is one of the obligatory duties of Islam (or Fasting in Islam is a faith) which has several metabolic changes in the body. Several studies have investigated various aspects of fasting,but also its effects on individuals with different characteristics such as obesity are almost unclear. The purpose of this study is the effect of fasting on glucose,lipid profile and body mass index**.**
Methods: This study was done in the summer of 1392 with the participation of 36 volunteers (18 males and 18 females) who were overweight,and over 25 years in the city of Yazd. In coordination with persons in the three days before and after Ramadan fasting blood samples were collected. Fasting glucose,triglyceride s,cholesterol,LDLc and HDLc,and body weight were measured. Data were analyzed using SPSS16.
Results: Mean fasting glucose and triglyceride levels didn't showed a significant decrease compared to before fasting while The mean weight (from 95/2 ± 12/4 to 93 ± 11/5 kg),BMI (from 34/2 ± 5/1 to 33/4 ± 5/1 kg per square meter) and LDLc to HDLc (from 5.6 ± 1.2 to 5.2 ± 1.06) were significantly reduced and Average HDLc before and after fasting showed a significant increase (from 37/8 ± 8/9 to 41/3 ± 6/8 mg%,p <0.05). Conclusions: Increased levels of HDLc and decreased body mass index in obese fasting,indicating the usefulness of fasting on the health of individuals.
Keywords: Fasting,Serum Lipoproteins. Obesity

Assessment of nutritional status based on anthropometric parameters,biochemical and food intake in hemodialysis patients referred to Imam Ali hospital in Zahedan

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Background: Chronic renal failure is a progressive disorder due to accumulation of blood urea nitrogen,and the result is a loss of appetite in patients. On the other hand,dietary restrictions in hemodialysis patients and the loss of water-soluble nutrients during dialysis,nutritional status is worse. The aim of this study was to evaluate the nutritional status of hemodialysis patients compared with the control group.
Methods: 45 patients on dialysis with a mean age of 13.1 ± 43.2 years and 40 healthy subjects with a mean age of 12.6 ± 38 years were studied. Nutritional status using biochemical and anthropometric parameters and food intake was measured. After 14 hours of fasting,5 ml blood for measurement of serum levels of urea,uric acid,creatinine,lipid profile and serum albumin was obtained. Then,24-hour dietary recall questionnaire was completed for each individual,weight (after dialysis) and height were measured and body mass index (BMI) was calculated as weight (kg) divided by height (m^2).
Results: In HD patients,mean energy and protein intake(P 25 kg / m^2,respectively. 5 patients (11.1%) had serum albumin> 3.5g / dL. The levels of serum lipids and lipoproteins of patients were not significantly different from the control group.
Conclusion: A significant reduction in body weight,serum albumin,and energy and nutrient intake in hemodialysis patients showed poor nutritional status in these patients. Having a proper diet in these patients will be effective in preventing long-term complications of the disease.
Keywords: Biochemical and Anthropometric parametrs,Food intake,Hemodialysis patients.

A mini nutritional assessment of hospitalized patients in the largest hospital of Urmia, Iran

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Background: The nutritional status of the hospitalized patients affects strongly on drugs turn over, surgery outcome and convalescence period of their disease. Most of the patients suffer from malnutrition at a long period of time before affecting the diseases. This study was conducted to assess the protein-energy malnutrition of hospitalized patients.
Methods: Eighty five patients (46 female and 39 male persons) were selected randomly through recently hospitalized patients at the internal diseases and surgery units of a central governmental hospital (Imam Khomeini) in Urmia. Age, sex, type of their diseases, weight, height, Body mass index (BMI), ideal body weight (IBW), usual body weight (UBW), IBW%, UBW%. A mini nutritional assessment (MNA) questionnaire was completed for each of patients selected.
Result: Based on MNA questionnaire 45.9 percent of patients (n=39) were at risk of malnutrition and 14.1 percent of them (n=12) were malnourished. Prevalence of malnutrition was significantly higher than others in malignant patients.

Omega 3 fatty acid differentially modulated serum levels of IGF1 and IGFBP3 in men with CVD: a randomized,double-blind,placebo-controlled

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Background: Studies have reported elevated serum insulin-like growth factor 1 (IGF-1) levels followed by omega-3 supplementation in various groups. Considering decreased level of IGF-1 in patients with cardiovascular disease (CVD) and protective effects of IGF-1 against CVD progression and myocardial infarctions mortality,this study performed with the aim of determining effects of omega-3 supplementation on serum levels and gene expression of IGF1 and IGF binding protein 3 (IGFBP-3) in men with CVD.
Methods: Sixty two middle aged (Age=55.9±6.5) non-obese male CVD patients accomplished the study protocol in two groups of omega-3 (n=31) or placebo (n=31). Participants took omega-3 supplement or placebo (edible paraffin) for 8 weeks while they were asked not to change their diet or physical activity plan. Anthropometric and lipid profile characteristics,serum IGF-1,serum IGFBP-3 and also IGF-1 and IGFBP-3 gene expression in peripheral blood mononuclear cells (PBMCs) were measured in all participants before and after the intervention. Statistical analyses were performed using SPSS software.
Results: There were no significant differences between two study groups in age and BMI at the baseline. Two groups also had no difference in baseline serum LDL,HDL,VLDL,TG & IGF-1. Compared to placebo,omega-3 supplementation increased serum IGF-1 levels (P value=0.01),and decreased serum level of IGFBP-3 (P value=0.02). There were a trending toward increase in IGF-1 expression and non-significant decrease in IGFBP-3expression.
Conclusion: Omega3 supplementation in patients with CVD increases serum IGF1 level and decreases serum IGFBP3. Further research is warranted to investigate the underlying mechanisms.
Keywords: omega-3; IGF-1; IGFBP-3; gene expression; cardiovascular disease

Evaluation of the status of heavy metals in rice cultivation in the province 92

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Background: Rice is one of the main components of the food basket of the country. Although the consumption of rice,to change habits and nutritional pattern as a result of industrialization going down But rice is the main food of the world population,approximately 2/4 billion. Although in terms of wheat cultivation is after,but 85% of its production to a total consumption of human nutrition looks. Per capita rice consumption in Iran is estimated that 42/5 kg is actually the second product is filled with the country consumption. One of the most important pollutants rice are lead and cadmium,that human existence is no need to continue for the metals. These metals are elements of the Earth crust-forming. Broad application they lead to widespread presence in water,soil and air is. The aim of this study was to determine the amount of toxic and heavy metals (lead and cadmium) in rice cultivated in the province of Gilan full consumption.
Methods: in this study,36 samples of rice cultivated from area 10 (sangar,astane ashrafie,khoshkibijar,kh omam,pasikhan,shafts,PIR Bazaar,some sara,foman.) were collected. And after the preparation of the samples the values of lead and cadmium using atomic absorption spectrophotometry model Rayleigh WFX-210 was determined. After gathering information,the statistical values obtained was compared with the national standard.
Results: On the measurement of the values of lead and cadmium respectively 0/055 ± 0/08 ± 0/034/06 mg/kg of foodstuff recovered. Because rice is one of the items filled with food intake that is exposed to heavy metals And due to the flexibility of the accumulation of heavy metals in tissues of the human body and the adverse effects thereof,
Conclusion: The results obtained from the sample studied in this research indicates that the amount of heavy metal pollution in the extent permitted the Ministry of health and in terms of food consumption in terms of consumer health and safety are at an acceptable level.
Keywords: Safety-rice-lead-cadmium-Gilan

Association of nutritional status with treatment outcomes in patients with leukemia

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Background: Cancer-related malnutrition increases the morbidity and mortality rate and it also decreases the survival of the patients. The aim of this study was to find the association of nutritional and inflammatory status of the patients with acute lymphoblastic leukemia (ALL) and acute myeloid leukemia (AML) with treatment outcomes.
Materials and Methods: Sixty-eight patients with ALL or AML enrolled in the study. Body mass index (BMI), serum levels of albumin,pre-albumin,transferrin and hs-CRP as well as patient-generated subjective global assessment (PG-SGA) were assessed before the onset of chemotherapy and at the end of the treatment. The association of these variables with length of hospital stay and duration of neutropenic fever as the treatment outcomes was evaluated.
Results: Fifty-five patients with acute leukemia (ALL,n=28 & AML,n= 27) completed the study. Both of length of hospital stay and duration of neutropenic fever were higher in patients with AML (P= 0.022 & P=0.012 respectively). Noteworthy,patients with ALL had higher BMI and serum level of pre-albumin and lower levels of hs-CRP and PG-SGA scores (P= 0.049,P= 0.028,P= 0.030 & P= 0.001 respectively).
Conclusion: It seems that better nutritional status and lower level of hs-CRP as an index for inflammation are associated with better treatment outcomes,shown here by shorter hospitalization and duration of neutropenic fever. Early assessment of nutritional status of the patients with acute leukemia as well as adequate nutrition support will help this group of patients to achieve better response to treatment.
Keywords: Nutritional assessment,acute lymphoblastic leukemia,acute myeloid leukemia,treatment outcomes

Effects of vitamin K on matrix metalloproteinase-3 and rheumatoid factor in women with rheumatoid arthritis: randomized, double-blind, Placebo-controlled Trial

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Background: Rheumatoid arthritis (RA) is an inflammatory disease characterized by increasing some inflammatory markers and proteolitic enzymes which leads to joint destruction. Given the RA pathology, it seems that anti-inflammatory agents might delay joints destruction. Although recent investigations have considered vitamin K as an anti-inflammatory nutrient with an important role in bone metabolism, to date there is limited information on its efficacy in rheumatoid arthritis. We aimed to examine the effects of vitamin K1 (phylloquinone) on biomarker of joint destruction and autoantibody in RA patients.
Materials and Methods: Sixty four women with rheumatoid arthritis who fulfilled the eligibility criteria were randomly allocated into intervention and control groups. Vitamin K1 (10 mg/day) and placebo were given to the participants for eight weeks. Baseline characteristics and anthropometric measures were obtained. Clinical status using disease activity score in 28 joints (DAS-28) and serum levels of Matrix Metalloproteinase-3 (MMP-3) and rheumatoid factor (RF) were evaluated before and after the intervention.
Results: There was no significant change in each group regarding serum levels of MMP-3 compared to baseline values. However, DAS-28 and RF serum levels decreased significantly in vitamin K1 group (P =0.041 and P=0.041). Inter-groups comparison showed no significant change in these markers after adjusting for relevant confounders including duration of RA, energy intake and weight and folic acid consumption (P >0.05).
Conclusions: Vitamin K1 supplementation at 10 mg/day for 8 weeks did not change joint destruction in rheumatoid arthritis patients compared to control group. Further studies with a longer follow-up and various doses of vitamin K are required to determine the effects of vitamin K on join destruction.
Keywords: Vitamin K; Matrix Metalloproteinase-3; Rheumatoid Factor; Rheumatoid Arthritis.

Evaluation of effects of 6% maltodextrin ingestion during 60% Vo2max exercise on the performance in the female collage students

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Background:The purpose of this study was to evaluate the effects of 6% maltodextrin ingestion during 60% Vo2max exercise on the performance in the female collage students.
Methods: 22 young female subjects (mean ± SD of Age= 19.3 ±0.49, Weight= 58/2±4.5kg, Height= 162.2±5.4cm, VO2max= 51/21±5/69ml/kg/min) were selected and randomly allocated to two groups; Carbohydrate (CHO) (N = 11) and Placebo (PL), (N = 11), (CHO group (ingestion a 7% maltodextrinsolution at regular 15 minute intervals) and group PL drinking plain water at 5 min before and then at regular 15 minute intervals during exercise). 60 m sprint, 505 agility, sarjent jumping tests, max power, min power, mean power and fatigue index of the subjects measured (pre-test and post-test). Independent t-test was used for data analysis.
Results: ingestion of 6% Maltodextrin solution during 60% Vo2 max exercise failed to improve anaerobic performance and power output of the collage students compared to a placebo drink(0/05).
Keywords: Maltodextrin Supplementation, Anaerobic Performance, Anaerobic Power, Male Student-Athlete

Examination of relationship between dietary

intake and BMI and expression rate of anger in female college students in Shahid Beheshti University of Medical Sciences

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Background: Notable increase in anger in modern societies and their impact on individual and public health manifested the need to find strategies to control or reduce anger. Studies show that some food groups may be effective in the management of mental disorder including depression,anxiety and anger. So far no studies examine the association between dietary intake and anger in Iran .Therefore,the purpose of this study is to examine the relationship between dietary intake and BMI and expression rate of anger in female college students.
Methods: This is a cross sectional description analytical study among 114 female college students living in dormitory in Shahid Beheshti University of medical sciences. The sampling was performed by random sampling method. Their height and weight was determined by meter and scale. Dietary intake was assessed with a validated food frequency questionnaire (FFQ) and expression rate of anger was calculated with a validated State-Trait Anger Expression 2 (STAXI 2) questionnaire and data analyzed with the linear regression and SPSS 21 software.
Results: findings show a statically significant reverse association between dairy intake and anger trait (angry reaction) and this correlation was consistent after adjusting confounding factors (P= 0.015). This was no statically significant association between other food groups intake and BMI and anger.
Conclusion: Higher dairy consumption was associated with a lower prevalence of anger and this finding is compatible with many studies about impact of dairy intake on mental disorders especially depression. So dairy consumption can be suggested as a nutritional solution to decrease anger and increase relaxation.
Keywords: Anger, BMI, Dietary Intake

Evaluation of food variety in overweight and obese people

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Background: Food variety is an indicator which can show the dietary status and is one of the Features of healthy diets. This article was aimed to investigate the food variety status in Overweight and obese people.
Methods: This Cross-sectional study was hold on 141 subjects with body mass index (BMI) equal 25 kg/m^{2}and higher, after measuring the height and weight with standard method.Personal information was collected and Short-validated questionnaire was filled into assess dietary intake diversity within seven food groups and 43 food items. Food variety score (FVS) was estimated in the range of 5-38, by counting the food items which have been consumedat least 40 grams in an average week (Except in the case of fats and sweets) then it was calculated on a daily basis. Subjects in this study was categorized into 4 groups based on FVS; Very poor, poor, relatively favorable and favorable. Consumption of any items from each food groups at least once per day was considered to estimate the dietary diversity score (DDS).
Results: Mean age and BMI of the subjects was 35/3±11/7 year and 33/01±5/03 kg/m2respectively. More than subjects (90/8%) consume each of the seven food groups daily and the eliminated groups from the daily diet were dairy and miscellaneous groups (including drinks, sweeteners and yeast). 92/2% of subjects consume from grain group, 29/1% from fruits, 27/6% from vegetables and 19/2% from meat group, at least one subcategoryfrom each group. Range of FVS was 5-38, mean and median of FVS was 24/3 and 24respectively. Only about 22/7% of subjects have the favorable food varietyscore (FVS>28).
Discussion: Results from this study indicated that only a few of the subjects in this study have favorable food variety status and knowledge promotion is required to improve nutrition and health status.
Keywords: overweight, obesity, FVS, DDS

Dairy products status in household's food baskets with an emphasis on probiotics in Tabriz

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Background: Despite the importance of dairy products in food pyramid, it seems majority of people do not consume them daily. Therefore, we aimed to investigate dairy product role in households' food basket with an emphasis on probiotics in Tabriz city.
Methods: This cross-sectional study was carried out on 150 households referred to hypermarkets of Tabriz including Laleh Park and Refah. Socio-economic status of households as well as details data regarding purchased dairy product such as presence, type, brand and fat content and cause of choosing of dairy products were collected through face-to-face intervention and direct observation.
Results: Nearly half of the subjects were male (aged 35/6±13/4 yrs)and more thanhad university degree. Although food shopping list was mostly prepared by mothers (78.7%), the responsible person for food purchase was fathers in about half of the households. Shopping was done in 44% and 35.3% of the households weekly and monthly, respectively. Aroundof households were reading food labels. Dairy products were found in the food baskets (96%) i.e. milk and cheese (97/3%), yogurt (95/3%), butter (74%) and ice cream (70.7%).The most common types of cheeses were natural (unprocessed) products and good taste was the most important factor in the selection of commercial food brand. Only 12/7% and 9/3% of households had purchased probiotic yogurt and cheeses.
Discussion: Our findings indicate desirable status of dairy products in food basket of Tabriz households however, knowledge promotion is required for probiotic dairy products.
Keywords: Dairy products,Food basket, Probiotic, Household

Association of personality traits with food preferences in female students at Jundishapur University of Medical Sciences

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Background: Healthy nutrition has important role in prevention of chronic disease and it increases the level of well-being. One of the key factors determining the food choice is inner desire and preference. psychological factors play important role in food preferences and finally food choices. personality is considered as a main prediction of food preferences. The aim of this study was to assess the relation between food preferences and personality traits.

Methods: This cross-sectional study included 224 female students at Jundishapur University of Medical Sciences aged between 18 and 30 years. The NEO-Five Factor Inventory questionnaire was used to assess the five dimensions of personality (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness). Food preferences were assessed using food preferences questionnaire containing 19 questions about food preferences. Data were analyzed using SPSS and Spearman correlation coefficient.

Results: High neuroticism had a significant positive correlation with tendency to salty, sour and fatty foods and significant negative relationship to preferring milk and dairy product($p<0.05$). High levels of extraversion showed a significant positive correlation with tendency to meats, nuts, ice cream, chocolate and cocoa($p<0.05$). High openness, also positively correlated with preference to meat and fast foods and negatively associated to preferring biscuite and cookie($p<0.05$). In addition high agreeableness indicated negatively related to having soft drinks, beverages and commercial fruit juices($p<0.05$). High conscientiousness had a significant positive correlation with preferring milk and dairy products, fruits, vegetables and nuts and negative relationship to having salty and fast foods($p<0.05$).

Conclusion: Personality traits were related to different taste and food preferences. Hence, nutritional education planning can modify the Food preferences by improvement of unhealthy dietary habits related to personality traits.

Keywords: Personality traits, Food preferences, Female university students

Association of personality traits with dietary habits in female students at Jundishapur University of Medical Sciences

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Background: Healthy nutrition has important role in prevention of chronic disease and it increases the level of well-being. Among factors determining the food choice and dietary habits, psychological factors play important roles and personality is considered as a key factor. The aim of this study was to assess the relation between dietary habits and personality traits.

Methods: This cross-sectional study included 224 female students at Jundishapur University of Medical Sciences aged between 18 and 30 years. The NEO-Five Factor Inventory questionnaire was used to assess the five dimensions of personality (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness). Dietary habits were assessed using dietary habits questionnaire containing 20 questions about dietary habits. Data were analyzed using Pearson correlation coefficient, stepwise regression test.

Results: High neuroticism and openness types were significantly associated with low scores of dietary habits indicating unhealthy dietary habits in these types ($p<0.01$). In addition, high conscientiousness was significantly related to high scores of dietary habits implying healthy dietary habits ($p<0.01$). Stepwise regression analysis showed that there were personality traits that can significantly predict the dietary habits ($p<0.01$).

Conclusion: Personality traits were related to dietary habits; hence, nutritional education is suggested on the basis of personality traits to modify the dietary pattern and prevention of chronic disease in students.

Keywords: Personality traits, Dietary habits, Female university students

The effect of vitamin D supplementation on adiposity, blood glycated hemoglobin, serum leptin and TNF-α in type 2 diabetic patients

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Abstract: Type 2 diabetes mellitus could apparently be influenced by vitamin D through different mechanisms. It has been well corroborated that reducing of total body fat, including visceral fat is one of the strategies in management of type 2 diabetes. We chose a total of 51 subjects divided in two groups: group supplemented with 400 IU/d vitamin D3 (n=26) for

14 weeks (Vit.D group) and group administered daily placebo for 14 weeks (n=25). Vitamin D3 or placebo was given to each of subjects by investigator assistant in terms of they belong to which of the intervention group. The matching was carried out between subjects of two groups with a view of their sex and age. There was no significant alteration in adiposity and the other body composition characteristics including waist circumference among baseline and post-intervention stages of study. We found a significant increase in serum leptin during the intervention period in Vit.D group (P=0.002) but not in that of placebo group. There was a significant decrease in serum TNF-α between baseline and post-intervention phase in Vit.D group (P=0.001) whereas we could not find a significant difference between the two phases of study in placebo group. In summary, we were not able to demonstrate an effect on body fat mass in subjects with type 2 diabetes after supplementation with vitamin D but the effectiveness of the supplementation was seen in attenuation of one of the markers of systemic inflammation, TNF-α, as well as in enhancement of the serum leptin levels.

Erythrocyte trans fatty acids content and oxidative stress in infertile women with polycystic ovarian syndrome: a case-control study

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Background: Trans fatty acids (TFAs) are proposed to be a possible modifiable factor of the ovulatory infertility disorder. Also, the impact of oxidative stress (OS) on polycystic ovary syndrome (PCOS) related infertility in females remains unclear. The purpose of this study was to test the hypothesis that higher TFAs of erythrocytes (RBC) and OS are associated with the risk of ovulatory infertility disorder in PCOS.

Methods: Thirty five infertile women with polycystic ovarian syndrome, defined by AES criteria and 29 age-matched healthy women as the control group were recruited for the study. After physical measurements blood oxidative status was evaluated by determination of serum total antioxidant capacity (TAC) and malondialdehyde (MDA). Erythrocyte TFAs were measured using gas chromatography (GC).

Results: Infertile PCOS women had higher MDA (p< 0.001) than healthy woman. However TAC was significantly lower in patients (p=0.031). TFA linoleate (18:2t) were significantly higher in PCOS group than the controls (p= 0.019). MDA (OR= 1.13, 95% CI. 1.053-1.233; p=0.006) and TFA 18:2t (OR= 1.225, 95% CI. 1.024-1.465; p= 0.026) showed positive and TAC levels (OR= 0.643, 95% CI. 0.415-0.998; p= 0.049) showed protective effect on the risk of ovulatory disorder infertility, even after adjustment for BMI, physical activity and education levels. PCOS cases showed higher BMI and waist circumference than their matched controls (p<0.05).

Conclusion: Oxidative stress status and RBC trans fatty acids might be a predictor of increased risk for ovulatory infertility disorder in women with PCOS.

Keywords: Trans fatty acids, Oxidative stress, PCOS, Infertility

Effect of nutrition education intervention in the prevention of gastrointestinal cancer in women referred to health centers in city Dalahoo

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Background: Manufacturer of proper nutrition for health promotion, risk reduction and disease management is emphasized. According to a study by the Newspaper Association of America Food in 2010 is Nutrition education will lead to positive changes in the lifestyle of the elderly .That can affect the health of the elderly healthy diet and a daily choice of vegetables, salads, fruit (to prevent cancer), legumes and whole grains and protein, saturated fat, has been established.

Methods: This is an educational interventionon-1271randomly selected individuals were house wives city Dalahoo to determine the effect of health education in three periods (before, 2months, 6months) after training on behavior change were housewives. The intervention consisted of classroom training, training manuals, and CDs. The data collected from the questionnaires were analyzed and enter the computer

Results:12% of the subjects before training do not use fruit and vegetables which are respectively two and six months laterreducedto11and9.9%. Also, 20% of participants had consumed fish more often and always at least twice a week to 21 and 24% in two months and six months after training increased. After the intervention, drug use rose from 52% to 49 possible diet and 46 per cent. Take a way and fast food consumption from42% to40% and39.4% fell into two and six months after training.

Conclusion: Based on the findings of this study, education and behavior change Housewives family has been a director of nutritional programs. It is recommended that training in health centers as a serious program.

Keywords: Intervention, nutrition, cancer.

Effects of balanced low calorie diet on reducing insulin resistance among apparently healthy obese women

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Background: The prevalence of obesity is increasing

worldwide at an alarming rate. An amelioration of obesity-related health risks such as insulin resistance is one of the most important goals of obesity treatment. Therefore, we studied the effects of balanced low calorie diet on reducing insulin resistance among apparently healthy obese women.

Methods: This clinical trial was conducted on 90 volunteer apparently healthy obese women (mean age= 27.71 ± 7.21 years and mean body mass index= 33.25±3.02 Kg/m^2) attending the nutrition clinic from September 2012 to February 2013. The participants were received a balanced low calorie diet. The diet was set at 500 kcal per day below the initial 3-day dietary records, and comprised 10-15% proteins, 55-60% carbohydrates and <30% fat. Data collection included weight, height and fasting blood glucose and insulin at baseline and 6 months after intervention. A Homeostasis Model Assessment of Insulin Resistance (HOMA-IR) was used to evaluate insulin resistance.

Results: The administered diets consisted of a mean of 2252.02±226.25 (kcal). After 6 months of the intervention, the mean of energy intake was 1986.59±364.35 (kcal). Consumption of the balanced low calorie diet resulted in decreased weight (81.79±11.01 (kg) vs. 73.33±12.17 (kg); p<0.001) and insulin resistance (3.26±1.34 vs. 1.96±0.57 (kg); p<0.001) after 6 months intervention.

Conclusions: Consumption of the balanced low calorie diet and weight loss in apparently healthy obese women had beneficial effects on reducing HOMA-IR score.

Keywords: obese women, balanced low calorie diet, insulin resistance

Comparison of the effect of sesame butter and sesame oil intake on serum levels of glucose and oxidative stress in streptozotocin - induced diabetic rats

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Background: Diabetes is one of the most common metabolic disorders and is related to oxidative stress-induced diseases. According to the role of dietary antioxidants in control and prevention of diabetes, this study was aimed to examine the effect of sesame butter vs. sesame oil on serum levels of glucose and oxidative stress biomarkers in diabetic rats

Methods: Forty male albino rats of wistar strain were randomly divided into 4 groups (10 rats per group) and treated for 6 weeks as follows: Group 1: non-diabetic control rats; Group 2: diabetic control rats; Group 3: diabetic rats treated with1.25 g/kg sesame butter; and Group 4: diabetic rats treated with 0.5 g/kg sesame oil. Finally, serum glucose, total antioxidant capacity (TAC) levels were measured and analyzed statistically

Results: Data showed that sesame butter and sesame oil- treated diabetic groups had significant lower levels of glucose in comparison to the diabetic control group at the end of study(P<0.05). Sesame butter supplementation also increased TAC concentration significantly in diabetic rats (P<0.05)..

Conclusion: Results of the study indicated the anti-hyperglycemic and antioxidative effects of sesame butter and sesame oil in the animal model of diabetes.

Keywords: diabetes; sesame; glucose; lipid profile.

Assessing the recovery rateof childrenas an indicator of effectiveness in "Multidisciplinary Interventional Program for Improvement of Nutritional Status of Children in Iran":2010to 2013

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Background: Moderate-to-severe malnutrition continues to be a public health problem in developing countries. In Iran an integrated interventional program for decreasing malnutrition among children-less than 6 years has been developed since 1995. Malnourished children from poor families are referred to this program to receive defined food baskets until attainment of normal weight. This study carried out to assess the effect of food rations distribution on the recovery rate of children under coverage of "Multidisciplinary Interventional Program for Improvement of Nutritional Status of Children)MIPINSC (program"from2010to 2013.

Methods: This cross-sectional study is part of a large study on evaluation of this MIPINSC program at the national level. Data were collected from documented progress reports of the program, submitted to Nutrition Department of Iran Ministry of Health and Medical Education. Data included recovery, defaulted and death rate of children under coverage of the program in each province. Descriptive data analysis conducted using SPSS ver20.

Results: Based on the results, the average of recovery, defaulted and death rate of children in the program within the period of study was 41%, 11% and, 0.01%, respectively. The recovery rate was less than expected based in the program goals (50%) and those of SPHERE Project (75%). Meanwhile, the defaulted and death rate met the program and SPHERE Project goals (less than 15% and 3% respectively). Despite of the increase in fund allocated to the food basket (from 200000 Rial to 500000 Rial per month), there was no increase in the proportion of recovery rate over time.

Conclusion: Results showed that the program partially met its goal in improving nutritional status of malnourished children and it is still far from the defined standards. It is necessary to identify factors that can improve effectiveness of the program and incorporate then within the existing activities.

Keywords: Recovery Rate, malnutrition, multidisciplinary interventional program

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Dietary patterns and depression disorders in Iranian adults

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Background: Depression is globally prevalent both in developed and developing countries. Limited data are available in relation to dietary patterns and depression disorders. We are aware of no report in non-western nations especially the Middle-eastern populations, where the dietary intakes are highly different from other parts of the world. This study examined the relationship between major dietary patterns derived from principle component analysis and prevalence of depression in a large sample of Iranian adults.
Methods: This cross-sectional study included 4763 Iranian general adult population aged 20-55 years. Thirty three food items were entered in to the principle component analysis to identify dietary patterns. Examination of current major depressive disorder was assessed with the Iranian validated version of Hospital Anxiety and Depression Scale (HADS) and 12 item general health questionnaires (GHQ-12) was used to measure psychological symptoms. To find the association between dietary patterns and psychological disorders,we used logistic regression in different models with adjusting for age and then for sex marital status,education,physical activity,chronic diseases,smoking and antidepressant use and energy intake (kcal/d). Further adjustments for BMI were done in the last model also. To assess the overall trend of odds ratios across increasing quartiles of dietary pattern scores,we treated the quartile categories as an ordinal variable in the analyses. All analyses were performed using SPSS software (version 19.0; SPSS Inc, Chicago IL). P values were considered significant at <0.05.
Results: Mean age of study population was 36.4±8.0 years. Prevalence of depression, anxiety and psychological distress was 10.6 (men: 7.0% and women: 13.5%), 5.7 (men: 4.4% and women: 6.8%) and 23.3% (men: 18.4% and women: 26.5%),respectively. After adjustment for potential confounders, lacto-vegetarian dietary pattern was protectively associated with depression in women (OR: 65; 95% CI: 0.46-0.91). In addition, traditional dietary pattern was positively associated with depression (1.42; 1.01-1.99) in women. Western dietary pattern was positively associated with depression in men (OR: 1.73; CI: 1.07-2.86). These associations persisted in multivariate models adjusting for a wide range of possible confounding variables.
Conclusion: In our study some dietary pattern had significant association with depression but further prospective studies are requires finding out the direction of the relationships. As dietary intake unlike many other risk factors,is a modifiable environmental condition,this finding could provide evidence-based health care strategy to prevent mental illness.
Keywords: Depression, dietary pattern, principle component analysis

Family dinner eating of adolescents in relation to mental disorders and excess weight: the CASPIAN-III Study

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Background: Family dinner is a proxy of family connectedness that may affect mental health. The frequency of family dinner is also related to higher diet quality, which in turn may affect body weight. In the present study, we aimed to examine the associations of the frequency of family dinner with mental disorders and obesity in a nationally-representative sample of Iranian adolescents.
Methods: This cross-sectional study was conducted on 5528 Iranians adolescents who participated in the third survey of a national surveillance program entitled Childhood and Adolescence Surveillance and PreventIon of Adult Non-communicable disease (CASPIAN-III) Study. The frequency of family dinner meal was assessed. Mental health assessments were done as a part of the World Health Organization-Global School-based Student Health Survey.
Results: We did not find any significant difference in dietary intakes between dinner consumers and skippers; however they were more likely to consume breakfast and had higher meal frequency.After controlling the effect of some confounders, dinner consumers had lower odds for all types of mental disorders (OR=0.55; 95% CI=0.47-0.64), anxiety (OR=0.47; 95% CI= 0.4-0.54), insomnia (OR= 0.6; 95% CI=0.53-0.7), and confusion (OR=0.7; 95% CI=0.6-0.86), as well as for the body mass index- z score (OR=0.78; 95% CI= 0.73-0.84).
Conclusion: Current study showed an inverse relationship between the frequency of family dinner consuming and mental disorders and obesity in a nationally-representative sample of Iranian adolescents. Such simple recommendations for families may be feasible, sustainable, and effective for health promotion and disease prevention.
Keywords: dinner, obesity, mental disorders, adolescents, Iran

Hesperidin, the main flavonoid constituent of citrus fruits, modulates inflammatory responses following myocardial infarction

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Background: Inflammatory mediators have a crucial role in myocardial infarction 1,2. Recently, several flavonoids have been suggested to have cardio protective and anti-inflammatory properties 3-5. The present study was aimed to investigate the effect of Hesperidin, the main flavonoid constituent of citrus fruits, on the serum levels of inflammatory markers and adipocytocines in patients with myocardial infarction.
Methods: In this randomized, double – blind controlled clinical trial, 75 patients with myocardial infarction were participated. Participants were randomly divided into two groups (intervention and control). Patients consumed 600 mg/day pure Hesperidin supplement and placebo in the intervention and control group, respectively for 4 weeks. At the baseline and end of the study, serum concentrations of lipid profile, hs-CRP, IL-6, E-selectin, leptin and adiponectin were measured.
Results: Hesperidin supplementation significantly decreased the serum levels of E-selectin and increased adiponectin and HDL-C levels in patients with myocardial infarction (P0.05).
Conclusion: Hesperidin supplementation could compensate the decreased levels of adiponectin and HDL-C, and the increased levels of E-selectin in patients with myocardial infarction. These findings confirm the cardio-protective effects of certain flavonoids in the diet.
Keywords: Flavonoids, Hesperidin, Inflammation, Lipid profile, Myocardial infarction

The effects of low carbohydrate diets on liver function tests in nonalcoholic fatty liver disease: a systematic review and meta-analysis of clinical trials

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Background: Although several observational and experimental studies have examined the effects of low carbohydrate diets (LCD) on non-alcoholic fatty liver disease (NAFLD),there are considerable inconsistencies among studies. In this systematic review and meta-analysis of clinical trials,we summarize the effect of LCD on liver function tests, including intrahepatic lipid content (IHLC),ALT,AST and GGT, in patients with NAFLD.
Methods: PubMed, ISI Web of Science, Scopus and Google Scholar databases were searched for relevant publications until July 2014, resulting in ten relevant papers that were included in both our systematic review and meta-analysis.
Results: Our search led to 10, 9,5 and 4 studies that had reported ALT,AST,GGT and IHLC, respectively. LCD decreased IHLC by -11.53% (95% confidence interval (CI): -18.10,-4.96). However, the effect of LCD on liver enzymes was not significant. Mean differences for the effect of LCD on ALT,AST and GGT were -4.49 IU/L (95% CI: -14.08,5.10),-1.69 IU/L (95% CI: -5.47,2.08) and -9.42 IU/L (95% CI: -32.67,13.83),respectively. Subgroup analyses based on study design (pre-post and parallel or cross-over studies),revealed significant reduction in pre-post studies for ALT -13.73 IU/L (95% CI:-21.40,-6.05) and AST -2.66 IU/L (95% CI:-4.61,-0.70),but not for parallel or cross-over studies [ALT: 3.96 (-9.28,17.20) and AST: 1.85 (-6.99,10.70)],respectively. Mean differences of GGT were not significant in pre-post, parallel, or cross-over subgroups.
Conclusion: LCD consumption in subjects with NAFLD led to a significant reduction in IHLC, but did not significantly affect the concentration of liver enzymes.
Keywords: Low carbohydrate diet, non alcoholic fatty liver, alanine transaminase, aspartate aminotransferases

Association of dietary acid load with cardiovascular diseases risk factors among patients with diabetic nephropathy

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Background: Previous evidence suggested adverse association between dietary acid load and cardiovascular risks. However,we are not aware of any study in patients with diabetic nephropathy. In present study,we aimed to assess the association of dietary acid load,examined by both potential renal acid load (PRAL) and protein: potassium ratio (Pro:K) scores,and cardiovascular risk factors in patients with diabetic nephropathy.
Methods: In present cross-sectional study,we randomly enrolled 547 patients with diabetic nephropathy. Dietary intake was assessed by a validated food frequency questionnaire. Biochemical and anthropometric measures were assessed by using standard methods.
Results: Mean age and BMI of participants were 66.8 y and 24.0 kg/m2,respectively. After controlling for potential confounders,mean values of HbA1c,triglyceride,systolic blood pressure were less in low PRAL category than high category (HbA1c (%): 5.7±0.5 vs. 7.8±0.5%; P=0.01,TG (mg/dL): 246.9±2.3 vs. 257.4±2.3; P=0.006,SBP (mmHg): 103.6±0.7 vs. 106.1±0.7; P=0.03),whilst creatinine and FBS were higher. Pro:K was positively related to HbA1c (5.8±0.5% vs. 7.6±0.5%; P=0.03),but inversely with LDL-C and waist circumference.
Conclusions: We found that both PRAL and Pro:K were positively related to HbA1c in diabetic nephropathy patients. Nevertheless,other biochemical and kidney-related markers were differently associated with PRAL and Pro:K. More studies are needed to reveal the clinical outcomes of dietary acid load in older populations as well as diabetic nephropathy patients.
Keywords: dietary acid load, cardiovascular, diabetic nephropathy, creatinine, blood urea nitrogen.

Assessing body shape index (ABSI) as a predictor for the risk of cardiovascular diseases and metabolic syndrome among Iranian adults

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Background: The positive association between abdominal, general obesity and chronic diseases has been concluded by several studies. However,the best anthropometric measures to predict the risk of chronic diseases should be clarified in each population. Therefore,we aimed to compare the predictive power of A Body Shape Index (ABSI),body mass index (BMI) and waist to height ratio (WHtR) and Clinica Universidad de Navarra-Body Adiposity Estimator (CUN-BAE) for metabolic syndrome (MetS) and cardiovascular disease (CVD) risks among Iraniansin different age and sex categories.
Methods: This population-based cross-sectional study conducted on 9555 subjects,aged 19 years or older. Anthropometric measures,blood pressure and biochemical markers were measured using standard protocol. Hypert ension,hyperglycemia,hypercholesterolemia,high LDL-C and low HDL-C levels were considered as the CVD risks.
Results: Mean (SD) of age and BMI of participants were 38.7 (15.5) years and 25.7 (4.6) kg/m2,respectively. ABSI showed the weakest correlations and lowest area under curve (AUC) for various risk factors and MetS. However,the highest OR was observed for ABSI and MetS in different age and sex categories.
Conclusion: Based on the AUC,it is concluded that ABSI is a weak predictor for CVD risks and MetS. More studies are needed to determin the best predictor of CVD risk among Iranian population.
Keywords: A body shape index (ABSI), waist to height ratio (WHtR), Clinica Universidad de Navarra-Body Adiposity Estimator (CUN-BAE), cardiovascular risks,metabolic syndrome

Evaluation the nutritional status, growth and sensitivity of taste and smell in children with Down's syndrome in Ahvaz

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Background: Down's syndrome is associated with several psychomotor and sensory disorders that can affect the nutritional status of patients. This study was aimed to evaluate the nutritional status, growth and sensitivity of taste and smell in children with Down's syndrome in Ahvaz.
Methods: This cross-sectional study was carried out on 58 children with Down syndrome in exceptional centers of Ahvaz,in 2012. Demographic, anthropometric and dietary information were collected using questionnaires, by the interviewing with parents. The sensitivity of taste and smell was also assessed using the Short Sensory Profile questionnaire. Data analysis were carried out using SPSS17.0 software and p values less than 0.05 were considered significant.
Results: According to the growth charts of children with Down syndrome,37.9% and 34.4% of children were above

the 75th percentile, respectively in terms of weight to age ratio and BMI. The ratio of the extracellular water to the total body water was significantly higher in the girls compared to the boys. Dietary fat intake was higher than its recommended values, and the mean of taste and smell sensitivity score was 13.5±2.0.
Conclusion: More than a third of children were obese according to weight to age ratio and BMI. Consumption of high- fat and high-calorie diets and increased sensitivity of them to taste and smell stimuli could be responsible for their obesity. Therefore,providing nutritional education to parents and improving dietary pattern of these children is required.
Keywords: Down syndrome, Nutrition, Obesity, Taste and smell sensitivity

Comparison and nutritional status of elderly people in nursing homes and private home in Yasuj
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Background: malnutrition is a prevalent and serious problem in the elderly people which is related to undiagnosed and untreatable adverse clinical outcomes and mortality. According to the importance of nutritional status in aging and lack of studies about the comparison of nutritional status of home care and nursing house care, this paper aims to evaluate and compare the nutritional status of home care and nursing house care elders in Yasuj.
Method: According to the limited number of nursing home of Yasuj, this descriptive analysis study was concluded in one women and one men elderly house, 5o over sixty years old elderly were chosen randomly among them. For choosing the home care samples, 50 family with over sixty years old member were selected referring to the family files in healthcare clinics and synchronizing their demographic characteristics with elderly house samples. Their nutritional status was evaluated by mini nutritional assessment (MNA) which was standardized for Iranian elderlies. To calculate the mean difference and correlation coefficient,t-test with one sample,two samples and Chi-square test are used, respectively.
Results: The malnutrition index for people who inhabited in home care and elderly care places were 16.47,CI (15.42,17.52) and 18.84,CI(17.01,20.66) respectively. And the difference between two groups are2.37,CI(0.37,4.35) which is statistically significant (P-value=0.02). There was a meaningful relationships between malnutrition index with the residence place (pvalue=0). 50% and 30% of nursing homes members were affected by malnutrition and at the risk of affection,respectively. 30% and 28% of home care elderlies were affected and at the risk of malnutrition.
Conclusion: These findings imply on the malnutrition drastic outbreak and undesirable nutritional status particularly among the elderly house care members. Therefore,it is recommended to provide supportive nutritional plans for both of the groups particularly the nursing homes members.
Keywords: elderly people, MNA, nutritional status

ω 3-fatty acid and fish oil consumption and breast cancer; A review of last studies
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Background: Beneficial effects of Omega-3 fatty acids are wonderful. Decreases of chronic disease include cardiovascular disease and now are breast cancer. The effect of omega-3 fatty acid in decreases of breast cancer was observed but the mechanism of this effect is unknown. The target of this review is investigated of beneficial effects of omega-3 fatty acids in prevention and treatment of breast cancer.
Materials &Method: This review article is with investigated of last studies with searching in PUBMED search motor with keywords include "OMEGA-3 FATTY ACIDS" , "EICOSAPENTAENOIC ACID" , "DOCOSAHEXAENOIC ACID" and "BREAST CANCER" between 2004 to 2014. After filtration and separation, 37 articles are selected.
Results: The omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), can reduce metastasis and induce improving in patients with breast caner. The mechanisms of this effects are: Down-modulate CXCR4 expression and function in MDA-MB-231 breast cancer cells: in some of studies, were observed beneficial effect of omega-3 fatty acid with expression reduction in some of metastasis migration receptor (e.g CXCR4 that is a transmembrane G-protein–coupled receptor) Suppress expression of EZH2 in breast cancer cells: The polycomb group (PcG) protein, enhancer of zeste homologue 2 (EZH2), is overexpressed in several human malignancies including breast cancer. Aberrant expression of EZH2 has been associated with metastasis and poor prognosis in cancer patient. The mechanism of this effect is posttranslationally regulate the expression of EZH2 in breast cancer cells. Effect on progestin stimulation of invasive properties in breast cancer: an appropriate concentration of the omega-3 fatty acid inhibits progestin stimulation of invasive properties. Inhibition in MDA-MB-231 human breast cancer cells: Omega-3 fatty acids inhibited the growth of MDA-MB-231 cells, in addition, EPA and DHA induced apoptosis, as indicated by a loss of mitochondrial membrane potential.
Conclusion: Investigation of last studies show that consumption of Omega-3 fatty acid from supplements or food has beneficial effects in improve and control of breast cancer.
Keywords: ω 3-fatty acid, fish oil, breast cancer, review

Investigation of the effect of sesame seed powder in overweight and obese women with metabolic syndrome
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Background: Sesame (sesamum indicum L) seed with high oil contents have essential fatty acids and phisologically active furofuran lignans. In animal study fat-burning effect of these Lignans has been reported. Although sesame lignan has been used as dietary fat-reduction supplements,no controlled clinical trial on this application have been performed. The aim of this study was to investigate the effect of sesame seed powder on weight,body mass index (BMI),percent of body fat,waist circumference (WC),waist to height ratio.
Methods: In a randomized,parallel-group,6-week feeding trial,46 overweight and obese women with metabolic syndrome were given recommendations for a healthy diet with 50g/day of roasted sesame seed powder. Body weight,body mass index (BMI),percent of body fat,WC,waist to height ratio,and energy intake and expenditure at beginning and end of study were determined.
Results: Weight loss and decreased BMI and WC occurred after both interventions but it was significant ($p<0.05$) in sesame group. The percent of body fat decreased significantly in both groups. There was no significant difference in calorie intake and physical activities between groups over the study period. Conclusion: It seems that sesame could be effective in weight loss and fat reduction. However,more investigations are necessary to establish the mechanism of this effect.

Keywords: sesame, lignans, fat-burnning, weight, BMI

Harmonization of dietary habits and drought climate

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Background: Our country has been faced with severe drought caused by climate changes,but our behavior regarding cultivation pattern of crops and dietary habit has not been changed and they are not in a harmony with current dry condition of our country. Negative impacts of drought and climate change in Iran threat food security and approaches to address them are optimized cultivation pattern and dietary habit of Iranians. In the same direction with the statement of supermom leader of Iran Islamic revolution regarding paying more attention to "resistive economy",for national and food security and reduce dependence to other countries,food basket of Iranians must be filled based on food crops adapted to drought climate of Iran. Unfortunately,this fact has not been considered in Iran and rice,an adapted crop to high rainfall area,is the second food crop after wheat in Iran. The question is why in a dry country like Iran,affected by negative impacts of climate changes and drought,and according to evidences,drought adapted crops such as chick pea and lentil which in decades ago had a main portion on food table of Iranians and provided carbohydrate,protein and fibers,have been replaced by rice,nevertheless of their more nutritional and medicinal value than rice? Moreover,these crops are more resistant to drought even than wheat. In dry cropping seasons when wheat faces with crop failure,crops such as chick pea and lentil obtain acceptable economic yield. Also,growing these crops enhance fertility of soil and reduce requirement to apply chemical fertilizers in fields. Adding these clean crops to people's food table and replacing them with a part of consuming bread,rice and meat,is one of the effective approaches to tackle negative impact of climate change,to enhance health of Iranians and self-sufficiency,and also is in the same direction with resistive economy. In dry condition of Iran chickpea and lentil production and consumption must been paid more attention. To promote the culture of consumption chickpea lentil and other food crops adapted to dry condition of Iran,requires national intention and Jihadic management,and ministries of Jihad-e- Agriculture,Education and Health and Islamic republic broadcasting organization must work as a team and acknowledge this work as effective approaches to promote "resistive economy" to enhance food and national security.
Keywords: dietary habits and drought climate

Dietary variety score and gastric cancer in people referred to educational hospitals in Kerman

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Background: Stomach cancer is one of gastrointestinal cancers and the fourth most common cancer according to the latest reports. Because of poor diagnosis, after lung cancer, stomach cancer is the second leading cause of death in the world. Stomach cancer is the third most common cancer in Iran, the leading cause of cancer-related deaths in men, and the second leading cause of death in women in Iran. Despite the relatively high prevalence of stomach cancer in Iran, no study has yet been conducted on the relationship between dietary factors and this cancer. The present study aimed to determine this relationship.
Methods: In this control case study,50 patients with stomach cancer and 150 with no cancer were selected. Participants' food consumption was assessed using semi-quantitative Food Frequency Questionnaire. To determine the relationship between diet variety score and stomach cancer. First these indicators were calculated. Following calculation of indicators, logistic regression model was used to assess adjusted effect of confounding factors.
Results: The results showed a relationship between dietary variety score (OR=0.6), and reduced risk of stomach cancer. A more diverse consumption from subtypes of dairy products is associated with reduced risk of stomach cancer.
Conclusion: Study results showed that a diverse diet and consumption of various food groups is associated with reduced risk of stomach cancer, and more diversity in using subtypes of milk and dairy products has an inverse relationship with stomach cancer.
Keywords: Stomach cancer, diet variety score, case-control study

Is there an association between exclusive breastfeeding and its duration with cardio respiratory fitness in childhood?

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Background: Breastfeeding has positive effects on different health aspects. Short term effects of breastfeeding have been established in several studies. However, long term effects of breastfeeding on chronic diseases are controversial. Cardio Respiratory Fitness (CRF) may be influenced by early life characteristics such as infancy nutrition. The aim of present study was to determine effects of exclusive breastfeeding and its duration on cardio respiratory in children aged 7-8 years old in Kermanshah-Iran.
Methods: In this retrospective cohort study, 246 students with age of 7-8 years old and body mass index (BMI) of 16.96±3.03 kg/m participated. Both female and male students had no cardiovascular, liver or kidney diseases. Based on the type of feeding in infancy, they were divided into 3 groups – children breastfed for more than 6 months, those breastfed for less than 6 months, and those formula-feed. Basal characteristics, dietary intake and anthropometric indices (weight, height, BMI, body composition) and CRF were evaluated. CRF was determined by treadmill ergometric test and VO2max. The SPSS software version 16 was used for all data analysis.
Results: p6 months breastfed group (p6 months breastfed group, but it was not significant (p=0.27). Also, breastfeeding for more than 6 months was positively associated with CRF (p< 0.01) before and after adjustment for confounder factors (birth weight and BMI of the children; BMI of their mothers; smoking, physical activity, dietary intakes and body composition). Risk ratio of CRF in formula fed was 3.22 times more than group breastfed more than 6 months. VO2 max (ml/kg/min) was significantly the highest in group breastfed more than 6 months (p=0.01).
Conclusion: Exclusive breastfeeding for more than 6 months can improve CRF in children aged 7-8 years old in Kemanshah-Iran. Therefore, educate and encourage mothers to breastfeed their infants can be useful.
Keywords: Cardio respiratory fitness, Breastfeeding, Childhood

Health literacy and nutrition status in rural pregnant women of Izeh, Iran

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Background: The aim of this study was to examine the relationship between health literacy and nutrition status in rural pregnant women of Izeh, Iran in 2013.
Method: This descriptive-analytical study was conducted on 240 rural pregnant women of Izeh district using cluster sampling. A Farsi version of the Test of Functional Health Literacy in Adults (TOFHLA) was used for measuring health literacy and also a Chi-square test was used to examine the association between two categorical variables.
Results: 62% of the studied women had low level health literacy (borderline and inadequate) and 31.2% of them suffered of unfavorable status of nutrition behaviors. Health literacy level was significantly correlated with NSDP, education level and age. However, NSDP was not associated with employment status and Household Income.
Conclusion: According to the findings of this study, the higher level of health literacy leads to better nutrition status during pregnancy. Therefore, providing more education to improve the health literacy among women is suggested
Keywords: Health literacy, pregnant women, Nutrition status, Lifestyle, Iran

Dietary intakes between sarcopenic and non sarcopenic Iranian elderly

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Background: Sarcopenia is associated with frailty and disability among the elderly and imposes significant costs on health care systems. Numerous studies have looked at the association between nutrient intake such as protein, vitamins, minerals, and antioxidants and sarcopenia. We evaluated the difference between dietary intake among sarcopenic and non sarcopenic elderly in a district of Tehran, Iran.
Method: We used a semi-quantitative Food Frequency Questionnaire to assess the dietary intake of 300 randomly-selected elderly men and women (at least 55 years old) living in the 6th district of Tehran. sarcopenia is defined as a combination of relatively low appendicular muscle mass with either low muscle strength or low muscle performance according to European working group on sarcopenia definition. We performed T- test to compare the dietary intakes.
Results: Our sample consisted of 300 individuals (evenly divided by gender) with an average age of 66 and an average BMI of 27 kg/m2. We detected 54 sarcopenic cases in our sample (prevalence rate of 18%). The average energy intake of people in sarcopenic group was 2,323 kcal/day versus 2249 kcal/day in nonsarcoenic , the mean of carbohydrate intake was 381 grams/day in sarcopenic versus non-sarcopenic individuals. We observed no significant difference between fat and protein intakes in sarcopenic and nonsarcopenic groups, respectively (58.94 gram/day VS. 59.3 gram/day; 85.5 gram/day 86.18 gram/day). Discussion: Previous studies have evaluated the association between nutrient intake especially protein intake and sarcopenia. These studies have reported mixed results on the existence of such association. sarcoenia is a multifactorial condition, physical inactivity, age-related changes in the secretion of trophic hormones, and decreases in muscle innervation and capillary density and nutrition insufficiency. We found no difference between dietary intakes in two groups may be due to existence other cause rather than inappropriate dietary intakes.
Conclusion: No significant differences were seen between sarcopenic and non sarcopenic groups.
Keywords:sarcopenia, dietary intakes, protein, carbohydrate, fat

Inflammatory Cytokines and Sarcopenia in Iranian Adults-results from SARIR study

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Background: Some studies emphasize on effects of inflammatory cytokines in reducing muscle mass as well as muscle strength and performance. The aim of this study is to compare pre-inflammatory cytokines in sarcopenic and non-sarcopenic subjects.
Methods: The present study used data from"Sarcopenia and its Determinants Among Iranian Elders" (SARIR) study. Three hundred men and women aged above 55 years old who lived in the 6th district of Tehran were selected using cluster random sampling. Participants with limited mobility or with a history of debilitating disease were not invited. Dual x-ray absorptiometry scan, muscle strength and performance test were performed for each subject. Fasting blood sample was taken from each participant to measure serum hs- CRP, IL6 and TNFα. Data distribution was examined via Kolmogorov-Smirnov test t-test and Mann whitney test was performed to compare variables between control and case groups. P values less than 0.05 were considered statistically significant.
Results: There was no significant statistical difference between control and case groups regarding inflammatory cytokines. A statistically significant difference was seen between normal and abnormal groups of muscle strength in hs-CRP(p value =0.04) There was no statistically significant difference in other inflammatory markers among muscle mass and gait speed test in case and control groups.
Conclusion: We did not observe any association between sarcopenia and inflammatory markers. This may be due to several factors. Firstly, it might be because of the study type. As it is seen in previous studies, longitudinal studies with high sample size, has reported an inverse relation between inflammatory markers and muscle strength or muscle performance whereas cross-sectional studies do not show this relation. Secondly, it may be due to racial and age difference in our study. Finally, it may be because of the way that cytokines were measured. On the other hand, measurement of plasma inflammatory cytokines may not suffice to determine the differences, and the measurement must be done in cellular cytokines. Higher level of CRP can increase insulin resistance and lead to impaired metabolic and mechanical muscle function. Lack of correlation between inflammatory cytokines and sarcopenia could be due to participants' age and genetic.
Keywords:sarcopenia, iranian, inflammatory factor, TNFα, CRP, IL6

Relationship between body image, body dissatisfaction and weight status in Iranian adolescents

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Background: In our current society, adolescents are concerned about body image. The relationship between body dissatisfaction and obesity is not clear in developing countries. This study sought to describe adolescents' perceptions and level of dissatisfaction with their body image and determine the relationship of these factors to their weight.
Methods: Objective measures of weight and height were taken for 1109 schoolchildren whose ages ranged from 10 to 18 (504 girls and 605 boys). BMI z-scores and weight status were calculated based on the World Health Organization's (WHO's) 2007 growth-reference charts. Figure rating scales were used to assess perceptions of current and ideal body size and dissatisfaction difference between these perceptions. Multivariate analyses were used to assess the relationship between the perceptions and dissatisfaction with weight status.
Results: Perceived body image size was associated positively with weight status (partial regression coefficient for overweight/obese vs. non-overweight/obese was 0.63 (95% CI 0.26-0.99), and the BMI z-score was 0.21 (95% CI 10-0.31), adjusted for gender and age). Body dissatisfaction also was associated with weight status, with overweight and obese children more likely to select thinner ideal body size than healthy weight children (adjusted partial regression coefficient for overweight/obese vs. non-overweight/obese was 1.47 (95% CI 0.99-1.96), and the BMI z-score was 0.54 (95% CI 0.40-0.67)).
Conclusions: Awareness of body image and increasing body dissatisfaction with higher weight status is established at a young age in this population. This should be considered when designing interventions to reduce obesity in young children, in terms of both benefits and harms.
Keywords: Body Image, Adolescence, Obesity, Body Dissatisfaction, Ideal Body Size

Food dietary patterns and risk of multiple sclerosis in Iran, A Case-Control Study

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Background: It has been suggested that nutrition might play a role in the etiology of multiple sclerosis (MS). However, dietary patterns associated with MS risk are unknown so this study was performed to evaluate the relationship between MS risk and major dietary patterns recognized by factor analysis in Iran.
Method: Usual dietary intake of 71 cases and 142 control aged 20–60 year who were admitted to the major neurological clinics of Tehran (capital) were assessed with a food frequency questionnaire consisting of 168 food items. To define major dietary patterns, we used factor analysis. Multivariate logistic regression was used to assess the relationship between dietary patterns and risk of MS. Furthermore smoking (yes/no), leisure-time physical activities (yes/no), parents age at the time of patient birth (years), season and place of the patient birth (spring, summer, autumn and winter), past medical history of rubella and measles (yes/no) and MS family history (yes/no) were asked.
Results: Two major dietary patterns were identified in the study population. The patterns included: 1-Healthy dietary pattern: high in nuts, fruits, vegetables, whole grains, low-fat dairy, white meat, beans, vegetable oil, coffee and fried potatoes 2-Western-like dietary pattern: high in hydrogenated fats, sugar, soda and industrial juices, high-fat dairy products, pickles, processed meats, refined grains, dried fruits, potato chips and boiled potatoes , an inverse relation were seen between healthy dietary pattern and risk of MS (OR: 0.30, CI: 0.09-0.47, P value <0.001).
Conclusion: Our findings showed that the risk of MS can be affected by major dietary patterns.

Relationship between serum leptin levels and BMI, serum albumin levels in hemodialysis patients

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Background: Leptin is secreted by adipose tissue obese gene,plays an important role in the appetite control. Although in many research the relation between leptin and obesity and body fat mass about healthy subjects have been shown,in dialysis patients are still not fully understood. In this study,the relation between serum leptin levels and weight,body mass index and serum albumin in the hemodialysis patients were evaluated.
Methods: 45 dialysis patients with a mean age of 13.1 ± 43.2 years and 40 healthy subjects with a mean age of 12.6 ± 38 years were enrolled. The dialysis patients with a history of less than 3 months,the consumers of lipid-lowering medications and corticosteroid drugs and the diabetics,people with cardiovascular problems and infectious diseases were excluded from the study. After dialysis patients weight and height were measured,the body mass index was calculated as weight divided by height square. Then,54 ml venous blood was collected from any patient for measurement of BUN,creatinine,uric acid,albumin and serum leptin.
Results: The results showed that the serum leptin levels in the dialysis patients,2.7 ± 16.3 ng/mL,were significantly lower than the similar factor in the control group,5.2 ± 23 ng/mL,(P = 0.02). Moreover,Patients with BMI lower than 18.5 Kg/m^2 and albumin lower than 3.5 g/dL had lower leptin levels than other patients and the control group (P < 0.01). So it turns out that there is a high correlation between serum leptin levels and body weight,BMI and serum albumin in the dialysis patients.
Conclusion: According to the results,it seems that the reduction of serum leptin levels in the hemodialysis patients is closely related with the malnutrition and further investigations are needed.
Keywords: Serum leptin,Serum albumin,Body Mass Index,Hemodialysis patients

Nutritional estimation of professional women´s soccer players

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Background: Proper nutrition plays key roles in exhibiting the most proportion of athlete ability. Nutrition as one of the major factor in determining body supply,readiness and fitness of elites need deep concentration. Aim: In this survey we determine energy and macronutrient intake of national soccer players.
Materials &Methods: This cross sectional study performed on 1 male and 8 female professional soccer players. Usual diet consumption was evaluated using 24 h food

recall questionnaire. Data were analyzed with Nutrition software (version 4) and extracted nutrients were compared with RDA with independent –sample t-tests using SPSS software (version 21.0). P values lower than 0.05 were set as significant level.
Results: Mean age of male and female players were 14 and 13.12±.64 years old. Mean energy intake of male and female soccer players were 2518 kcal and 3168±746 kcal,in sequence. The average of carbohydrate intake were 302.8 g (48.1%) and 471.63±120.79 g (59.56±4.53%) and mean of two other macronutrients consumption of male and female were 95.24 g (15.13%) and 86.21±17.05 g (11.28±2.66%) for protein,105 g (37.53%) and 110.63±32.5 g (31.05±3.53%) for fat,respectively.
Conclusion: Athlete's energy,carbohydrate,fat and protein consumption is higher than RDA in both genders. Total energy,carbohydrate and fat consumption were higher in female,and protein intake was lower in female soccer players than male. Average intake of mentioned nutrients and energy were higher than non-athletes subjects,while their consumption was lower than several other athletes from European countries.
Keywords: Nutritional estimation,women´s soccer players,Isfahan

The study of relationship between life style with stomach cancer in the cancer patients referring to Emam Ali hospital in zahedan,1390-91.
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Background: After skin cancer,stomach cancer in parallel to esophagus cancer is the most in Iran.it is the second factor mortality between all mortality resulting from cancer in the world.the rate of mortality from cancer is increasing,especially in the past 50 years ago.the aim of this study was the relationship between nutritional risk factors and life style with stomach cancer.
Material & Methods: In a study case-control,46 stomach cancer and 46 healthy subjects were selected from December 2010 to November 2011.Demographic characteristics of subjects were recorded by interview or information in folder of every patients for determination of nutritional status,it was used food frequency questioner (FFQ) statistical analysis was done by SPSS15 software.P0.05).
Conclusion: The result showed there was,the relationship between some foods consumption and improper food pattern with stomach cancer in the patients. There was significant difference on the basis of following risk factors between two groups too.it is recommended to modify food habits and present education for improvement of food pattern and health promotion in the patients.
Keywords: Stomach cancer,life style,,zahedan

Usual intake distribution of vitamins and prevalence of inadequacy in a large sample of Iranian at risk population: Application of NCI method
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Background: Assessment of usual intake distribution of vitamins and estimating prevalence of inadequacy and excess among a large representative sample of middle aged and elderly people in central regions of Iran.
Methods: Cross-sectional study, second follow up of Isfahan Cohort Study (ICS).Setting:Urban and rural areas from three cities (Isfahan, Najafabad & Arak) in central regions of Iran.Subjects:1922 people aged 40 years and older, with a mean age of 55.9 ±10.6; 50.4% were male; and the majority (79.3%) were urban.Measures and Analysis:Dietary intakes were collected using a 24-h recalls and two food records. Distribution of vitamins intake was estimated using traditional and national cancer institute (NCI) methods. The proportion of subjects at risk of vitamins intake inadequacy or excess was estimated using the Estimated Average Requirement (EAR) cut-point method and the tolerable upper intake levels (UL) index.
Results: There were remarkable differences between obtained values from traditional and NCI methods, particularly in the lower and upper percentiles of the intake distribution. High prevalence of inadequacies for vitamins A, D, E, B2, B3 (especially among females) and B9 was observed. Significant gender differences were found in terms of inadequate intakes for vitamins A, B1, B2, B3, B6, B9, B12 and C ($p<0.05$).
Conclusion: The degree of vitamins inadequacy in the middle-aged and elderly Iranian population is alarming. Nutritional interventions particularly through population-based educational programs in order to improve diet variety and consume nutrient supplements may be necessary.
Keywords: Micronutrient; Vitamins; Usual dietary intake; Intake inadequacy & excess; NCI method

Usual intake distribution of minerals and prevalence of inadequacy in a large sample of Iranian at risk population: Application of National Cancer Institute method
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Background: The aim of current research was assessment of usual intake distribution of minerals and estimating prevalence of inadequacy and excess among a large representative sample of middle aged and elderly people in central regions of Iran.
Methods: In this cross-sectional study, second follow up of Isfahan Cohort Study (ICS), 1922 people aged 40 and over were investigated. Dietary intakes were collected using a 24-h recalls and two food records. Distribution of minerals intake was estimated using traditional and national cancer institute (NCI) methods. The proportion of subjects at risk of minerals intake inadequacy or excess was estimated using the Estimated Average Requirement (EAR) cut-point method, the probability approach and the tolerable upper intake levels (UL) index.
Results:The mean (±SD) age of participants was 55.9 (±10.6), 50.4% were male and 79.3% were urban. There were remarkable differences between obtained values from traditional and NCI methods, particularly in the lower and upper percentiles of the intake distribution. High prevalence of inadequacies for magnesium, calcium and zinc (for males older than 50 years) was observed. Significant gender differences were found in terms of inadequate intakes of calcium, magnesium, iron and zinc ($p<0.05$).
Conclusion: severe imbalanced intake for magnesium, calcium and zinc was observed in the middle-aged and elderly Iranian population. Nutritional interventions besides population-based educations are needed to promote healthy diet in the studied at risk population.
Keywords: Minerals; Usual dietary intake; Intake inadequacy & excess; NCI method

Effects of Juglans regia L. leafextractonhyperglycemiaandlipid profiles intypetwodiabeticpatients:Arandomizeddouble-blind, placebo-controlled clinicaltrial

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Background: The Juglans regia L. (J. regia) leaf has been traditionally used for treatment of diabetes mellitus in Iran. But yet, no controlled human study has determined its efficacy in diabetic patients. The present study was designed to investigate the effects of the J. regia leaf extract on hyperglycemia and lipid profiles in type II diabetic patients.
Methods: Total 61 patients, suffering from type II diabetes with fasting blood glucose (FBG) between 150-200 mg/dL, glycated hemoglobin (HbA1c) between 7 to 9% and aged between 40 to 60 years were selected, and randomly divided in to two groups of J. regia and placebo. First group received 100 mg J. regia leaf extract in capsules form two times a day for 3 months and other group received 100 mg placebo capsule with the same dosage. The standard anti-diabetic therapy (metformin and glibenclamide, and nutritional regimen) was continued in both groups. At the baseline and after three months the FBG, insulin, HbA1c, cholesterol, triglyceride, HDL, LDL and liver and renal function tests were determined. In addition general satisfaction with the treatment was identified using health questionnaires.
Results: The results indicated that FBG, HbA1c, total cholesterol and triglyceride levels in J. regia treated patients significantly decreased compared with the baseline and with placebo group. Patients in J. regia group were significantly satisfied with J. regia treatment compared with the placebo group. No liver, kidney and other side effects were observed in the groups, except more GI events (specially a mild diarrhea) associated with extract treatment at the beginning of the study.
Conclusion: In conclusion, treatment of type II diabetic patients with 100 mg J. regia leaves extract two times a day for three months improves lipid profile and glycemic control without any tangible adverse effects.
Keywords: Juglans regia; Diabetes; Medicinal plants; Blood glucose; lipid profiles

The effect of omega-3 consumption on androgen profile in patients with polycystic ovary syndrome: A systematic review and meta-analysis of clinical trials

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Background: Anti-androgenic role of n-3 PUFAs among polycystic ovary syndrome (PCOS) patients is supposed by some researchers in recent years. The present study aimed to systematically review clinical trials assessed the effect of omega-3 consumption on the androgen hormonal levels among adult females with PCOS.
Methods: PubMed, ISI web of Science, Google scholar and Scopus were searched up to June 2014 Clinical investigations assessing the effect of omega-3 PUFA on adult PCOS patients were included. Mean±standard deviation of change in serum total testosterone, sex hormone binding globulin (SHBG) and dehydroepiandrostrone sulfate (DHEAS) were extracted. Summary effects were derived using random effects model.
Results: Seven clinical trials with 220 adult patients were. Meta-analysis showed that n-3 PUFAs supplementation marginally reduces the total testosterone (mean difference (MD): -0.21 (nmol/lit); 95% confidence interval (CI), -0.44 to 0.02; P = 0.068) but not SHBG levels (MD: 2.15 (nmol/lit); 95% CI, -0.61 to 4.91; P= 0.127) or serum DHEAS values (Hedes'g: -0.11; 95% CI, -0.29 to 0.06; P = 0.19). Subgroup analysis showed that only uncontrolled before-after studies (Hedes'g -0.15; 95% CI, -0.27 to -0.04; P = 0.01) and long term interventions (Hedes'g: -0.17; 95% CI, -0.29 to -0.05; P =0.004) had the reducing effect on DHEAS.
Conclusion: It does not seem that omega-3 supplementation significantly affect the androgenic profile of patients with PCOs, unless in before-after trials or trials with long-term intervention. As the majority of long-term interventions were single group in design, double blinded placebo controlled clinical trials with long follow-up periods are highly needed.
Keywords: omega-3 fatty acids, polycystic ovary syndrome, systematic review, meta-analysis

Food dietary patterns and risk of multiple sclerosis in Iran, A Case-Control Study

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Background: It has been suggested that nutrition might play a role in the etiology of multiple sclerosis (MS). However, dietary patterns associated with MS risk are unknown so this study was performed to evaluate the relationship between MS risk and major dietary patterns recognized by factor analysis in Iran.
Methods: Usual dietary intake of 71 cases and 142 control aged 20–60 year who were admitted to the major neurological clinics of Tehran (capital) were assessed with a food frequency questionnaire consisting of 168 food items. To define major dietary patterns, we used factor analysis. Multivariate logistic regression was used to assess the relationship between dietary patterns and risk of MS. Furthermore smoking (yes/no), leisure-time physical activities (yes/no), parents age at the time of patient birth (years), season and place of the patient birth (spring, summer, autumn and winter), past medical history of rubella and measles (yes/no) and MS family history (yes/no) were asked.
Results: Two major dietary patterns were identified in the study population. The patterns included: 1-Healthy dietary pattern: high in nuts, fruits, vegetables, whole grains, low-fat dairy, white meat, beans, vegetable oil, coffee and fried potatoes,2-Western-like dietary pattern: high in hydrogenated fats, sugar, soda and industrial juices, high-fat dairy products, pickles, processed meats, refined grains, dried fruits, potato chips and boiled potatoes , an inverse relation were seen between healthy dietary pattern and risk of MS (OR: 0.30, CI: 0.09-0.47, P value <0.001).
Conclusion: Our findings showed that the risk of MS can be affected by major dietary patterns.
Keywords: Multiple Sclerosis, Dietary Pattern, Factor Analysis

Prevalence of low birth weight and its association with gestational stress In attending to health cent-

ers in Shiraz

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Background: The term low birth weight (LBW) a condition known as birth weight 2500 g or less. Negative consequences of LBW include delays in development, neurological disorders, cognitive impairment, chronic respiratory problems, hearing and vision disorders, epilepsy, learning disabilities and attention deficit disorder is. The aim of this study was to determine the prevalence of low birth weight and its association with gestational stress In attending to health centers in Shiraz, 1388.
Method: In this cross-sectional study of 422 postpartum women who had been admitted to hospitals in Shiraz were selected easy .The data from the two questionnaires of impact of stress events and risk factors for LBW were collected and were analyzed using chi square test.
Results: Based on the questionnaire of The impact of stress events, the mean score of mothers with infant LBW was 59.81 and mothers with infants greater than 2500 g, 55.63. Between factors of gender, Occupation of mother, income of family, smoking in mother, Number of family members, rank of birth, gestational age gap with previous infant and maternal age had no significant relationship with LBW. But factors for Occupation of mother, Occupation of father, Experience of being born low birth weight, maternal disease in pregnancy, weight gain in pregnancy and gestational weeks was significantly associated with low birth weight. prevalence of LBW in this study was 22.27%.
Conclusion: LBW is important factor that related with Malnourished of children and this Malnourished are related with socio-economic status and maternal health. According to the results low birth weight neonates is one of the main causes of disruption in the normal development of the fetus and Increase the incidence of low birth weight.
Keywords: LBW, Gestational Stress, Newborn, Mother

Evaluation effect of standardized ginseng extract Panaxs (G115 ®) on fasting blood glucose levels,glycated hemoglobin and lipid profile in patients with diabetes type 2

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Introduction: Despite enormous efforts to search for cure,diabetes mellitus still remains as a formidable challenge for public health.This project was designed to evaluation effect of standardized ginseng extract Panaxs (G115®) on fasting blood glucose(FBS) levels,glycated hemoglobin(HbA1c) and lipid profiles in patients with diabetes type 2.
Methods: In this the randomized,double blind placebo controlled clinical trial,30 patients with type 2 diabetes were investigated. They were divided into two groups (n=15 each),the randomized and placebo groups,the former receiving 300 mg/day G115 and placebo receiving 300 mg/d wheat flour .FBS,Hba1c and lipid profile were determined at baseline and at the end of study. SPSS version 18.0 (SPSS Inc,Chicago,IL,USA) was used for data analysis. Independent and paired samples T-test was used for comparison.
Results: Subjects randomized to G115,as compared to the placebo group,had a significant decrease in HbA1C (t= -2.593,p=0.015)) and FBS levels (t=-2.13,p=0.042). There was no improvement lipid profiles of subjects randomized to G115,compared to controls.
Conclusion: Results of this study suggest that G115 supplementation in subjects with type 2 diabetes may improve glucose control but it has no significantly effect on lipid profiles. Panax ginseng,fasting blood glucose,glycated hemoglobin,Lipid profiles.
Keywords: Panax ginseng,fasting blood glucose,glycated hemoglobin,Lipid profiles

Exploration of the correlation of knowledge of young people about complication of fast food with their use

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Background: The development of science,technology and industry changes in the life patterns in communities and thus prepared foods as well as a new way of eating,has become part of the eating behavior in the community. Relation between consumption of these foods,low diet quality and increasing prevalence of obesity has been investigated in several studies. We aimed to explore the correlation of knowledge of young people about complication of fast food with their use.
Methods: Methods: This study is part of a cross - sectional study was conducted of the year 1391,the number of 5608 persons aged 15 to 35 years old resident of 22 districts of Tehran were selected by cluster sampling. their knowledge about risk factors for heart disease,diabetes,and food consumption and fast food consumption weekly asked Through a questionnaire. The results were analyzed with spss software.
Results: 73/3% of the subjects (40/1% of men and 59/9% female),were unaware about effect of fast foods consumption on the risk of myocardial infarction and in 73/3% of them from the effects of this on the risk of diabetes. In order to assess the performance of these people,in response to fast food consumption question,41% said they have not used during the last week of fast foods and 41/8% of them reported to use only once or twice,11/8%,3 to 4 times and 3/9% 5 or more. There was significant relationship Between the knowledge of the subjects about the effects of fast foods on diabetes and myocardial infarction and fast food meals per week,(p <0/0001).
Conclusion: this study showed that the knowledge of tehranian young people about the effect of fast foods on development of diabetes and MI have very little information and Compared with people who have more information,use more fast food. because eating fast food once or twice a week is high so it needs to be more education and train. **Keywords**: Fast food,Tehran, awareness, diabetes, MI

Dietary fats and colorectal cancer

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Background:Colorectal cancer (CRC) is the 3rd or 4th most common cancer with the marked increasing incidence and mortality rates in most countries in the last few decades. Lifetime risk of developing CRC is 1 in 20 (5%). The present study aimed to see effects of different types of fats on carcinogenesis by review of the randomized controlled trials (RCTs) published in the past 10 years.
Results:CRC has long and multifactorial Pathogenesis process from mutations in specific oncogenes and tumor suppressor genes to alterations in gene expression by

Epigenetic or Non genotoxic mechanism,however environmental factors and lifestyle,makes the most difference in cancer risk between people,High-fat diets are generally associated with high risk of colon cancer,in this issue types of fat and effects on carcinogenesis are different. Some Mechanisms dietary fats increase colon carcinogenesis are as follows: 1) high-fat diet activates oncogenic cascades,involve Epithelial-mesenchymal transition and inflammation in CRC,and play important roles in tumor growth and progression 2) repeated exposure to secreted bile acids,associated with a high-fat diet,activates formation of reactive oxygen and nitrogen species that cause DNA damage and increase in mutant cells with growth advantage 3) Accumulation of hyper oxidizable triglycerides in cytoplasm of intestinal epithelial cells induce DNA damage link to truncation mutation in both alleles of the Apc gene 4) High fat diets induce obesity hormones by which signaling via receptors and activated pathways(mTOR) is the other mechanism called obesity related colon cancer. Experimental studies showed high-fat diet rich in n-6 polyunsaturated fatty acid (PUFA) and saturated fatty acids (SFA) promoted colon carcinogenesis,diets rich in n-3 PUFA and n-9 monounsaturated FA (MUFA)reduced colon tumorigenesis. Epidemiological and observational reports showed that n-3 PUFA-rich diet may suppressed the risk of colon cancer in humans. Milk as a Dairy product,had an inverse association whit CRC,TFA intake was associated with increased CRC risk,and Interestingly natural (dairy) TFAs with high calcium content have less unfavorable metabolic effects.

Conclousion: amount of fat intake and composition of dietary FA are crucial factors for colon carcinogenesis,which gives opportunity for effective prevention and intervention.

Keywords:cancer,colorectal,dietary fats

Determination of Acrylamide amount in variety of potato chips in Lorestan and Comparison of that with national estandards

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Background: Acrylamide is a chemical that can form in some foods during high-temperature cooking processes,such as frying,roasting,and baking. Acrylamide was recognized as a potential carcinogen for human being by the international cancer research organization. As far as the present study is concerned,no research has been carried out concerning the presence of acrylamide in food products particularly in potato chips produced Iran consume in Lorestan. The object of the present study is to verify the safety of Iranian potato chips for acrylamide content and compare the results with the international standard.

Methods: Different potato chips from four major Iranian potato chips brands were randomly chosen and the amounts of acrylamide were measured by GC-MS. Results: The amounts of acrylamide in all the samples examined were higher than the amount recommended by WHO and FDA. The minimum amount of acrylamide was 1042 ppb for chily flavor potato chips and the maximum amount was 3090 ppb for potato chips with salty flavor.

Conclusion: The high amount of acrylamide in Iranian potato chips recommended quick measures to be taken by relative organizations to control and reduce this substance

Keywords:chips, Acrilamid, G.C-Mass

Dietary Intake of Male and Female Table Tennis Athletes

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Background: Proper nutrition plays key roles in exhibiting the most proportion of athlete ability. Better conditioning of professional athletes is affected by being in suitable body fitness and their nutrition is the basic of body composition. In this survey, we assess daily energy and nutrients consumption of national elites.

Methods: This observational survey assessed food intake of 10 female table tennis player athletes. The participant's 24 hour food recall questionnaires were used to determine energy and macronutrients intake of national table tennis players. Their daily intake was compared to recommended and standard criteria (RDA). SPSS software was used to perform statistical analysis. Pvalue lower than 0.05 was set as statistically significant level.

Results:Mean and standard deviation (SD) of athlete's age were 18.5±8.55 years old. Mean daily energy intake were 2641±1013 kilocalories. The average consumption of carbohydrate (CHO) were 352±107 gram (54.5±6.85%), fat and protein intake of them were as follow: 106.20± 61.7 g (34.87±5.64%) and 87.16± 35.84 g (13.23±1.63%), respectively.

Conclusion: Mean energy, carbohydrate, protein and fat intake of professional table tennis players were higher than RDA, significantly (P value<0.001).

Keywords: Dietary intake, table tennis athletes, Isfahan

Evaluation of Anthropometric Indices, Eating Behaviors and Related Factors in Patients with History of Addiction

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Background: Evidence suggests that addiction could affect nutrient absorption and metabolism, and induced nutritional deficiencies and malnutrition. Because nutritional evaluation is the first step in the nutrition care process, we are going to assess anthropometric indices, eating behavior in addicted patients who referred to Addiction Treatment Centers of Qom.

Methods: In this descriptive-analytical study, first we randomly select 4 of 9 centers of drug rehabilitation centers in the city of Qom, and 329 patients were enrolled from 4 centers. Survey questions included descriptive demographics, Type of opiate, dietary habits, and then assess anthropometric indices include of height, weight, waist circumference, arm circumference and thickness of skinfold in triceps and calf.

Results: Twenty-nine percent of addicted people are in the detoxification process. There is no relationship between the how to use of opiate and treatment periods with anthropometric indices (excluding a relation between how to use of opiate and waist circumference). Also, except height, there are no relationships between other anthropometric indices and type of used opiate. No statistically significant difference was found between body mass index

of Opium and Hashish consumers. So, body mass index of opium consumers is 3.07 more than Hashish consumers.
Conclusion: According to these results, with respect to importance of nutritional issues in addicted patients, and lack of self-care and financial capability, governmental support program and education course is necessary to improvement of quality and quantity of addicted people diet.
Keywords: Anthropometric Indices, Eating Behaviors, Addiction

Diet Diversity in Fasting People of Qom in Ramadan Month

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Background: In Islam, fasting means abstaining from food and beverages from before the Morning Prayer to evening. This long period of fasting accompanied with weakness, and could alter eating behaviors and dietary habits. Therefore, with respect to importance of diet diversity in healthy nutrition, in this study we are going to assess diet diversity of fasting people in the Qom.
Methods: Fasting people (N=120) at the city of Qom in a descriptive-analytical study were surveyed. Subjects aged from 20-45 years were recruited. To assess dietary intake, a food record questionnaire used for 3-days. Consumed foods are categorized according to food guide pyramid and recommended values were determined.
Results: Consumption of vegetables, meat and meat products and dairy groups were significantly less than the recommended amounts, and fruits consumed more than recommended amounts. The intake of bread and cereal group and other groups were not statistically different from the recommended values.
Conclusion: Based on the findings of this study, diet of fasting people has not enough diversity. However, due to the undeniable role of maintaining proper nutrition on health promotion, it is necessary to educate fasting people to choose food from all food groups.
Keywords: Diet Diversity, Fasting, Qom, Ramadan

Concentration of Fluoride Intake through Water and Tea Consumption in Qom City Residents in 2012; A Cross-Sectional Study

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Background: The human body gets Fluorine from a variety of sources including food and water. This element is essential in order to prevent tooth decay. However, high concentrations of this element led to a lot of dental fluorosis and skeletal injuries. This study aimed to measure the concentration of fluoride in water and tea consumed in the city of Qom.
Methods: The present study is cross-sectional analysis water and high consumed tea brand samples in the city of Qom in 2012. Fluoride concentrations in water and tea samples were measured by HACH Model DR-4000 spectrophotometer and Ion selective method respectively. The data were analyzed using software SPSS-17.
Results: According to the experimental results, the average concentration of fluoride in the drinking water obtained between 0.07-0.63mg/l. The lowest concentrations were related to domestic water treatment systems. Concentration of fluoride in dry tea bag and granular tea were 138.9 and 153.71 mg/kg respectively. The concentration of this element in the tea bags and granular tea infusion were 1.29 and 1.5 mg/l respectively.
Conclusion: Results of this study showed that the amount of fluoride in drinking water reduced by the domestic and industrial water treatment systems greatly. So drinking tea could partially compensate for the lack of fluoride in drinking water.
Keywords: Fluoride Intake, Water, Tea Consumption, Qom

The Relation between Brewed Tea and Drinking Water with Urinary Fluoride Concentration among Youths

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Background: Fluoride is an element that enters the body from different dietary and non-dietary sources. Water and brewed tea are the main dietary sources of this element. Therefore, we are going to assess the student's urinary fluoride concentration and evaluated whether there is a relation between the amount of drinking water and tea with urine.
Methods: In a cross-sectional study, we enrolled 100 males and female students of Qom University of Medical Sciences. Daily intake of water and brewed tea were assessed in three days before obtaining urine samples. Urinary fluoride concentration tested in samples by using of spectrophotometer model DR-4000 and in the method of SPADNS.
Results: Fluoride levels in the urine of male and female students were almost similar and it was about 1.45 mg/lit. Also there were no any relation between the water and tea consumption and urinary fluoride concentration.
Conclusion: Based on the findings of this study, it seems that brewed tea intake could increase the urinary fluoride concentration.
Keywords: Fluoride, Black tea, students, Urinary fluoride

A Survey of Dietary Supplements Use among Iranian Athletes

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Background: Nutrition in professional athletes have a crucial role in their success and in some cases, nutrition deficiency could compensate by dietary supplements. In recent years, dietary supplements (DS) usage increased significantly. So, evaluation, objectives, kind of popular supplements, and affecting factors for DS selection is one of the research priorities in the Sports Nutrition field. Therefore, in this study we are going to evaluate the dietary supplements in athletes in city of Karaj.
Methods: A researcher designed questionnaire with 17 questions designed to assess the dietary supplements usage, resource for information and where shopping DS. 195 athletes from various disciplines participated in this study. Results: The average age of the athletes was 24 ± 7 years. 36% of subjects taking supplements, and 49% reported a history of supplementation. The main reason for the use of supplements are include of increased Sports performance by 48%, and then nutritional needs by 39% and increased muscle mass 31%. Sixty-four percent of athletes mentioned coaches as the most important source of information about dietary supplements, and in order dietitians (24%) and Internet (23%) in next places to provide information. Sixty- one percent of the athletes preferred to supply required supplement from coaches and drugstore with 51% in second place. The most commonly ingested supplements were protein supplements followed by vitamins, creatine and glutamine.
Conclusion: The results of this study are indicating high prevalence of dietary supplements in athletes. Also, demonstrate a need for nutrition and dietary supplement education for athletes and coaches.
Keywords: Supplement use, athletes

The impacts of Magnesium supplementation on serum alkaline phosphatase and osteocalcin and fracture healing in women with bone fracture

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Background: Magnesium is an essential mineral in bone formation. This nutrient incorporates in bone metabolism and enhances bone mineralization. This study designed to assess the effects of magnesium supplementation on alkaline phosphatase and osteocalcin and also callus formation in women with long bone fracture.
Methods: In a double-blind randomized placebo controlled trial, 32 women with long bone fracture, age 20-45 years old, were randomly divided into the Mg group or control, receiving either 250 mg magnesium oxide daily or placebo for 8 weeks. Serum alkaline phosphatase and osteocalcin were measured at the beginning and the end point, and also callus formation was checked at the end of study. P value < 0.05 was considered as significant level.
Results: There was no significant difference between two groups in alkaline phosphatase and osteocalcin levels at the beginning and the end of study. Serum alkaline phosphatase and osteocalcin levels were increased in both groups, but there were not statistically significant. Furthermore, the callus formation which revealed the fracture healing was not different between 2 groups.
Conclusion: This study concluded that Magnesium supplementation did not change the serum markers of bone formation and fracture healing, however further studies need to approve this finding.
Key words: Magnesium, Alkaline phosphatase, Osteocalcin, fracture

Effect of Vitamin E on Fasting and Postprandial Oxidative stress, Inflammatory markers, glucose status and Insulin Resistance in Type 2 Diabetic Patients: a Randomized Clinical Trial

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Background: Atherosclerosis is one of the prevalent complications in diabetic patients. Increased free radicals in diabetes activate stress sensitive signaling pathway, resulting in this outcome. This study examines the effect of short term supplementation of vitamin E on different biochemical markers in type 2 diabetic patients, in this regard to prevent from atherosclerosis in this group.
Methods: In this single-blind placebo controlled trial, 30 type 2 diabetic patients were randomly divided into two groups of study to receive vitamin E (400IU) or identical placebo capsules daily for 6 weeks. Serum level of lipoproteins, glucose, insulin, malondialdehyde (MDA), interleukin-6 (IL-6), high-sensitivity C-reactive protein (hs-CRP), pulse rate and blood pressure were measured in fasting and postprandial (after a fatty meal) states before and after six weeks of supplementation.
Results: There wasn't any significant difference in fasting and postprandial lipid profile (Triglyceride, HDL-, LDL- and total Cholesterol), glucose, insulin and HOMA-IR after six weeks of intervention between the two groups. However, the result of our study showed a significant decrease in fasting and postprandial MDA levels and postprandial pulse rate and a significant increase in fasting IL-6 in vitamin E group compared to the controls after supplementation. There were no significant differences between the groups in other markers.
Conclusion: This study suggests that short term supplementation of vitamin E can reduce oxidative stress in fasting and postprandial states in type 2 diabetic patients and may prevent diabetic complications; in addition increment of IL-6 after supplementation may play a role in attenuating Type 2 diabetes by anti-inflammatory effect.
Keywords: vitamin E, diabetes, postprandial period, oxidative stress, inflammation, atherosclerosis, clinical-trial.

Predictors of health promoting behaviors in patients with coronary artery disease

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Background: the concept of health promotion is applied to improve quality of life and well-being and not merely prevention of diseases. Health-promoting behaviors (HPB) include all behaviors that are performed to maintain good health and prevent disability. Therefore, compliance to these behaviors is necessary in patients with chronic dis-

eases including cardiovascular diseases. The purpose of this study is to determine the predictors of health-promoting behaviorsinpatients withcoronaryartery diseases.
Methods: In this cross-sectional descriptive survey patients with coronary artery disease (n=250) who were referred to the Seyedoshohada heart hospital in Urmia / Iran were enrolled. Demographic information was collected. Valid and reliable questionnairesnamed Pender (HPLP-II),Cardiac Self-Efficacy (CSE) and General Self-Efficacy (GSE) were used for assessing of HPB, CSE and GSE respectively.Dataanalysis was done usingdescriptivestatistics, correlation coefficients, Stepwise multiple regression analysis and independent sample *t*-test.
Results: Fifty five percent of participants were male and mean age was 59±12.1. HPB in 72% of participants was moderate. Stepwise multiple regression analysisindicated among all the predictors, CSE, GSE, education and Body Mass Index (BMI) respectively were the best predictors of HPB. Thismodelcouldpredictthechanges of HPB upto 32%(adjustedR^2=0.32). Of the components of HPB, the highest score was related to health responsibility (32±6.5) and spiritual growth (31.6±5.7) but exercise (13.2±4.3) and stress management (15±3.3) had the lowest scores.
Conclusions: According to theresults, the HPB wasmoderatein themany of patients. Cardiac and general self-efficacy, education and BMI had the greatest effects onHPB. Also responsibility ofhealth andspiritual growthcreate the mostmotivationinthe patients to apply HPB butthe lowest regard isrelatedtophysical activity and stress management. It is concluded that enhancing awareness and broadertraining programs about health promotionis required to motivate patients for healthy lifestyle.
Key words: Health-promoting behaviors, Cardiac Self-Efficacy, General Self-Efficacy, BMI, HPLP-II

Evaluation of cardiac and general self-efficacy and their association with health-promoting behaviors in patients with coronary artery disease

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Background: Health-promoting behaviors (HPB) should be considered as major strategies to maintain health and manage coronary artery disease. But before anything else, patients must believe in their ability to manage disease, which that is called self-efficacy. The of this study was to determine the amount of Cardiac Self-Efficacy (CSE) and General Self-Efficacy(GSE) and their association with HPB in patients with coronary artery disease.
Methods: A descriptive and cross-sectional design was used. Patients with coronary artery disease (n=250) who were referred to Seyedoshohada heart hospital in Urmia/ Iran participated in the study. Demographic information was collected. HPB were assessed by questionnaire of Pender (HPLP-II) and evaluation of self-efficacy was performed using two type questionnaires including general and cardiac self-efficacy. Data analysis was done using descriptive statistics, correlation coefficients, independent-t and stepwise multiple regression.
Results: Fifty five percent of participants were male and mean age was 59±12.1. Levels of HPB in 72%, GSEin 90% and CSE in 58% of participants were found average. GSE was positively correlated with HPB (R=0.20, P<0.002), but there was more correlation between CSE and HPB (R=0.46, P<0.001). GSE and CSE demonstrated a direct correlation with all components of health promoting behaviors.
Conclusions: It is concluded that self-efficacy plays an important role in initiation and maintaining of health promotion behaviors but the correlation between CSE and HPB was stronger. Creating a sense of empowerment in patients motivates them for more successive efforts in maintaining adaptation of healthy lifestyles. Thus, making patients confident in conducting health-related behaviors should be considered as a preliminary action before starting of training programs.
Keywords: Cardiac Self-Efficacy, General Self-Efficacy, BMI, Health-promoting behaviors, Pender

Swimming training and Ginkgo biloba extract on NMDA and BDNF plasma

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Background: Swimming benefits are the physical, social and psychological, such as reduced anxiety and mental stress and increase energy and vitality. Ginkgo biloba is one of the oldest plants in Asia that applied in traditional medicine to treat a variety of diseases such as depression and anxiety. The aim of this study was to investigate the effect of eight weeks endurance training swimming on BDNF and NMDA levels with Ginkgo biloba extract young girls untrained.
Methods: 40 healthy females aged 27-22 girls as subjects of this study were selected and randomly divided into four groups of 10 people (1- swim training with Ginkgo biloba extract, 2- swimming with no Ginkgo biloba extract 3-extract Ginkgo biloba and 4- control groups).
Results: The results showed that endurance training in untrained young girls had no significant effect on levels of NMDA. However, the experimental group after endurance exercises significantly higher levels of BDNF.
Conclusion: The present study was effective in improving depression with Ginkgo biloba consumption, decrease anxiety, improve memory and increase Vitality suggest that related to flavonoid and antioxidant activity of this plant with endurance training.
Keywords: swimming training, Ginkgo biloba, NMDA, BDNF

Effects of Nigella sativa oil extract on inflammatory cytokine response and oxidative stress status in patients with rheumatoid arthritis; a randomized, double-blind, placebo-controlled clinical trial

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Background: rheumatoid arthritis (RA) is an inflammatory autoimmune disease. TNF-α stimulates nuclear factor kappa B (NF-κB) signaling a pathway that leads to production of inflammatory cytokins which play an important role in RA. Vice versa, Th2 that produces anti-inflammatory cytokines such as IL-10 able to induce a skew from inflammatory to anti-inflammatory reactio. Also Pro-oxidants (free radicals) and defects of anti-oxidant (scavenging) mediators have important roles in pathogenesis of RA and are key initiators in tissue injury observed in the patients.
Nigella sativa is medicinal plant that has long been used in traditional medicine for treating various conditions. Numerous animal studies provided evidences that the seed

may elicit a broad anti-inflammatory /anti-oxidant activity. The aim of the present clinical trial was to evaluate anti-inflammatory and antioxidant properties of *Nigella sativa* oil in patients with (RA).

Methods: Forty-two patients with RA were assigned into two groups in this randomized, double blind, placebo-controlled clinical trial. Subjects in intervention group received two capsules, 500 mg each, of *Nigella sativa* oil, each day for 8 weeks; the other group consumed two capsules as placebo per day for the same period of time. Serum TNF-α and IL-10 and whole blood levels of oxidative stress parameters were measured at baseline and end of the trial. **Results**: The serum level of IL-10 was increased in the *Nigella sativa* group (P< 0.01).

MDA and NO were significantly decreased compared to the baseline values in the Nigella sativa group (p= 0.04 and p=0.01, respectively).

There were no significant differences in the TNF-α, SOD, catalas and TAS values between or inter the groups, before and after the intervention (p> 0.05).

Conclusion: Previous studies on the pharmacological effects of *Nigella sativa* seed and TQ confirmed multiple benefits including suppression of pro-inflammatory cytokines, pro-oxidants and elevation of some anti-inflammatory cytokines such as IL-10 in animal models with inflammatory. Findings of a study on animal model of RA indicated that oral administration of TQ resulted in significantly reduced levels of TNF-α, MDA, NO and increased level of IL-10, SOD, CAT. Treatment with *Nigella sativa* shifts the balance of cytokines toward a bone protecting pattern and reduces production of free radicals. The results of the present study showed that eight weeks of *Nigella sativa* supplementation increased significantly IL-10 and reduced non-significantly pro-inflammatory cytokine, TNF- α also reduced significantly MDA, NO. The findings are in consistence to earlier studies. Unexpectedly, in the present study *Nigella sativa* could not change serum levels of SOD, CAT and TAC. It is highly possible that this different between animal model studies and our study raised from lack of administration of anti-inflammatory drugs in animal during those interventions or dose differences and different experimental conditions.

The suggested mechanism that Nigella sativa may affect both oxidative stress and inflammatory process simultaneously is through inhibition of NF-κB. This study indicates that Nigella sativa could improve inflammation and reduce oxidative stress in patients with RA. It is suggested that Nigella sativa may be a beneficial adjunct therapy in this population of patients.

The effect of Portulaca oleracea seeds on anthropometric measurements in overweight and obesity patients with asthma: a Randomized Clinical Trial

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Background: Many studies show that there is a relationship between asthma and obesity. Weight management is important in patients with asthma. In some countries, people used Portulaca oleracea seeds for lose weight. The experiment is designed to study the effect of Portulaca oleracea seeds on anthropometry measurements in asthma patients with overweight and obesity.

Method: In a randomized clinical trial, 37 patients with asthma disease that refer to clinics of Tabriz University of medical science divided to intervention and control groups. First group (n=18) received protocol treatment and 10g/day Portulaca oleracea seeds in two doses with two glasses of water, while participants in second group (n=19) had only their protocol treatment and drank two glasses of water in every day for 8weeks. At the baseline and end of study, anthropometric measurements were obtained for each person and dietary intake and physical activity questionnaires were completed.

Results: Mean age and history of asthma for participants at baseline was 45.13 ± 9.2 and 9.9 ± 8.1 years, respectively. Comparing of anthropometric measurements including weight, body mass index, waist circumference and hip circumference, waist-to-hip ratio between two groups indicated any significant differences between two groups after consumption of seeds *(p*0.05).

Conclusion: Administration of Portulaca oleracea seeds could not decrease anthropometric measurements in asthmatic patients with overweight and obesity.

Keywords: Asthma; Portulaca oleracea seed; obesity; overweight.

Association of anthropometric measurements with lung function in patients with asthma

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Background: Obesity is a serious public health issue and is related to lung dysfunction. In fact, obesity is commonly regarded as a risk factor for asthma development, poor asthma control, and poor response to asthma therapy. We investigated the association of anthropometric measurements with lung function in asthmatic patients.

M**ethods:** In a cross-sectional study, the medical records of 85 asthmatics were analyzed. For determining of lung function, Pulmonary function tests (PFTs) was performed by spirometer and anthropometric parameters including weight, height, body mass index (BMI), waist circumference (WC), hip circumference (HC) and waist-to-hip ratio (WHR) were measured for each person.

Results: Mean age and median duration of asthma for participants were 43.9 **±** 10.61 and 6(3to 14) years, respectively. Among anthropometric parameters, only WHR indicated significant correlation with Pulmonary function tests in both sex (p<0.05). There were negative associations between WC, HC and WHR with PFTs only in overweight and obese women (p<0.05).

Conclusion: Some of the anthropometric parameters are correlated with lung function and it seems that Gender differentially contributes to the relationship between obesity and lung function.

Keywords: Asthma; Body Mass Index; Obesity; Spitometery.

Authors Index I

Prepare rice cookies with nutritional and organoleptic suitable properties

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Background: Due to the increasing number of celiac patients,has increased demand for gluten-free products. Rice cookies is a type of Japanese snack food. rice flour is used in making cookies because of sticky property of rice flour amylopectin. The aim of this study was to prepare rice cookies with nutritional and organoleptic suitable properties.
Methods: In the present study,rice flour produced from rice to mixtured in two stages with different amounts of oil and sugar and After kneading,and stored for 2 hours at 5-2 ° C to taken various forms and was performed at 180 F° temperature for 50 minutes. In order to evaluate the organoleptic properties of the oil and sugar were investigated rice cookies treatments in terms of parameters such as taste,tenderness and texture and moisture content.
Results: Moisture of cookies were prepared with 10% sugar,a lots less of sugar cookies prepared with 5%. flavored parameter of prepared cookies were showed a significant difference. In general cookies prepared with 10% sugar and 13/5% oil have tasted better and tenderness of the cookies compared to rice cookies with 5% sugar and 18/5% oil.
Conclusions: The results of this study can be used to improve the indicators of rice cookies prepared from rice flour,especially for celiac patients.
Keywords: Rice cookies, celiac patients, organoleptic properties,

Authors Index J

Assessment of consumption of refined iodized salt,sea salt and rock salt in urban households of Astara city,2014

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Background: Iodization of salts consumed is the best iodination procedure in many countries of the world. Also, in addition to iodization of salt, the purity and free from heavy metals to there is essential. The aim of this study is evaluation of consumption of refined iodized salt,sea salt and rock salt in urban households of Astara city.
Methods: This cross-sectional descriptive study was conducted in 2014 year. For this work questionnaire consisted of 5 questions about type of salt consumed for cooking and table was prepared and were randomly completed by 250 women referred urban health centers in Astara city,then the analysis was performed.
Results: The results of this study showed that from 250 women referred to the health centers,4 women (1.6%) were consumed sea salt for cooking and table,6 women (2.4%) were consumed rock salt for cooking and table and 240 women (96%) were consumed iodized refined salt for cooking and table.
Conclusion: The results of this study have been showed that the percentage of people uses sea salt and rock salt for cooking and table. Unfortunately,some jobber have extensive publicity about the health benefits of this type of salt (sea salts and rock salts),that there are unreal and considered as serious threat for human health. Given that these salts are lack of iodine and also are unrefined,so with the increased use of these salts,goiter and other diseases caused by iodine deficiency affect the community. Thus,in order to increase the effectiveness of IDD programs,more education about the importance of consumption of iodized salt specially refined iodized salt in appropriate amount,proper procedure of storing and salt consumption and proceeding in the proper production and distribution of salts is necessary.
Keywords: refined iodized salt, IDD, Iodine, rack salt, sea salt

Effects of row yellow onion consumption on CEA, CA-125, ALT, AST, ALP in breast cancer patients during doxorubicin-based chemotherapy

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Background: The clinical use of DOX is limited by a significant dose-dependent cardiotoxicity and hepatotoxicity. In addition, DOX toxicity has been shown to induce inflammatory changes in the heart and liver tissues of DOX administration so reduced efficacy of treatment. There for oncologist use hepatic enzyme and Circulating tumour markers, Carcinoembryonic Antigen (CEA) and Cancer Antigen 125 (CA-125) to monitor drug side effects and monitoring independent prognostic factor for disease free survival and death from disease in breast cancer patients. According to epidemiologic studies which suggested that onions possessed strong anti-inflammatory and free radical scavenging capacities, we investigated the effect of this functional food in breast cancer (BC) survivals.
Methods: 46 BC patients aged between 30-65 years, who their disease had been approved as insitue ductal carcinoma (IDC), grade II and III without metastasis, after radical or partial mastectomy (2011-2013), matched for in/exclusion criteria, were selected. The subjects after second chemotherapy in a Block-random allocation was considered in 2:1 distributions indicating of non-taxol protocols (doxorubicin contained regimens): other chemotherapy protocols. were served diets containing BMI-dependent 110-120 g/d Row Yellow Onion daily in high onion group (HO) with main meals. Participants in low onion group (LO) likewise placebo were taken 30g/d onion during 8 weeks. Eventually serum glucose and insulin were measured in the taken blood samples in beginning and at the end of study.
Results: Mean Serum AST , ALT, ALP levels were not change statistically significant between placebo and intervention groups. Two indicators of liver toxicity, ALP and AST approximately increased in each group, but the elevation in placebo was higher than intervention ($P<0.05$). During the study serum ALP as a marker of cardiotoxicity showed non significant higher reduction in HO group compared to LO (143.09mg/dl to 133.40). CEA and CA-125 significantly decreased only in high onion feed group ($P<0.023$ and $P<0.040$, respectively). Conclusion: Manipulation of diet by high intake of onion have synergistic effect on chemotherapy. This property may explain the ability of onion to lower the side effects of chemotherapeutic drugs, and demonstrated very promising properties for developing chemotherapeutics combinations for the therapy of BC.
Keywords: Breast Cancer, onion, Cardiotoxicity, Hepatotoxicity, chemotherapy

Effect of low caloric diet with vitamin D3 on non-alcoholic fatty liver Disease: a study protocol for a randomized controlled clinical trial

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Background: Over the past couple of decades it has become clear that nonalcoholic fatty liver disease (NAFLD) is now one of the most common causes of liver disease in all over the world. The prevalence of NAFLD is high especially in obese people. Nutritional factors such as dietary micronutrients like vitamin D may have extraordinary effects on clinical manifestations of fatty liver disease. Recent studies have shown high prevalence of vitamin D deficiency in NAFLD patients. Based on studies we are now completing a randomized controlled double blinded trial study to determine the effect 12-week using vitamin D and low caloric diet on NAFLD subjects. In this study we try to evaluate the possible effect of hypocaloric diet with 50000 IU vitamin D3 supplementation on anthropometrics,biochemical markers and the imaging factors in NAFLD patients with vitamin D deficiency. Interventional group receive low caloric diet and vitamin D3 supplementation and another group of NAFLD patients receive only low caloric diet for 12 weeks. If successful,this study will determine if vitamin D3 supplementation with low caloric diet will result in clinically meaningful decreases disease severity and thus can be a good therapeutic way for patients with NAFLD.
Keywords: Nonalcoholic fatty liver disease,Vitamin D deficiency,Low caloric diet,randomized controlled dou-

ble blinded clinical trial

The knowledge, attitude and practice of health care staff about pregnancy nutrition in Ajabshir and Bonab

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Background: Nutritional knowledge is one way to achieve proper and balanced nutrition in whole life. Since pregnant women are vulnerable groups of community,nutrition in this period plays significant role in in maternal and infant health. As mothers get most of their information from health centers and the knowledge of the staff in health centers on nutrition during pregnancy is necessary for proper education,in this study,nutritional knowledge of health care staff was investigated in Ajabshir and Bonab city.
Methods: In this study,sixty staff randomly selected from health care centers in Ajabshir and Bonab cities. In order to assess the knowledge on nutrition during pregnancy,staff completed a questionnaire containing 10 questions. For evaluation,the questionnaire was adjusted based on 20 scores and subjects was divided into three groups with poor,average and good knowledge based on the scores on the questionnaire. SPSS software program was applied for data analyzing.
Results: The results showed that in Ajabshir city,6% of staff had good knowledge on nutrition during pregnancy,27% had moderate knowledge and awareness of 67% was poor. In Bonab city,6% of staff had good knowledge on nutrition during pregnancy,24% had moderate knowledge and awareness of 70% was poor.
Conclusions: According to the results,most of the health care staff had poor knowledge on nutrition during pregnancy. Given the importance of nutrition in pregnancy and the need for proper education to mothers, training courses for health care workers is essential in this regard.
Keywords: Knowledge, pregnancy, health care staff, West Azarbaijan

Effects of coenzyme Q10 supplementation on liver enzymes and lipid profiles in patients with nonalcoholic fatty liver disease

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Background: Non-alcoholic fatty liver disease (NAFLD) is the most common type of liver disease,as a health problem across the world is caused by an abnormal accumulation of TG in the liver. Oxidative stress has been implicated in the pathogenesis of NAFLD. Antioxidant therapy could potentially protect cellular damage and protect cells against oxidative stress and improvement of metabolic disorders. This study was designed to investigate the effects of coenzyme Q10 (CoQ10) on liver enzymes levels and serum lipid profiles in patients with NAFLD.
Methods: This double-blind randomized placebo-controlled clinical trial was conducted in 41 patients with NAFLD. The subjects were randomly allocated into 2 groups of intervention who received 100 mg/day CoQ10 and the placebo for four weeks. Biochemical parameters including lipid profiles and liver enzymes were assessed at baseline and end of study.
Results: Serum aspartate aminotransferase (AST) concentrations significantly decreased after CoQ10 supplementation ($P < 0.05$). No significant change in lipid profile was observed.
Conclusions: CoQ10 supplements at a dose of 100 mg by the generation of metabolic energy as an essential co-factor is able to improve liver function in NAFLD. Further trials with higher dose of CoQ10 supplements and longer treatment periods are warranted.
Keywords: Non alcoholic fatty liver disease (NAFLD),Coenzyme Q10,lipid profile,liver enzymes.

The effect of milled flaxseed on glycemic indexes in pre-diabetic patients: A randomized controlled clinical trial

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Background: Cardiovascular complications of diabetes starts at the early stages of this disease, called prediabetes, and designing effective and early interventions at this stage can prevent progression of pre-diabetes to diabetes. Few studies have shown the effect of flaxseed on glycemic control. This study aimed to assess the effect of milled flaxseed on glycemic indexes in pre-diabetic patients.
Method: In this 12-week randomized clinical trial, 92 subjects with pre-diabetes were randomly allocated to 3 groups: two groups received 40 g (HD) and 20 g (LD) flaxseed daily, and the third group was the control (C). Participants on intervention groups instructed to consume flaxseed in exchange of same amount of carbohydrate and fat in daily diet. Anthropometric and laboratory evaluation are performed both before and after intervention in three groups. Insulin resistance, beta cell function, and insulin sensitivity were calculated by HOMA calculator software.
Results: FSG was significantly decreased in all three groups at the end of the study, compared to the baseline; but there were no significant changes between the means of the three groups. In this study, no significant difference was observed in insulin concentration among the studied groups compared to the baseline, neither between the studied groups. Although daily intake of 20 g flaxseed in LD group showed a significant decrease in terms of insulin resistance, this difference was not significant between the three groups. Beta cell function increased compared to the baseline; this increase was only significant in C and HD groups. However, mean changes of beta cell function did not show any significant difference between the groups. Comparison of insulin sensitivity rate before and after the intervention demonstrated a significant increase in insulin sensitivity only in LD group. This difference was not significant in other groups before and after the intervention and also between the groups.
Conclusion: Flaxseed did not improve glycemic control in patients with prediabetes and recommending flaxseed as a dietary component for pre-diabetic patients requires further studies.
Keywords:prediabetes, insulin resistance, flaxseed

The effect of lemon balm supplementation on blood glucose and lipid profile in patients with hyperlipidemia

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Background: Nowadays the using of medicinal herbs is interested by researchers for treatment of diseases. In this study the effect of lemon balm supplementation on blood glucose and lipid profile was examined in patients with hyperlipidemia.
Methods: 58 healthy man & woman with high serum cholesterol participated in this randomized clinical trial study within two months interval. Patients were randomly divided into two groups: Placebo (PG) and supplemented (SG). SG group were supplemented with 6 capsules (0.5 gr lemon balm powder in each capsules) and PG group received 6 placebo capsules each day. Fasting blood sugar (FBS),cholesterol and triglyceride were measured before and after within two month intervention.
Results: Mean of LDL-c in SG before and after supplementation decreased significantly (P= 0.002),the mean of LDL-c between two groups did too (P=0.02). Also the results shows a noticeable decline in level of Cholesterol in two groups in the beginning and the end of trial but this reduction in SG (P=0.000) was so powerful than PG (P=0.03). Mean of FBS & HDL decrease significantly in both groups (P= 0.005) but no significant differences between groups observed after the study. Moreover were not found significant disparity in level of Triglyceride in two groups. Nonetheless results present this herb prevent remarkably from increasing the level of LDL/HDL in SG group.
Conclusion: This study indicates that powder of lemon balm supplementation as a high source of antioxidants & bioactive compounds can be effective on lowering level of cholesterol & LDL in patients with hyperlipidemia.
Keywords: Melissas,Blood Glucose,Cholesterol,Triglycerides

The relationship of dairy products intake with menstrual cycle and bleeding period in Ahvaz Jundishapur University of Medical Sciences student girls

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Background: Menstruation is an important process for women's reproductive health and abnormal menstruation has adverse effects on overall health. Food intake is assumed as an index of lifestyle that could affect on many aspects of life. It has been shown adequate milk and dairy products intake have potential health effect during pregnancy and lactation. According to this fact that normal menstruation has considerable effects on pregnancy, we decided to investigate the relationship between milk and dairy products intake with length of menstrual cycle and bleeding period in university student girls.
Methods: One hundred student girls from Ahvaz Jundishapur University of Medical Sciences completed the consent form to participate in this research. General information, length of menstrual cycle and bleeding period were asked from all participants. Milk and other dairy products (yoghurt, ice cream, cheese and dough [Iranian traditional beverage]) daily serving consumption were asked from all students too.
Results: The mean ± SD of total daily milk and dairy products intake were 2.57 ± 1.65. The length of menstrual cycle and bleeding period were 27.56 ± 3.47 and 6.42 ± 1.47 days respectively. Milk intake showed positive relationship with length of menstrual cycle (P= 0.012, r = 0.270). Bleeding period revealed significant positive relationship with dough consumption (P<0.001, r = 0.414) but this association was negative with cheese consumption (P=0.025, r = -0.241).
Conclusion: We could consider that milk and cheese consumption have benefit effects on menstruation. According to positive relationship of dough intake with bleeding period, we need more research to find the causing effect.

Comparative measurement of ghrelin,l eptin, adiponectin, EGF and IGF-1 in breast milk of mothers with overweight/obese and normal-weight infants

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Background: Obese infants are more susceptible to develop adulthood obesity and its related co-morbidities. Previous studies have shown the presence of hormones and growth factors in maternal breast milk that may influence infant adiposity. The aim of this study was to investigate differences in concentrations of 3 hormones and 2 growth factors in the breast milk of mothers with obese and non-obese infants**.**
Methods: In this cross-sectional study 40 mothers with overweight or obese infants (weight for length percentile>97) and 40 age-matched mothers with normal weight infant (-100.05).
Results:There was also a significant positive correlation between EGF and ghrelin in both groups.
Conclution: This study revealed that there was a correlation between ghrelin and EGF level in breast milk of mothers with obese and non-obese infants suggesting a possible regulatory effect of these two hormones on weight in infants**.**
Keywords: Infant's obesity,Breast milk feeding,Hormones,Growth factor

The effect of quercetin on plasma oxidative status, c-reactive protein and blood pressure in women with rheumatoid arthritis

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Background: Considering the increased production of free radicals and inflammatory factors in rheumatoid arthritis (RA) and the effects of bioflavonoid quercetin on reducing oxidative stress, inflammation and blood pressure, the present study examined the effects of bioflavonoid quercetin on total antioxidant capacity (TAC) of plasma, lipid peroxidation and blood pressure in women with RA.
Methods: The current study was a randomized doubleblind clinical trial in which 51 women with RA aged 1970 years, were participated. Patients were assigned

into quercetin (500 mg/day) or placebo groups for 8 weeks. Dietary intake was recorded using 24h dietary recall questionnaire and the physical activity was assessed through an international short questionnaire of physical activity at the beginning and end of the study. Plasma TAC and malondialdehyde (MDA) using colorimetric method, oxidized low density lipoprotein (ox-LDL) and high sensitivity creactive protein (hsCRP) using enzymelinked immunosorbent assay method and also blood pressure were measured at the beginning and end of intervention.
Results: After 8 weeks there were no significant differences in TAC of plasma, oxLDL, MDA, hsCRP, systolic and diastolic blood pressure between quercetin and placebo groups and in each group comparing before and after.
Conclusion: In this study, quercetin had no effect on oxidative and inflammatory status of plasma and blood pressure in patients with RA. Further studies are needed to ensure the effect of quercetin on oxidative stress and inflammation in human.
Keywords: Blood pressure, lipid peroxidation, quercetin, rheumatoid arthritis, total antioxidant capacity

Investigation the relationship between serum 25 (OH) D and the risk of breast cancer

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Background: Some evidence suggests a relationship between vitamin D status and risk of breast cancer. The concentration of serum 25-hydroxy vitamin D (25 (OH) D) is considered to be the best indicator of vitamin D status in the body. This study aimed to investigate the relationship between serum 25 (OH) D and the risk of breast cancer. Moreover,we assessed the determinants of serum 25 (OH) D.
Methods and Materials: A total of 135 incident breast cancer cases in the Cancer Research Center of Shahid Beheshti university of medical sciences were matched with 135 controls by age and menopausal status. Information on the risk factors of breast cancer was collected to assess the role of confounding factors in the relationship between 25(OH)D and risk of breast cancer. A 168-item food frequency questionnaire was filled by interviews for every participants to assess dietary intake of vitamin D and some other dietary factors. To determine the vitamin D content of foods we used the USDA nutrient database. For analyzing the food frequency questionnaires we used the food composition table for the comprehensive plan for assessment of nutrient intakes in 1381-83. 5 mL blood samples were collected from all participants to measure serum 25(OH)D using ELISA method.
Results: Odds ratio and confidence interval of developing breast cancer for the highest quartile of serum 25 (OH) D level compared to the lowest quartile was 0.269(0.122-0.593). When stratified by menopausal status the inverse relationship between serum 25(OH) D level and risk of breast cancer was only observed in premenopausal women OR (95%CI) = 0.25(0.094-0.687). Serum 25(OH)D concentration was positively correlated with dietary intake of vitamin D (r=0.427),supplemental intake of vitamin D (r=0.282),total intake of vitamin D (r=0.343) and the amount of sun exposure per day (r=0.19). There was not any significant correlation between the duration of physical activity per day and the concentration of 25 (OH) D.
Conclusion: the results of this case-control study support the protective effects of higher concentrations of serum 25 (OH) D against breast cancer. Sunlight exposure,dietary intake of vitamin D,vitamin D supplementation and total intake of vitamin D are the determinants of serum vitamin D concentration.
Keywords: breast cancer ,25-hydroxy , supplementation ,vitamin D

Effect of Vitamin D Supplementation on Lipid Profile in Non-alcoholic Fatty Liver Adults

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Background: Vitamin D deficiency is common and associated with athrogenic lipid profile. We conducted a randomized control clinical trial that evaluated the effect of vitamin D supplementation on blood lipids of non-alcoholic fatty liver (NAFLD) subjects.
Method: A 12-week randomized double blinded clinical trial study with 2 groups was carried out among 73 NAFLD patients with hypovitaminosis D (serum 25 (OH) D3< 0.005). Alanine transferase (P< 0.005), alkaline phosphatase (P= 0.002), waist circumference (P< 0.005), and body mass index (P< 0.005) decreased notably.
Discussion: 12- week supplementation with vitamin D3 is effective in reducing lipid profile and liver enzymes. Inadequate vitamin D3 intake could play a contributory role in pathogenesis and progression of NAFLD patients.
Keywords: Vitamin D, Lipid profile, Non-alcoholic Fatty Liver

Adipokines: New insight in obesity and metabolic diseases therapy

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Background: Obesity is chronic disease defined as excessive and abnormal amount of fat storage in adipose tissue which has been increasing over the past few decades in both developed and developing countries. Obesity has been regarded a major public health problem worldwide can leads to a number of disease such as cardiovascular diseases (CVDs),type-2 diabetes (2DM),infertility,insulin resistance,hypertension,atherosclerosis and variety types of cancers. The aim of review study is idu adipokines in obesity and metabolic diseases therapy.
Methods: literature review using the following databases: SciELO,Lilacs and Medline,pubmed,Scopus,science direct from 2000 to 2014. The key-words used were adipokines,adipocytokines,obesity,metabolic disease.
Results: Studies have shown that adipose tissue is not only as depot storage tissue,storing energy,regulating energy balance but also an active complex endocrine organ that secrets a large number of bioactive peptides,referred to as adipokines or adipocytokines. In recent years,the number of adipokines has been increasing such as apelin,visfatin,vaspin,chemerin,omentin,adiponectin,retinol binding protein-4,angiotensinogen,nesfatin,BMP4,serom amyloid A,zinc-alpha2-glycoprotein. It has been demonstrated that adipokines play important roles in modulation of a number of signaling cascade in target tissues and key aspects of metabolic complications such as dyslipidemia,hypertension,syste

mic inflammation,insulin resistance,and several types of cancers in a paracrine and/or endocrine manner. Interventions to prevent obesity and weight loss is achieved limited success in the long run. Thus the need for the development of new management strategy is required. Dysregulated production and secretion of adipokines caused by excess adipose tissue and adipose tissue dysfunction can contribute to the development of obesity and obesity-related metabolic diseases. Thus adipokines may be as a novel treatment strategies for obesity and metabolic diseases in future because of their roles in regulation of appetite and satiety,adipogenesis,endoth elial function,energy expenditure,insulin sensitivity insulin resistance and insulin secretion.
Conclusion: Adipokines may be as new insight in obesity and metabolic diseases therapy. For clinical use of adipokines as novel candidate need complete information about their secretion,their regulation,mechanism of their actions,their side effects and others. Comprehensive research is still required to introduce adipokines as therapeutic tools or potential target.
Keywords: adipocytokines,adipokines, metabolic disease, obesity

Assesment of nutritional status in helicobacter pylori infected patients and healthy subjects,a case- control study

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Background: Helicobacter pylori (HP) is a microaerophilic human pathogen which has been recognized as the major cause of several gastrointestinal diseases such as peptic ulcer,atrophic gastritis and gastric carcinoma. The infection might disturb the gastric secretions including pepsinogen,gastric acid,intrinsic factor via which it impairs the bioavailability of some B vitamins like vitamin B12 and folate. Several studies revealed that inadequate intake and low serum concentration of these vitamins can lead to hyper-homocysteinemia which can be the risk factor of cardiovascular diseases. The aim of this study is assesment of nutritional status in helicobacter pylori infected patients and healthy subjects.
Methods: This case-control study was performed in summer,2012 .In this case-control study,44 subjects with Hp-infection and 46 healthy controls were studied. Participants were recruited from the patients referred to the central laboratory of Tabriz University of medical sciences. Exclusion criteria were : age < 25 or >55 years,Patients diagnosed with CVD,diabetes mellitus,liver disease,renal failure,celiac disease,inflammatory bowel disease,use of vitamin B,folate or vitamin B12 supplementation,use of non steroidal anti-inflammatory drugs. The scientific and ethical issues of this study were approved by nutrition research center of Tabriz university of medical sciences (code: 5/71/1670). Weight and height were measured according to standard protocols and BMI calculated. Dietary intakes were assessed using 24-hour dietary recalls by trained interviewers for 3 days (two workdays and 1 weekend).
Results: Twenty-two percent of the study subjects were male (11.4% in HP-positive and 32.6% in HP-negative groups). The mean age and BMI in HP infected and healthy subjects were (38.11 ±10.5,39.09 ±10.43 year) and (26.96 ±4.93,25.22 ±4.06 kg /m^2) respectivly. The Energy intake was 1733.83±506.54 cal/day in HP-infected patients and 1555.08±570.78 cal/day in healthy adults. Fat and protein percent were also 31.49±5.76 and 12.18±1.76 in HP-infected and 30.55±5.57 and12.80±1.99 in healthy subjects. There were no significant difference in energy and macronutrient intakes between two study groups. The mean intake of vitamin B12,folate and vitamin B6 in patients and non-patients were (1.60±0.68 µg,113.74±51.56 µg,0.661±0.24 mg) and (1.47±1.06 µg,123.01±55.24 µg,0.36±0.28 mg) respectively. Also no difference was shown in micronutients intake between the study groups. **Conclusion**: the present study showed that there was no significant difference of dietary intakes of folate,vitamins B12 and B6 between HP infected and healthy subjects.
Keywords: Helicobacter Pylori,Nutritional status,Folate

Is Serum Leptin Concentration Correlated with Body Mass Index and Waist Circumference in Apparently Healthy Adults?

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Background: Leptin, a product of *ob* gene, has been shown to increase in obesity and related metabolic disorders. Little is known about the serum levels of this adipocytokine inapparently healthy adult. The purpose of this study was to determine the association of total leptin levels with body mass index (BMI) and waist circumference (WC) in a random sample of Iranian adults.
Methods: In this cross- sectional study, asample of 150 apparently healthy male and females, aged 25-50 years were selected by random sampling from different parts of city. Our criteria for being healthy was based on self-report of not having any medical condition. Weight, height, WC and fasting serum leptin levels were measured and BMI was calculated as weight/height^2.
Results: There was a significant gender difference in weight [Mean Difference (MD)= 8.09, 95% confidence interval (CI) 4.07 to 12.12], height (MD= 14.27, 95% CI 12.22 to 16.31), WC (MD= 6.77, 95% CI 3.22 to 10.32), and serum leptin concentration (MD= -5.48, 95% CI -9.58 to -1.37). Females had higher values of serum leptin concentrations than males. There was a significant positive association of serum leptin concentration with BMI (β=0.267, P=0.001) and WC(β= 0.189, P=0.021) in univariate regression model, however only the latter remained statistically significant after adjusting for age, gender and BMI(β=0.357, p=0.028). Gender-specific analysis showed that there was only a significant positive correlation between serum leptin concentration and WC in females (β=0.446, p=0.032) after adjusting for BMI and age.
Conclusion: It is concluded that WC is an independent predictor of serum leptin levels in apparently healthy adults, also in females in gender specific model.
Keywords: Leptin, Adults, BMI, Waist Circumference

The Effect of a Nutrition Education Program on the Nutrition Knowledge of Elementary School Students in Astara City

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Background: Healthy nutrition is one of the most important bases of healthy life. One of the ways for increasing knowledge about healthy nutrition is education. Due to the fact that students are one of groups that may be at risk of malnutrition, the need for healthy nutrition education in this group more and more felt. The aim of this study was to evaluate **the effectiveness of** a nutrition education program on the nutrition knowledge of elementary school students in health promoting school (HPS) of Astara city.
Methods: In this cross-sectional descriptive study, 14 health teachers of elementary health promoting school (HPS) in urban and rural areas were educated about healthy nutrition according to related booklet in health center in 2012 year. Then these teachers educated 483 third grade students in elementary health promoting school (HPS) in urban and rural areas about healthy nutrition according to the related materials for three months. To evaluate the knowledge level and effectiveness of nutrition education program, the questionnaire consisted of 10 questions was prepared. This questionnaire before education (Pre-test) and after education (Post-test) was completed by the students. If students answered 8 to 10 questions correctly, were classified in group with good knowledge, between 5 to 7 were classified in group with moderate knowledge and between 1 to 4 were classified in group with poor knowledge of respectively, then these data were analyzed.
Results: The students were classified according to the number of correct answers. In the evaluation of Pre-test, 44 students (about 9 %) of the 483 students were classified in group with good knowledge and after education in the evaluation of Post-test, 211 students (about 44 %) of the 483 students were classified in group with good knowledge that knowledge level were increased 34/6%.
Conclusion: According to these findings, it can be concluded that the educational intervention was effective in promoting the nutritional knowledge of the elementary school students. Also, promotion of knowledge can be effective in the attitude and practice of students in the field of healthy nutrition, especially healthy snacks. It seems that persistence of these educational programs is essential.
Keywords: nutrition education, nutrition knowledge, elementary school students

Health-Promoting Properties of Bioactive Milk Peptides – Opportunities for Nutritional and Biomedical Applications

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Background: Milk is a highest quality source of well-balanced nutrients and also displays a range of biological activities that affects digestion, metabolic responses to absorbed nutrients, growth and development of specific organs, and resistance to disease. Milk have two proteins, the caseins and whey which containing physiologically active peptides. The aim of review study is description of health promoting properties of bioactive peptide in order to induction of opportunities for nutritional and biomedical applications.
Methods: literature review using the following databases: SciELO, Lilacs and Medline, pubmed, Scopus from 1990 to 2014. The key-words used were milk proteins, milk peptides, bioactive milk peptides.
Results: Bioactive peptides could be released during gastrointestinal digestion, enzymatic hydrolysis and fermentation. The components include β-lactoglobulin, α-lactalbumin, bovine serum albumin, lactoferrin, immunoglobulins, lactoperoxidase enzymes, glycomacropeptides, proline rich polypeptides, lysozyme, α_{S1}-casein, α_{S2}-casein, β-casein, κ-casein. These peptides directly influence numerous biological processes evoking behavioral, gastrointestinal, hormonal, immunological, neurological, and nutritional responses. Studies have shown that milk-derived bioactive peptides have many health promoting properties such as: antioxidant, antihypertensive, immunomodulatory, anticancer, cholesterol lowering, neurological transmission, anti-inflammatory, antimicrobial, insullinotropic, antithrombotic, hypolipidemic and promoting bone growth. For example, α-lactalbumin, **Lactoperoxidase** and lysozyme have good effects in prevention of cancer and control tumor size. Lysozyme applied in pharmaceutical products. Proline-rich polypeptide (PRP) was introduced to therapy of Alzheimer's disease patients. The therapeutic usefulness of PRP was confirmed in several clinical trials and supported by studies on its mechanism of action. Casein derivatives are used in the dry mouth syndrome and hypertension. The products containing bioactive milk peptides used as therapeutic or preventive recourse for a wide range of pathological states in variety group of people with different age such as elderly, adults, infants, neonate and children with no adverse effects.
Conclusion: The milk-derived preparations have found broad application in the food industry, production of infant formulas, and hygiene products as supplement for prevention and treatment of some diseases or condition.
Keywords: Bioactive peptides, Milk proteins, Health.

The effect of a nutrition education program on the nutrition knowledge of elementary school students in Astara city

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Background: Healthy nutrition is one of the most important bases of healthy life. One of the ways for increasing knowledge about healthy nutrition is education. Due to the fact that students are one of groups that may be at risk of malnutrition, the need for healthy nutrition education in this group more and more felt. The aim of this study was to evaluate **the effectiveness of** a nutrition education program on the nutrition knowledge of elementary school students in health promoting school (HPS) of Astara city.
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Conclusion: According to these findings, it can be concluded that the educational intervention was effective in promoting the nutritional knowledge of the elementary school students. Also, promotion of knowledge can be effective in the attitude and practice of students in the field of healthy nutrition, especially healthy snacks. It seems that persistence of these educational programs is essential.
Key words: nutrition education, nutrition knowledge, elementary school students

Health-promoting properties of bioactive milk peptides – opportunities for nutritional and Biomedical applications

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Conclusion: The milk-derived preparations have found broad application in the food industry, production of infant formulas, and hygiene products as supplement for prevention and treatment of some diseases or condition.
Keywords: Bioactive peptides, Milk proteins, Health.

Prevalence of dyslipidemia among adolescents in the city of Qazvin

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Background: One of the risk factors for cardiovascular disease, impaired lipid composition and LDL cholesterol and triglycerides and raising HDL cholesterol concentration is reduced. Information about the composition of blood lipids and lipid disorders among Iranian children is low. Some studies in Iran have shown the prevalence of dyslipidemia in children and adolescents. Given the importance of the lipid composition in this age group And its relationship to chronic diseases in adulthood, this study aimed to investigate the prevalence of dyslipidemia in adolescents was conducted.
Methods*:* This study is an analytical cross-sectional study. 318 adolescents aged 18-10 randomly selected from Qazvin city. Demographic data and anthropometric measures were collected and biochemical parameters were measured. T-student test and analysis of variance were employed to analyze data.
Results*:* Overweight and obesity were respectively 15.7% and 4.8% in adolescents. Hypercholesterolemia was observed in 19.6% of adolescence. Moreover 11.3% of those had Hypertriglyceridemia. Additionally 12.6% and 41% of adolescence had high LDL-C and low HDL-C. Children with overweight and obese had higher concentration of triglycerides compared with those with normal weight (P = 0.02).
Conclusions*:* We observed high prevalence of dyslipidemia in adolescents living in Qazvin city. Overweight and obese adolescents had higher levels of triglycerides than those with optimal weight. Considering above factors involved in the lipid disorder, providing appropriate approach to prevent of cardiovascular disease is warranted.
Keywords: Dyslipidemia, Body mass index, Obesity, Overweight, adolescents

Authors Index K

Nutritional assessment of cancer patients with standard tools PG-SGA 1024 patients in Iran

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Background: cancer is a main reason mortality and morbidity in all of the world. weight loss and malnutrition are common among cancer patients, these two factors greatly affecting survival and quality of life during treatment. the present study has been conducted in 2014 on a sample of cancer patients in oncology centers of Iran to determine the prevalence rates of malnutrition and the factors affecting it.
Methods: The PG-SGA standard questionnaire was administered to 1024 cancer patients to evaluate their nutrition status and determine the frequency of each malnutrition stage. Correlations and chi score tests were used to analyze the relationship between factors and weight loss and how they might affect the development of malnutrition.
Results: the prevalence of malnutrition among patients was 80% out of which 53% had moderate and 27% had severe malnutrition. The most common factors inducing nutritional symptoms were dry mouth, depression and anorexia. Some 36/1% of the patients had weight loss in the last month and 42/1% had weight loss in the 6 last month. The average PG-SGA score was 8/89 with 34 being the highest. 26/3% percent of patients scored over 9 (requiring critical nutrient intervention),52/6% scored that requires intervention by dietitian and 20/3% scored that no intervention required at this time.
Conclusion: malnutrition, weight loss and nutritional problems in cancer patients is prevalent in Iran. Therefore, periodical assessment by PG-SGA to detect malnutrition in patients should be made so that appropriate nutritional interventions can be provided.
Keywords: cancer, Nutritional assessment

Check the status of folate, vitamin B12, vitamin B6 diet in relation to dementia

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Background: Study findings have suggested an association between dementia risk and Bvitamins and have speculated about their use as preventive agents. The purpose of this study is to define association between dietary folate, vitamin B12 and vitamin B6 from food sources and risk of dementia.
Methods: Data were collected at the Iran Alzheimer Association in Tehran, a age and sex matched case control study of 120 men and women 50 years and older (in 2013). 60 Cases that histologically confirmed dementia and 60 controls from among the healthy participants in a aging survey of Alzheimer Association, were randomly selected. Dietary data were collected using 50 item food frequency questionnaire that include major food sources of folate, vitaminB12, vitaminB6 and 24-hour food recall questionnaire. Nutrient composition information was obtained from standard nutrient databases like the Food Processor (Nutritionist IV). For the cases, dietary data was collected through relative patient interviews, including their families and caregivers and for the controls; it was obtained through individual interviews. The SPSS version 19.0 for Windows software program, was used for all statistical analysis. Regression logistic Odds Ratio was computed to remove the confounding effect of total dialy energy intake, history of diabetes disease, heart disease, hypertension, stroke, depression, alcohol using and smoking.
Results: The cases mean intake of folate, vitaminB12 vitaminB6 from food sources, before adjusting for confounding factors, was less than controls at 254.87±100.38 (µg/d), 3.06±0.95 (µg/d), 3.19±1.03 (µg/d) respectively, after adjustment, mean intake of these micronutrients was also lower in the cases group. Higher intake of folate (OR: 0.07; 95%CI, 0.03 to 0.18), vitaminB12 (OR: 0.21; 95% CI, 0.10 to 0.46), and vitamin B6 (OR: 0.14; 95% CI, 0.06 to 0.32) and intake above the RDA for folate (OR: 0.11; 95% CI, 0.04 to 0.31), vitaminB12 (OR: 0.13; 95% CI, 0.04 to 0.39) and vitamin B6 (OR: 0.16; 95% CI, 0.05 to 0.51) were associated with a decreased risk of dementia. Also after adjustment, increasing folate, vitaminB12, vitaminB6 intake related to lower risk of dementia.
Conclusion: Dietary intake of folate, vitaminB12, vitaminB6 from food sources appears related to risk of dementia. Lower folate, vitaminB12 and vitaminB6 status were observed in dementia patients. Maintaining levels through the consumption of specific foods is a viable option to prevent dementia occurrence and progression.
Keywords: Vitamin B12, Vitamin B6, Diet

Dietary patterns and prevalence of irritable bowel syndrome in Iranian adult

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Background: Although several dietary factors have been reported to alleviate or aggravate the symptoms of irritable bowel syndrome (IBS), no information is available linking dietary patterns to irritable bowel syndrome. This study was undertaken to assess the association between dietary patterns and the risk of irritable bowel syndrome (IBS) among Iranian adults.
Methods: In this cross-sectional study, data on 3846 Iranian general adults working in 50 different health centers were examined. Dietary intake of study participants was assessed using a 106-item self-administered Dish-based Semi-quantitative Food Frequency Questionnaire (DS-FFQ) which was designed and validated specifically for Iranian adults. A modified Persian version of the Rome III questionnaire was used for assessment of FGIDs, including IBS, which was defined according to ROME III criteria. To identify major dietary patterns based on the 39 food groups, we used principal component analysis.
Results: We identified four major dietary patterns: 1) "fast food" dietary pattern; 2) "traditional" dietary pattern; 3) "lacto-vegetarian" dietary pattern; 4) "western" dietary pattern. After adjustment for potential confounders, we found that those in the highest quartile of "fast food" dietary pattern were tended to have higher risk of IBS than those in the lowest quartile (1.32; 0.99, 1.75, Ptrend=0.05). An inverse association was found between "lacto-vegetarian" dietary pattern and risk of IBS; such that even after adjustment for potential confounders, those in top quartile of this dietary pattern were 24% less likely to have IBS (0.76; 0.59, 0.98; Ptrend=0.02). No overall significant associations were observed between

"traditional" and "western" dietary patterns and risk of IBS, either before or after adjustment for covariates.
Conclusion: We found that "lacto-vegetarian" dietary pattern was associated with reduced risk, while "fast food" dietary pattern was associated with a greater risk of IBS in Iranian adults.
Keywords: Dietary patterns, Gastrointestinal disorders

The effect of Basil Seed Gum as a hydrocolloid coating on reduction of oil absorption in deep fried potato strips
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Introduction: Basil seed gum (BSG),is a new hydrocolloid extracted from basil seeds (ocimum basilicum),one of the endemic plants in Iran,with desirable functional properties equivalent to commercial food hydrocolloids. The aim of this work was to examine the effectiveness of using coating made from BSG as well as oil origin on reducing oil absorption in fried potato strips in order to produce healthier fried products with lower amount of oil.
Methods: Potato strips were blanched in 0.5% chloride calcium and then coated by 0.5-1.5% (w/v) concentration of BSG. Coating pick up, moisture content and Fried yield value of fried potatoes was also assessed.
Results: The best procedure for achieving the lowest oil uptake was blanching in calcium chloride solution and coating with 0.5% BSG after frying in canola oil. The results show that, the average oil uptake of samples coated with 0.5% BSG was by about 28% lower in comparison to the control ones. Oil type was significantly ($p \leq 0.05$) influence oil uptake.
Conclusion: BSG was effective in controlling moisture loss and samples in best conditions had about 29% more water content in comparison to control products, together with reducing oil absorption produce acceptable product of deep fried potato**.**
Keywords: Basil Seed Gum, Oil uptake, Edible coating, Deep frying, Potato

Healthy and Unhealthy dietary patterns are related to depression: a case-control study
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Background: Major depressive disorder is the leading cause of disability around the world. The relationship between depression and dietary patterns has been reported in a few studies but with controversial results. This study aimed to investigate this relationship in an Iranian population.
Methods: In our study, 330 depressed patients (cases) and healthy people (controls) (1:2) were individually matched according to age, sex and area of residence. New cases of depression were recruited from two psychiatric clinics in Tehran. Interviewers went to each patient s residential area, and invited qualified individuals to participate in the study as controls. Food intake over the past year was collected using a validated semi quantitative food frequency questionnaire. Dietary patterns were determined by the principal components method. Binary logistic regression was used to test the effect of dietary patterns on depression.
Results: We identified two major dietary patterns by using factor analysis: the healthy and unhealthy dietary patterns. We categorized the scores of these patterns to quartiles. After adjusting for non depression drug use, job, marital status, children number, and body mass index , the relations of depression and quartiles of two dietary patterns are significant ($p=0.04$ & $p=0.01$, respectively). Compared with participants in the lowest quartile, those in the highest quartile had significantly lower odds ratio (OR) for depression in healthy dietary pattern, and higher OR for depression in unhealthy dietary pattern.
Conclusion: This study indicates that healthy and unhealthy dietary patterns may be associated with the risk of depression. The results can be used for developing interventions that aim to promote healthy eating for the prevention of depression.
Keywords: Major depressive disorder, epidemiology, nutrition, dietary pattern, depression

The Lived Experience and Satisfaction of Women with the Subsidy Targeting Program through Cash Transfer: A Qualitative Research in Tehran
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Background: The subsidy targeting program through cash transfer in Iran, established in 2010,has influenced the quality of social life as well as nutritional status of Iranian households. In this qualitative study, lived experience and understanding of urban women in Tehran about the program was evaluated.
Methods: This study was part of a research project entitled "Effectiveness of subsidy targeting through cash transfer on food security and nutritional status of urban population in Tehran: evaluation of a program". To collect data, seven semi-structured focus group discussions (FGD) were conducted with 76 women who have experienced the effects of cash transfer program on their households as mother, wife or daughter. Based on open sampling, with the aim of maximum variation of the participants' experiences, three socio-demographically diverse distincts from the north, centre and south of Tehran metropolis were selected. All the FGDs were audio recorded and transcribed verbatim. Data collection and analysis were done simultaneously using the Constant Comparative Methods in the qualitative research.
Results: In the face of intial manifest goals of the subsidy targeting program through cash transfer to reduce social inequalities and poverty at multiple levels, this program has in practice increased the relative deprivation and social gaps in residents of Iranian metropolises like Tehran. FGDs showed that social observability and participation of members of Iranian household in social events has decreased as major components of social capital. Moreover, most of the participants believed that the dependency ratio has gone into reverse in urban households in Iran and couples in reproductive age have ever-incresingly become dependent on aged members of their families for managing their livelihood. Some women believed that this program has increased the domestic violence and decreased their hope to the future of their children which in turn could led to lower

childbearing and population growth. In contrast, some women evaluated it as a good program, which was not implemented well.
Conclusion: Cash transfer Program in Iran has raised negative and positive viewpoints in women based on its impacts on inflation and household expenditures.
Keywords: Subsidy targeting, Satisfaction, Lived Experience, Focus group discussions (FGD)**,** Cash transfer

A study on interaction of cinnamon and Cefixme to control in-vitro E. coli infection
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Abstract: The cinnamon is a traditional herb and food that in Iranian food will be mostly used. And to treat many of body aches. Recently self-treatment by traditional herb even beside chemical torapy will be done in Iran. In order to study the reduction or inducing the effect of cinnamon on Cefixme antibiotic activity this experiment carried out 3 treatments in 3 replications in invitro. The result of this study showed that the inhibition zone for E.coli in cinnamon treatment 16.5 and Cefixme treatment 18.3 and in combined cinnamon and Cefixme treatment 11 were achieved. So result of combined cinnamon and Cefixme was significantly less than Cefixme and cinnamon treatment lonely and may be interaction of these two reduced antibiotic effectiveness of them.
Keywords: Cinnamon, Cefixme, Antibiotic activity, E. coli

Evaluation the rate of consumption of ready meal during a week in urban and rural households in East Azerbaijan Province
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Background: One of the main causes of malnutritionis lack of nutritional knowledge which results in inappropriate practice and causes the problems such as obesity and risk of non-communicable diseases. Consumption of ready mealin high amount is one of the important factors contributed to obesity. This study was designed to investigate the rate of consumption of ready mealduring a week in urban and rural households in East Azerbaijan Province
Methods: In this survey the population was the households in urban and rural areas of east Azerbaijan province. Cluster sampling with equal sizes was used and A total of 57 clusters with 8 subjects were studied in urban (38 cluster) and rural (19 cluster) areas. The data in this study collected using a structured questionnaire and interviews were done in the household.
Results: In households, 86.3 percent (in urban samples 89.5% and rural samples 80.6%) did not consume ready mealon a weekly basis. The sample used ready mealonce a week was 9.8% (8% in urban and 12.9% in rural) and the sample used ready mealtwice a weekwas 3.7 percent (6.5 in urban and 2.2 in rural areas). 0.2% of the population (0.4% in urban samples and 0% in rural samples consumedready mealthree times during a week.
Conclusion: The results of this study showed that consumption of ready meal was not high in households; however, for preventing non-communicable diseaseseducational programs are necessary to reduce weekly consumption of eating in restaurants.
Keywords: Ready meal, Household, East Azerbaijan

Association of nutritional status with anthropometric measures and demographic factors in the elderly living at Tabriz nursing homes
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Background: The risk of malnutrition increases significantly in the institutionalized elderly, leading to greater risks of morbidity and mortality. Early detection of at-risk patients and optimal nutritional support is a key task to prevent nutrition-related complications in the elderly. One of the excellent tools for research setting is Mini Nutritional Assessment (MNA),which identifies malnourished elderly .The aim of this study was to investigate the association of nutritional status with anthropometric measures and demographic factors in the least-studied elderly population at nursing homes of Tabriz.
Methods: In this cross-sectional study,a sample of 76 (24 men and 52 women) elderly (mean age: 75yr) resiging at nursing homes of Tabriz were recruited. Demographic factors were obtained through a questionnaire. Anthropometric measures (weight,height and waist,calf,hip,and arm circumference) were carried out and body mass index (BMI) and waist to hip ratio (WHR) were calculated by standard procedures. MNA-short form was used to determine nutritional status. Pearson Correlation and One-way ANOVA tests were used for statistical analysis.
Results: Based on BMI,the frequency of underweight,normal weight,overweight,and obesity were 13.6%,49.2%,20.3%,and 16.9%,respectively. According to MNA,22.4% were under-nourished,51.3% were at risk of malnutrition and 26.3% were well-nourished. MNA score was significantly correlated with weight (r= 0.356,p=0.005),arm circumference (r=0.4,p<0.001),calf circumference (r=0.6,p<0.001),hip circumference (r=-0.4,p=0.002),and waist circumference (r=0.2,p<0.001). Age was inversely correlated with weight (r=-0.3,p=0.01) and arm circumference (r= -0.2,p=0.01). Furthermore,a significant relationship was observed between MNA score and appetite loss (p=0.008) and recent weight loss (p=0.006). No relationship was observed between demographic factors and MNA score. Conclusion: Malnutrition was common among the elderly living at Tabriz nursing homes. Regarding age-related changes in anthropometric indices and their relationship with malnutrition, urgent action is required to prevent nutrition-related complications in this elderly population.
Keywords: Mini Nutritional Assessment, elderly, malnutrition, body mass index.

Predictors of low birth weight infants in the North West province of Iran: a case-control study
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Background: In developing countries more than 95 %of

infants are born with a low birth weight. Mortality rate of these infants is forty times higher in comparison to the normal weight ones and this problem remarkably affects the health indices of countries. Hence the aim of this study was to assess the predictors of low birth in East Azerbaijan,north-west province of Iran.
Methods: The study was conducted through a hospital based case–control design involving 49 women delivering low birth weight infants and 98 delivering normal weight infants. The data was analyzed using both bivariate and multivariate methods.
Results: It was found that the mean maternal age of the low birth weight infants and normal infants was 28.69 ± 6.83 and 27.96 ± 5.49 respectively. There was significant positive association between maternal chronological and marriage ages with the odds of low birth weight infants (P <0.05). Additionally,it was found that with increasing maternal weight prior to pregnancy the odds of low birth weight decreased (P <0.05). Interestingly,larger families of more than four members had higher odds for low birth weight infants in comparison to the families with less than four members (OR = 2.86,95% CI: 1.09-7.47). It was demonstrated that with ten centimeter increment in the maternal height there was a decline in the odds of low birth weight infants (OR = 0.58,95% CI: 0.34-0.98). According to the multivariate logistic regression independent factors associated with low birth weight include higher maternal chronological (OR = 1.88,95% CI: 1.29 - 2.75) and marriage age (OR = 4.97,95% CI: 1.97 - 12.50) and increase in maternal weight prior to pregnancy (OR = 0.60,95% CI: 0.42 - 0.86).
Conclusion: Major risk predictors of low birth weight in the Iranian population were maternal chronological and marriage age and maternal weight before pregnancy
Keywords: Low Birth Weight, Maternal factors

Whether fish oil supplementation alters serum adiponectin and asymmetric dimethylarginine in patients with chronic atrial fibrillation
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Back ground: Positive effects of fish oil supplementation on atrial fibrillation (AF) have been shown in some studies. But the exact mechanism of these effects remains unclear. There are evidences showing fish oil supplementation could improve endothelial function. AF is associated with endothelial dysfunction. An association between endothelial function and serum asymmetric dimethylarginine (ADMA) and adiponectin has previously been reported. In this study we investigated whether fish oil supplementation alters serum adiponectin and ADMA in patients with chronic AF.
Methods: Eighty patients,50-85 years,BMI>25kg/m2 with chronic AF,were randomized to 8 week supplementation with 2g/day of fish oil or placebo. Commercial ELISA kits were used to measuring serum levels of adiponectin and ADMA; lipid profile and fasting blood sugar (FBS) were measured by routine methods before and after the intervention. Height,weight and waist circumference were measured and BMI was calculated before and after the supplementation.
Results: Significant changes of adiponectin (13.14±7.32 vs 11.87±6.94,p=0.027) and ADMA (0.59±0.13 vs 0.71±0.14,p<0.001) serum levels were observed in fish oil group. There were no significant changes in lipid profiles and FBS after supplementation. We also found a positive correlation between adiponectin and ADMA before supplementation (p=0.027) but surprisingly adiponectin was not correlated with ADMA after intervention (p=0.34).
Conclusion: Our findings demonstrated fish oil supplementation could improve endothelial function through increasing serum levels of adiponectin and decreasing ADMA serum levels in patient with chronic AF.
Keywords: atrial fibrillation, fish oil, adiponectin, asymmetric dimethylarginine

Antiproliferative effects of Curcumin against human glioma U87MG cell line
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Background: Malignant glioma is the most common primary malignant brain tumor in adults. It is one of the main causes of morbidity and mortality in glioma patients,with an incidence of 3-5 per 100,000 people yearly. Despite advances made in surgery,radiotherapy and chemotherapy,the survival of Glioma patients is less than one year. Unfortunately,chemotherapy is not an effective way for patients suffering from glioma,therefore one of the best strategies for tumor suppression is to induce the apoptosis pathways in glioma cancer cells. Evidence has demonstrated that curcumin induces apoptosis in cancer cells. Curcumin,an orange-yellow component of turmeric,has a polyphenolic structure and traditionally been used for the treatment of some diseases. In the recent years,studies have indicated that curcumin has anticancer,anti-inflammatory,antioxidant,and antiviral properties. The objective of this research was to examine the effect of nanocurcumin on the viability of glioma cells.
Methods: In this study the human brain malignant glioma U87 cells were cultured in DMEM medium supplemented with 10% FBS. The effect of curcumin coupled with a new carrier was then investigated on the cell line by using MTT assay in different concentrations. Treatment with curcumin was explore by fluorescence microscopy.
Results: The MTT assay revealed that curcumin induces a dose- and a time-dependent decrease in cell viability. After 48 hours of treatment with nanocurcumin 50 percentage of cells remain viable.
Conclusion: Since Curcumin is able to induce cell apoptosis in human glioma U87 cells in a dose-dependent manner,it seems that this phytochemical might be a potential agent for the treatment of glioma.
Keywords: Curcumin, Glioma, MTT assay

Serum Uric Acid as a Player in the Elevation of Blood Pressure in Isfahan Adolescents
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Background: Previous studies have shown the association of serum uric acid with development of hypertension. We conducted a case-control study to evaluate the difference in the level of serum uric acid in people with and without hypertension.
Methods: The present report focuses on 62 hypertensive and 52 healthy male workers (age range, 30-65

years) in Esfahan. Biochemical analyses were assessed by using commercial kits. Also anthropometric parameters were assessed by professionals.
Results: After adjusting for multiple associated parameters, Serum uric acid level and mean diastolic blood pressure levels were significantly higher in hypertensive group compared to healthy group (p<0.001). Among hypertensive subjects other metabolic factors like abdominal obesity and body mass index were higher in hypertensive group (p<0.001). Mean BMI in hypertensive was 27.7± 0.7 and in healthy subjects was 25.3±1.1. One of the important things that we found among our analyses was the differences of fasting blood sugar (FBS). Means of FBS in the patient group was 109.7 but in the control group was 83.94 (p<0.001). Discussion: These findings suggest a positive association between serum uric acid concentration and hypertension. This association was partly mediated through a metabolic syndrome. Also we found a higher diabetes risk with higher uric acid in hypertensive patients. By the way the control of uric acid level maybe decreases the incidence of hypertension
Keywords: Serum uric acid, Hypertension, Metabolic syndrome

Determination of maternal serum zinc,iron,calcium and magnesium during pregnancy in pregnant women and umbilical cord blood and their association with outcome of pregnancy
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Background: Trace elements and specially minerals are critical for the development of fetus. Many minerals are transferred to the fetus for fetal stores in the latter part of the pregnancy. It has been shown that various trace elements such as Zinc,iron,Calcium and Magnesium are metabolically interrelated and there is alteration in their concentration during pregnancy. Beyond pregnancy is associated with increased demand of all the nutrients and deficiency of any of these could affect pregnancy,delivery and outcome of pregnancy. Objective: To study the levels of trace elements namely zinc,iron,magnesium and calcium in maternal and umbilical cord blood and their association with pregnancy outcome.
Methods:: sixty Zabolian pregnant women were selected from those who had registered their names for the prenatal care and who had followed up till the 3rd trimester of pregnancy ending in child birth. Biochemical parameters analyed with the help of the biochemical laboratory. Data were analyzed by SPSS software.
Results The mean biochemical profile such,serum calcium, magnesium,zinc and iron in the pregnant women were as follow: in the 1st trimester 8.3 mg/dl,1.9 mg/dl,74.9 µg/dl and 74.4 µg/dl respectively; in the 2nd trimester 8.5 mg/dl,1.9 mg/dl,73.1 µg/dl and 79.3 µg/dl respectively; in the 3rd trimester 8.6 mg/dl,1.9 mg/dl,68.4 µg/dl,and 82.2 µg/dl respectively. In the umbilical cord blood,the mean serum calcium,magnesium,zinc and iron were 8.6 mg/dl,1.9 mg/dl,84.1 µg/dl,and 89.8 µg/dl respectively. The mean serum calcium and magnesium during the three trimesters of pregnancy were not significantly different from that in the umbilical cord blood,while the mean serum zinc and iron in the umbilical cord blood were significantly different (p<0.05) in the three trimester of pregnancy. The mean birth weight of neonates was 3.0 kg and 12% of neonates showed low birth weight. Our findings showed that,except magnesium,the profile of other biochemical variables,namely,calcium,zinc and iron in the umbilical cord blood of the neonates with normal birth weight (NBW) were significantly higher than in the umbilical cord blood of neonates with low birth weight (LBW). Conclusion: The results suggest that maternal serum zinc,iron and calcium concentration influenced the birth weight of neonates as outcome of pregnancy,and however,there is need for proper,adequate and balanced micronutrient during pregnancy to affect neonates as healthy outcome.
Keywords: Trace elements, cord blood, pregnancy outcome

Increased dairy intake via kefir drink consumption improves the lipid profile of overweight or obese premenopausal women: A randomized controlled trial
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Background: Despite the promising findings from experimental studies in different animals regarding the beneficial effects of kefir (a probiotic dairy product) on lipid profile,randomized controlled trials conducted on this issue in humans are extremely scarce. Therefore,we aimed to determine the effects of increasing dairy intake via kefir drink consumption on the lipid profile of overweight or obese premenopausal women.
Methods: In this single-center,parallel-group,randomized controlled trial,a total of fifty otherwise healthy overweight or obese premenopausal women were randomly assigned to 2 groups,labeled as control and kefir,to receive an outpatient dietary regimen for 8 weeks. Subjects in the control group received a weight maintenance diet providing a maintenance level of energy intake,containing 2 servings/d of low-fat dairy products,while those in the kefir group received a weight maintenance diet,containing 2 additional servings/d (a total of 4 servings/d) of dairy products from commercial kefir drink. Outcome measures including the serum concentrations of triglyceride (TG),total cholesterol (TC),low-density lipoprotein cholesterol (LDL-C),and high-density lipoprotein cholesterol (HDL-C) were measured at baseline and after 8 weeks of intervention (i.e. study endpoint).
Results: Thirty-eight subjects (mean age 36.1 years) completed the study. Although there was no significant difference between groups at baseline,after adjusting for potential confounders in the analysis of covariance models,subjects in the kefir group showed significantly lower mean serum concentrations of TC (179.0 mg/dl) and LDL-C (110.1 mg/dl) at study endpoint compared with those in the control group (TC: 195.2 mg/dl; LDL-C: 123.5 mg/dl) (both P=0.001). However, no significant differences were found in terms of mean serum concentrations TG or HDL-C between groups after 8 weeks of intervention.
Conclusion: In line with the findings from animal studies, the results of the present research suggest that

increased dairy intake via kefir drink consumption improves the lipid profile of overweight or obese premenopausal women. However, future randomized controlled trials of sufficient methodological quality are warranted to further confirm our findings.

Keywords: Dairy, kefir ,lipid profile, premenopausal women, randomized controlled trial

Health-Service marketing for nutrition and diet therapy

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Building a medical practice for a dietitian is harder than ever. Many general practitioners and other specialties have entered to diet therapy and competition in this field is increasing. Patients are becoming increasingly involved in making choices through them. Health care Markets will become segmented and there will be other health professionals ready and willing to answer the needs of those new markets with skills and information dietitians have not yet learned or rejected as unnecessary. With what seems to be a competitive field, marketing is vital for every medical practice, new or established, small or large, to succeed. Dietitians today must take an entrepreneurial approach to marketing, actively seeking out new patients and referral sources. Presently, the marketing window of opportunity for nutrition is wide open and Career avenues for dietitians who distinguish themselves will abound. Competing successfully in this market may require experience and education outside the required nutrition curriculum and traditional career settings. In this competitive market, it is important for a dietitian to use good health service marketing plan before beginning a medical practice to better understand the practice's patients, competition, operational performance and its impact on patients, and the healthcare environment in which it operates. Attracting and keeping clients is necessary to survive in business. As with all types of service marketing, whether the conventional customer-seller relationship or the more complex patient-physician association, there are fundamental principles and aspects that are imperative in creating customer satisfaction and building loyalty.in fact, Health Service Marketing a medical practice is a way to attract and retain patients. A review of the strategic health care service market planning being implemented by other professional groups, practical successful guidelines, understanding concepts such as service marketing mix, levels of consumer satisfaction, the branding of services, entrepreneurship approach of Nutrition, skills and case studies and all their relation with dietetic profession, provides perspective for those beginning dietitians or in the midst of their practice growth.

Keywords: service marketing, entrepreneurship. Strategic plan, diet therapy

Beneficial effects of pomegranate point to the Quran and nutrition science

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Background: Healthy eating has prominent value in Islam. The Quran, after considering the human food, has been stated about plants. The pomegranate with scientific name PunicagranatumL. and Quran name Al-Roman is given three times in the Holy Quran. This fruit due to the many bioactive components has important role in the prevention and treatment of chronic diseases. The aim of this study was the review of beneficial effects of pomegranate point to the Quran and nutrition science.
Methods: In this review study, after meditation on the verses of the Quran and all papers submitted at the scientific information database including PubMed, Web of Science and Google Scholar from the years 2000 to 2014 with Keywords pomegranate, Islam, disease, nutrition and Quran, the results obtained and discussed.
Results: The effective components of pomegranate act in the prevention of cancers through different mechanisms such as inactivation of pro-inflammatory enzymes, suppression of tumor growth and up-regulation of tumor suppressor proteins. Inhibition of enzymes involved in the oxidation and synthesis of fat and increasing of production, secretion and sensitivity of insulin from pancreatic beta cells are the most important mechanisms involved in the reduction of fat and glucose, respectively. Anti-obesity effect of the pomegranate is related to the inhibition of pancreatic lipase enzyme and its anti-infective effect is associated to the inhibition the growth of bacteria.
Conclusion: Considering emphasizes of Quran on the beneficial effects of pomegranate as well as the existence of enough scientific evidence about its prevention effects, the using of this fruit in diet is suggested.

Keywords: pomegranate, Islam, Chronic diseases, Quran, nutrition

Relation between personality and fruit consumption with mediation of Theory of planned behavior in mid adulthood on Zanjan 2014

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Background: Acute diseases to chronic diseases deformation in current century, has resulted Attention to lifestyle, especially nutrition. This study aimed to explore the role of mediator structures the theory of planned behavior in relationship between personality and fruit consumption in mid adulthood.
Methods: In a cross sectional study, were selected 372 subjects (192 female,180 male) on Zanjan with mean and (SD) age (M= 45.21,SD=4.91) via multi cluster sampling method. Data were collected using the Big Five Personality Inventory and questionnaire designed by the researchers based on the theory of planned behavior Ajzen about the behavior of fruit consumption, that reliability and validity were tested and approved, and was analyzed with Lisrel 9.1,in the framework of structural equation modeling.
Results: fruit consumption had highest frequency (30.3%) in groups of five and more units. There was not significant relationship between conscientiousness, agreeableness and fruit consumption .Intention, Perceived behavior control and descriptive subjective norm had significant relationship with agreeableness fruit consumption. Except instrumental attitude and injunctive subjective norm, other components of the TPB, mediated relation between agreeableness and fruit consumption, but none of the structures was mediated

between conscientiousness and fruit consumption.
Conclusion: The mediator component of the theory of planned behavior can be used in the design of preventive interventions for increase fruit consumption.
Keywords: personality, fruit consumption, Theory of planned behavior, mid adulthood

Assessment of knowledge, attitude and practices toward anemia of female high school students in distinct 10, Tehran

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Background: According to World Health Organization (WHO), iron deficiency anemia is the most common nutritional deficiency in the world that its prevalence is 2.4-36.5 % in different areas of Iran. Anemia is more prevalence in women than men which this status exist in women aged 15-19 years in Iran. Education is the one of the prevention ways for iron deficiency anemia especially in high school groups. First step is current status assessment by studies on knowledge, attitude and practices. Based on the results of these researches, education contents, suitable methods to promote knowledge, attitude modification and incorrect practices are planned. Therefore, this study was done to aim the assessment of knowledge, attitude and practices of female high school students in distinct 10, Tehran.
Methods: This descriptive analytical study was carried out on 50 female high school students in the different grades and courses. For data gathering the questionnaire was used containing 11, 25, 11 and 5 questions on demographic, knowledge, attitude and practice about iron deficiency anemia, respectively.
Results: More than 50 percent of students had weak knowledge, but only 6 percent had good knowledge. 42 percent of students had suitable knowledge about iron rich sources. The most important data source for students include parents, health personnel, teachers, media, textbooks, magazine and newspapers. More than half of the students had undesired attitude and only 2 percent of them had desired attitude on iron deficiency anemia. The practice rate of students about iron deficiency anemia was 50%, 50-75% and more than 75% for 44%, 48% and 8% of the students, respectively. Knowledge of students was significantly related to grade, experimental science course, age and occupation of parents, but attitude and practice had no significantly relation to these variables. There was a significant positive correlation between knowledge of students about iron deficiency anemia and their attitude.
Conclusion: It is concluded that female high school students need more education about iron deficiency anemia. Considering the importance of the parents and teachers role as the data source, it could be promoted knowledge, attitude and practice by students, parents and teachers education.
Keywords: knowledge, attitude, practices, anemia

Mediation of agreeableness and conscientiousness influences on vegetable consumption within the Theory of planned behavior in adolescents on Zanjan 2014

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Background: Acute diseases to chronic diseases deformation in current century,has resulted Attention to lifestyle,especially nutrition. This study aimed to explore the role of mediator structures the theory of planned behavior in relationship between agreeableness,conscientiousness and vegetable consumption in adolescents.
Method: In a cross sectional study,were selected 390 students (195 girls,195 boys)high school on Zanjan with mean and (SD) age (M= 16.4,SD=1.48) via multi cluster sampling method. Data were collected using the Big Five Personality Inventory and questionnaire designed by the researchers based on the theory of planned behavior Ajzen about the behavior of vegetable consumption,that reliability and validity were tested and approved,and was analyzed with Lisrel 9.1,in the framework of structural equation modeling.
Results: Vegetable consumption had highest frequency (34/4%) in groups of five and more units. There was significant relationship between conscientiousness and Vegetable consumption (r = .12,p<.05).also all of constructs of TPB had significant relationship with Vegetable consumption. Except instrumental attitude,other components of the TPB,mediated relation between agreeableness,conscientiousness and vegetable consumption,but Perceived behavioral control not mediated directly . Conclusion:The mediator component of the theory of planned behavior,can be used in the design of preventive interventions for increase vegetable consumption.
Keywords: agreeableness,conscientiousness,vegetable consumption, Theory of planned behavior,adolescents

Association between consumption of fruits and vegetables and cardiovascular Disease

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Background: Cardiovascular disease is one of chronic diseases that is so prevalent in different societies. the aim of this study is to examine the association between consumption of fruits and vegetables and cardiovascular disease**.**

Methods: By Using the databases including sciencedirect, Google scholar and PubMed related articles between the years 2009-2014 were examined.

Resuls: Findings of the meta-analysis shows that increasing fruits and vegetables intake about 100 g per day leads to reduction of the risk of cardiovascular disease to 4-11%. Studies indicated that dark orange color helps the most to reduce the risk of cardiovascular disease. Not only intake of fruits and vegetables in total, but consumption of a variety of fruits and vegetables may play an important role in the prevention of cardiovascular disease. Flavonol-rich fruits include oranges and grapefruit improves the ratio of LDL / HDL and lowering triglycerides. After adjustment for lifestyle and dietary factors , adding 25 grams per day of white fruits and vegetables in diet lowered the risk of stroke up to 9%. In order to reduce the risk of stroke ,Bananais important ,too. According to different studies, pomegranate has been known as a heart healthy fruit.

Conclusion: Many studies have suggested that having a variety diet including various fruits and vegetables, is a good way to prevent the cardiovascular especially in those that are at risk of coronary heart disease. it has been recommended that to decrease the risk factors of cardiovascular disease, using white and orange fruits and berries, pomegranate and citrus fruits, especially in people who are at risk of cardiovascular disease factors is a good way.

Keywords: CHD, CVD, fruit, vegetables

Effect of white rice (WR) and brown rice (BR) on inflammatory Marker (hs-CRP) and cardiovascular risk factors among non-menopausal overweight or obese female.

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Background: Brown rice is unpolished rice with various beneficial compounds such as vitamins, magnesium and other minerals, dietary fiber, essential fatty acids,γ-oryzanoland γ-aminobutiric acid (GABA). In this present study, we compared the effect of white rice (WR) and brown rice (BR) on inflammatory Marker (hs-CRP) and cardiovascular risk factors among non-menopausal overweight or obese female.

Methods: In a randomized cross-over clinical trial, 40 overweight or obese (BMI >25) women were randomly allocated to group 1 (n=20): treatment with brown rice diet, and group2 (n=20): treatment with white rice diet for 6 weeks (first intervention period). Two participants in group 2 dropped out during this period. After a 2-week washout period, individuals were switched to the alternate diet for an additional 6 weeks (second intervention period) and three subjects in group 2 did not follow this period and eliminated, finally this study was completed with 35 subjects (group 1=20 and group 2=15). Each one was instructed to consume 150 gr cooked WR or BR daily in each intervention period. Cardiovascular risk factors including BMI, waist and hip circumference, blood pressure, serum lipid profiles, fasting blood glucose (FBG) and hs-CRP as an inflammatory marker, were measured 4 times (in study week 0,6,8,14).

Results: BR diet in comparison with WR diet could significantly reduce weight, waist and hip circumference, BMI, Diastole blood pressure and Hs-CRP. No significant differences between the two diets were found regarding lipid profiles and fasting blood glucose**.**

Conclusion: The present results suggest that BR replacement in diet may be useful to decrease inflammatory marker level and several cardiovascular risk factors among non-menopausal overweight or obese female**.**

Keywords: brown rice, white rice, inflammation, obese, overweight, female

Associations between sleep duration patterns and obesity in older children in Zahedan at 2013

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Background: The increase in childhood obesity is a major public health concern in developed countries, and the prevalence has been increasing worldwide over the last decades. Sleep is vitally important for a child's day-to-day functioning Causes of the obesity are known to be multifactorial. In this regard, sleep duration seems to be important in the regulation of body weight and metabolism by the modulation of key hormones such as leptin and ghrelin, as suggested by recent findings. There is growing evidence that sleep duration could be an additional factor. Objective To investigate whether longitudinal sleep duration patterns during early childhood is a risk factor of overweight or obesity at school entry while controlling for a variety of obesogenic environmental factors. This study aimed to evaluate the associations between sleep duration patterns and obesity in older children.

Methods: We did a cross-sectional study of 590 randomly selected 7-year-old and11-year-old school children from Zahedan . obesity was defined based on the 95th percentiles of body mass index (BMI) for age and sex, as proposed by CDC, 2000 and sleep duration patterns was reported through interviews with children.

Results: The prevalence of obesity among the participants was 22.1%. there was no significant association between sleep duration patterns and BMI (p=0.581).

Conclusion The findings showed, sleep duration patterns had no significant relationship with BMI. longitudinal research will be required to confirm a potential link of causality between these variables**.**

Keywords: obesity, sleep duration patterns, older children

Dietary B vitamin intake and breast cancer risk

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Background: B vitamins and other methyl-group nutrients may be related to breast carcinogenesis,but no studies have examined these associations in Iranian populations. We examined the associations of dietary intake of these nutrients with breast cancer risk**.**

Methods: Hospital-based case-control Setting: Shohada teaching hospital,Tehran,Iran Subjects: Overall,100 patients aged 30-65 years with breast cancer,and 174 hospital controls were included in the present study. Dietary intake was assessed using a valid and reliable semi-quantitative food frequency questionnaire consisting of 168 food items. Logistic regression models were used to compute odds ratio (ORs) and 95% confidence intervals (CIs) for the association of each nutrient and breast cancer risk.

Results: An inverse significant associations were found

for folate intake (fourth vs. first tertile: OR:0.07,95% CI: 0.16–0.27; p for trend= 0.05).

Conclusions: Our findings suggest dietary folate,B6,B2,biotin and pantothenic acid intake were associated with a reduction in breast cancer risk**.**

Keywords: Breast cancer,vitamin,B,folate

Augmented Plasma Adiponectin after Prolonged Fasting During Ramadan in Men

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Background: Intermittent fasting during Ramadan entails major changes in metabolism and energy expenditure. This study sought to determine effect of the Ramadan fasting on serum levels of adiponectin and tumor necrosis factor-α (TNF-α) as two inter-related peptides involved in cells sensitivity to insulin and glucose metabolism.

Methods: Total of seventy healthy men, with age range equal or greater than 30, with at least three type2 diabetes mellitus (DM) risk factors were selected. Serum lipid profile, anthropometric indices and plasma glucose levels were determined using conventional methods. Also, serum adiponec-tin and TNF- α concentrations were assessed using Enzyme-linked Immu-nosorbent Assay. Data were analyzed by paired t-test.

Results: Ramadan fasting resulted in a significant increase of serum adipo-nectin (P< 0.000), fasting glucose (P< 0.000) and triglycride (P< 0.001). Body mass index was lowered during the fasting (P< 0.000). Finally, no remarkable decrease was found in serum TNF-α levels (P= 0.100).

Conclusion: Ramadan fasting resulted in augmented adiponectin levels which may help in improving metabolic stress induced by insulin resis-tance in men with predisposing factors of type2 DM.

Alteration in T-cell cytokine production by vitamin A and zinc supplementation in mice

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Abstract: Simultaneous zinc and vitamin A deficiency are common health problems in developing countries. The objective of this study was to assess effect of supplementation of high zinc or vitamin A on immune function. After three months of feeding with a zinc and vitamin A deficient diet,mice were assigned into four groups which,for additional two months,received a normal or high zinc along with vitamin A deficient diet and a normal or high vitamin A along with zinc defi- cient diet. Serum and intestinal mucosa immunoglobulin A (IgA) were determined and supernatants of splenocytes were used to assess interlukin (IL)-2,IL-5,IFN-γ. Mice maintained on zinc deficient diet with normal or high vitamin A re- sulted in significantly lower production of IFN-γ. Also,supplementation of high dose vitamin A augmented production of the cytokine as compared to normal intake of the vitamin. Supplementation of either normal or high zinc along with low vitamin A diet significantly led to higher production of IFN-γ as compared to those receiving zinc limited but ade- quate vitamin A. High intake of zinc along with vitamin A deficient diet significantly enhanced secretion of IL-2. Lev- els of serum and mucosal IgA and IL-5 were not be significantly modulated. Moreover,animals fed with high doses of zinc showed increased IL-2 production than those that had normal intake of zinc. Results indicated that zinc and vitamin A supplementation up-regulates production of T-cell cytokines,IFN-γ and IL-2.

Decreased serum and mucosa Ig A levels in vitamin A and zinc deficient mice

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Abstract: Simultaneous zinc and vitamin A deficiency are common health problems in developing countries. The objective of this study was to assess effect of vitamin A and zinc deficient diet on immunoglobulin A (Ig A) response. Six weeks old mice were assigned into two groups receiving normal vitamin A and zinc or low vitamin A and zinc diet for five months. Serum and intestinal mucosa IgA were determined by enzyme-linked immunosorbent assay method. The concentration of zinc in serum was determined using an inductively coupled plasma mass spectrometer. Vitamin A measurement in serum was carried out by high performance liquid chromatography. Mice maintained on low vitamin A and zinc diet showed significantly greater food intake but lower production of IgA both in serum and mucosa. Mucosa IgA level was significantly higher in both control and deficient groups than serum IgA level. Results indicated that zinc and vitamin A deficiency is associated with lower production of IgA. Micronutrient Intervention strategies addressing IgA related gastrointestinal infections are needed.

The relationship between eating attitudes and the body mass index in schoolchildren aged 7 to 11 years in Zahedan,2014

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Background: Disordered eating attitudes and behaviors appear to be quite common in overweight children. Evidence also indicates that dietary habits acquired in childhood persist through to adulthood. The majority of overweight children reported that they have wished to be thinner,and many have actively sought to lose weight. Objective The objective of this paper was to assess eating attitudes in relation to the body mass index (BMI) in older children.

Methods: This cross-sectional study was carried out on 486 randomly selected 7- 11 years school children from Zahedan in 2012. Status of underweight,normal weight,overweight and obesity based on BMI percentiles for age and sex as proposed by standard control disease center (CDC-2000). Eating attitudes was assessed by self-administered validated questionnaires. The child version

of the Eating Attitude Test (ChEAT) is a 26-item,6-point Likert scale ranging from always to never. A score of 20 or above suggests the presence of an eating disorder.

Results: The mean eating attitudes score according to BMI status of the subjects studied was 18.9±7.7 (underweight, normal,overweight and obesity was 16.96,18.64,20.17 and 20.27 respectively). In this sample,45.2% of participants scored above the ChEAT screening threshold and presence an eating disorder. Results showed that eating attitudes had significant relationship with BMI (P = 0.015). Eating attitudes score in overweight and obesity subjects greater than in underweight participants. Therefore overweight and obesity subjects had eating disorder in our study.

Conclusion: The findings showed that overweight and obesity subjects had eating disorder. Elevated BMI predicted weight dissatisfaction. Eating disorders represent an extremely difficult,time-consuming and costly condition to treat. There is currently limited evidence in the published literature to suggest that any particular type of program is effective in preventing eating disorders and there has been concern that some interventions have the potential to cause harm. Future studies should focus on eating disorders prevention programs,childhood obesity and childhood obesity prevention programs to prevent non-overweight children from becoming overweight or obese.

Keywords: Eating attitudes,body mass index,schoolchildren

Evaluation the type of salt consumed and itstype of storage in households of rural and urban areas of East Azerbaijan province

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Background: Lack of iodine in the human diet causes various diseases like goiter. So, to prevent iodine deficiency, potassium iodate is added torefined edible salt to providethe daily value. High purity refined iodized salt keep iodine better and more secure.To keep the iodine in iodized salt, the salt should be consumed in less than a year, take it away from light and moisture, kept in plastic containers, wood, ceramic or dark glass. Also, during cooking, it is best to add salt at the end of cooking so it could be preserved as much as possible. This study aimed to evaluate the type of salt consumed and its type of storage in households of rural and urban areas of East Azerbaijan province.

Methods: In this survey the population was the households in urban and rural areas of east Azerbaijan province. Cluster sampling with equal sizes was used and a total of 57 clusters with 8 subjects were studied in urban (38 cluster) and rural (19 cluster) areas. The data in this study collected using a structured questionnaire and interviews were done in the household. Statistical analysis was performed using SPSS version 13.0.

Results: In the households, 91.3 percent (92.3%in urban and 89.5% in rural) consumedrefined iodized salt, 1.9 % consumed non-iodized salt (1.8% in urban and 2%in rural) and 6.8 % consumed both types of salts (5.8% in urban and 6.8% in rural). 29.8% of households (29.8 percent in urban and 40%in rural) kept salt in a dark vessel lids, 48.8% (50.7 percent in urban and 45.6%in rural) in a clear door containing vessel,6.3 percent (8.8 percent in urban and 1.9 % in rural) in a container without a lid, and 11.2 % (10.7 % in urban samples and 12% in rural ones) kept it inside package.

Conclusion: Based on these results, it seems that the knowledge of households onmethods of keeping the iodized salt is not desirable and appropriate education programs are essential in this context.

Keywords: Iodized salt, households, East Azerbaijan

Investigation the effects of BlackBerry (Persian mulberry) consumption on serum concentration of lipoproteins,Apo A-I,Apo B,hs – CRP and systolic (SBP) and diastolic blood pressure (DBP) in dyslipidemic patients

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Background: Dyslipidemia is the improvable risk factor of cardiovascular diseases; evidence suggests that adding bioactive compounds to the diet can positively impact heart disease risk factors. The present study investigated the effects of BlackBerry (Persian mulberry) consumption on serum concentration of lipoproteins,Apo A-I,Apo B,hs – CRP and systolic (SBP) and diastolic blood pressure (DBP) in dyslipidemic patients.

Methods: In this randomized clinical trial,among patients of the Social Security and Bu-Ali Sina clinics of Qazvin,72 with lipid disorders participated in the study and were randomly divided into two groups. Individuals in the intervention group took 300 g BlackBerry,the juice with pulp,daily for 8 weeks and the control group continued their usual diet without eating berries. At the beginning and end of the intervention,fasting blood samples were taken from both groups and serum concentrations of lipoproteins,Apo A-I and Apo B and hs - CRP were measured. Blood pressure before and after the study was measured with a mercury manometer.

Results: After intervention the concentration of Apo A-I and HDL levels increased significantly (p=0.015,p=0.001),Apo B and hs-CRP levels decreased significantly (p=0.044,p= 0.04) compared with baseline in the intervention group. Mean changes of Apo A-I and HDL and ApoB/ Apo A-I ratio were significant between two groups (p=0.005,p= 0.014,p=0.009). At the end of the study and between the groups,there was a significant difference between the mean values of hs-CRP (p= 0.01). At week 8,SBP decreased significantly (p=0.005) in the intervention group whereas no significant difference was observed between the mean values of SBP between the two groups. There was no significant effect on other lipid parameters and DBP in the intervention group compared to baseline and between the two groups.

Conclusion: Blackberry consumption can affect heart disease risk factors such as apolipoprotein concentration,blood pressure and inflammatory markers in individuals with lipid disorders.

Keywords: BlackBerry,apolipoproteins,hs-CRP,Blood Pressure

Food addiction is more prevalent in women with metabolic syndrome

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Background: Obesity and related illnesses including metabolic syndrome (MS) may be symptoms of food Addiction. In accordance, food addiction was defined following the DSM-IV diagnostic criteria for substance dependence. The aim of this study was to compare women suffering from MS with healthy subjects in terms of food addiction and its related diagnostic criteria.

Methods: Twenty-four female adults with MS and 25 healthy individuals completed Yale Food Addiction Scale (YFAS) questionnaires to assess food addiction. Demographic characteristics were recorded. Reliability was evaluated by a pilot study on 40 participants with MS and Cronbach's alfa-coefficient was calculated for primary sample. Validity was evaluated by getting the viewpoint of the psychology and nutrition experts. Chi square, independent samples T, and Mantel–Haenszel tests were applied to analyze the data.

Results: Participants with MS had a higher score of food addiction criteria and continuous version score. More than 70% of females with MS and only 12% of healthy subjects fulfilled the criteria for diagnosis of substance dependence. No difference in criterion "Continued use despite physical or psychological problems in eating behavior" score mean was found between the two groups. After adjustment for age and occupation,diagnosis of substance dependence was more prevalent among females with MS than healthy participations. The Mantel-Haenszel common odds ratios estimate of diagnosis of substance dependence associated with MS after the adjustment for age and occupation were (0.008- 0.486) (p=0.013) and (-4.4-(-0.48)) (p=0.031), respectively. (0.008 to 0.486, p=0.013) and (-4.4 to -0.48, p=0.031)

Conclusions: These findings suggest the higher prevalence of food addiction in females with MS.

Keywords: Food addiction, women, metabolic syndrome

Evaluation the effects of L-arginine supplementation on exercise performance, body composition and serum sodium and potassium in healthy male athletes

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Background: L - Arginine is a semi-essential amino acid that can affect athletic performance. Thus the purpose of this study was to evaluate the effect of L - arginine supplementation on athletic performance, body composition and serum sodium and potassium levels in male athletes.

Methods: This study was a randomized double-blind controlled clinical trial. Participants, 56 male athletes with an average age of 20.85±4.29 years were selected in Isfahan University of Medical Science clubs in the winter of 2014. Athletes received l- arginine supplementation with a dose of 2 g daily for 45 days in the intervention group and the same amount of placebo (maltodextrin) in the control group received. At the beginning and end of the study, the level of athletic performance, body composition and serum sodium and potassium levels were measured and data were analysis with using SPSS software version 19.

Results: At the end of the study athletic performance in the group receiving supplements of L - arginine significantly improved compared to the control group (P value =0.035). However, no significant changes in body composition and serum sodium and potassium levels were observed (P value > 0.05)

Conclusion: Supplementation of L - arginine can improve athletic performance in semi-professional athletes.

Keywords: L - arginine, athletes, sports performance, serum sodium and potassium, body composition

Association of malnutrition &SDH in under 6children: A cross-sectional survey in Fars province, Iran,2013

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Background: Childhood malnutrition as a major public health problem among children in developing countries can affect physical and intellectual growth and is also considered as a main cause of child morbidity and mortality. The objective of this study was to estimate the correlation betweenunder-nutrition **&**SDH and prevalence of malnutrition among children under 6 years of age in Fars province, Iran.

Methods: This survey was conducted by house to house visit through multi-stage sampling. A total of 15,290 children, aged 0-6 years old, were studied for nutritional assessment in terms of underweight, stunting, and wasting. Also, socio-demographic measures were obtained from structured questionaire. Backward stepwise logistic regression was used to relate underlying factors to the odds of under-nutrition indices.

Results: The prevalence rates of stunting, underweight, and wasting were 9.5, 9.7, and 8%, respectively. Male children were more stunted compared to females. Also, stunting was significantly associated with lower family income and lower maternal education. Living in urban areas, and poor water supply were identified as significant risk factors of all three types of childhood undernutrition. Moreover, Khamse and Arab ethnic groups were more vulnerable to under-nutrition. There was a

suggestion that health services were associated with wasting and also large family size was related to underweight.
Conclusion: The rate of under-nutrition in the study population was nearly low. However, planning the public preventive strategies can help to eradicate childhood under-nutrition according to underlying factors of malnutrition in the study population including gender, settlement area, family size, ethnicity, family income, maternal education, health services, and also safe water supply.
Keywords: Children**,** Prevalence, Malnutrition, Stunting, Underweight, Wasting

Assessment of the safety of food products in Guilan in 1392

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Background: Continuously monitor and manage the production of healthy food is the most important objectives of the Food and Drug Administration.In order to assess the status of food products produced in the manufacturing of food products marketed in the cities as well as the study was conducted.
Methods:5330 samples were collected from the test values; 1492 cases (30%), associated with the manufacturing provinces. and 3833 cases (70%), food products marketed in province (out of province), respectively.All relevant tests to evaluate product safety, health standards, microbiological contamination, and organoleptic evaluation of labels based on national standards and guidelines of the organization took place.
Results:Products 67.8% (3615 cases) were matched with health standards and related standards. 74.6% of cases sampled from the factory (the production) was compatible with hygiene standards.In presentation level 65.3% of the sample was evaluated in accordance with the standards.
Conclusion: Cases of non-compliance with health standards and microbiology products at the production level of 25% was considered and 35% were assessed at the presentation level.It seems that this difference is related to the conditions of transportation or storage of food products. Constant monitoring of the production and supply of food products can be effective in improving the safety and health of the population fed.
Keywords: Safety, food

Iron supplement intake in middle and high school girl students and related factors in Semnan, Iran (2010-2011)

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Background: Including the basic strategies by the World Health Organization to prevent and control iron deficiency anemia, the most common types of malnutrition, is iron supplementation in specific groups. The purpose of this study was to investigate the consumption of iron supplement and the related factors by girl students at middle and high school levels in Semnan.
Methods: In this study, 440 middle and high school girl students from different districts in Semnan were selected randomly and investigated. Collecting data was performed via of completing the questionnaires by students and supervised by a research expert. The supplement intake was considered as "complete" or "favorable" if the number of the tablets the student had consumed was equal to that distributed by school officials and otherwise, incomplete.
Results: 53.9% of middle school girls and 16.5% of high school girls has consumed their tablets completely, the difference was significant ($p<0.001$). Supplement consumption in middle school level declined with grade, i.e., at higher grades full tablet consumption would decrease ($p<0.002$). Awareness of iron deficiency symptoms was inversely proportional to full iron tablet consumption ($p=0.003$). A significant relationship was observed between complete iron tablet consumption by students and father's education($p=0.046$); mother's education($p=0.015$), student's educational average($p=0.003$); student's participation in iron supplementation classes($p<0.001$); parents' participation in iron supplementation classes($p=0.021$); authorities' supervising the taking of tablets by the student($p<0.001$); consumption of iron tablets during class($p<0.001$); and distribution of iron tablets by the health advisor($p<0.001$).
Conclusion: The study indicates an unsatisfactory situation regarding the consumption of iron supplementary tablets in Semnan middle and high school students. To improve the iron supplementation program, efforts in creating a positive attitude, culture of consumption mixed with awareness, as well as face to face training of students and their parents, and supervision by a health educator can be helpful.
Keywords: Iron supplementation, consumption status, middle and high school girls

Evaluation of nutritional status in children under 6 years, south- east of Iran

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Background: The present study was conducted in rural area of Sistan and Baluchistan province, south-east of Iran with aim of determine the prevalence of underweight, stunting, wasting , overweight and obesity among children.
Methods:1570 children was selected from all children under 6 years covered by healthy and treatment centers. Body weight and height were measured using standard methods. Determination of malnutrition performed based on WHO, NCHS and CDC standard.

Results: The result showed that, based on NCHS and WHO standard: 21.1% and 19.4%, 28.2% and 32.1%, 7.5% and 9.4% of children were underweight, stunted and wasted respectively. The peak of malnutrition based on stunting was more than underweight and wasting. According to CDC standard, the prevalence of overweight and obesity was 4.2% and obesity 4.1% respectively.
Conclusion: This study revealed, underweight, stunting

and wasting represents different processes of malnutrition which have different risk factors. Overweight and obesity are not major problem inthe children.
Keywords: Anthropometry, malnutrition**,** children, Sistan and Baluchistan, Iran

Study of nutritional status in individual of population lab in Zahedan

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Background: This study aimed to assess the nutritional status of the population lab in Zahedan and also design an intervention program in order to decrease nutritional problems.
Methods: In a descriptive- analytical, interventional study, 1613 subjects in two phase (before and after intervention) were randomly selected from 4 regions covered by the populationlab in zahedan. The average age of the fathers and mothers were 45.3 ± 13.8 and 42.3 ± 15.4 years respectively. After recording of demographic characteristics of households, nutritional assessment was done by determination body mass index (BMI) and recall – 48 hr methods. Intervention programs and nutrition education program was conducted in cooperation with households.
Results: The results showed, according to BMI level 12.6% and 8.6% of subjects were lower than standard in before and after intervention respectively. It was also observed 61% and 30.5% of households intake energy lower than 2500 kcal/d in before and after intervention respectively. In generall, nutritional status of population study showed based on energy intake, 36.3% affected, 16.8% vulnerable, and 46.9% were satisfactory. Percentage of daily energy intake from carbohydrate was lower than recommended allowances. AS compared to RDA, there were deficiencies based on calcium 71%, folic acid 100%, Iron 15%,and Vitamin A 77% intake too.
Conclusion: Findings showed deficiency of nutrients and there is an imbalance in the consumption patterns of population. Therefore, educational programs and cooperation in order to improve the nutritional status and household food security based on local region features is recommended.
Keywords: Nutritional status, anthropometric, population lab

Effect of nigella sativa oil extract on selected immune cell markers in rheumatoid arthritis female patients

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Background: rheumatoid arthritis (RA) is an inflammatory autoimmune disease. Nigella sativa is medicinal plant and Thymoquinone (TQ) is the major active compound and has broad anti-inflammatory activities. It has long been used in traditional medicine for treating various conditions. Our aim of the present clinical trial was to evaluate the Immune regulation of Nigella sativa oil extract in patients with RA.
Methods: Forty-two patients with RA were assigned into two groups in this randomized,double blind,placebo-controlled clinical trial. Intervention group will receive two 500 milligram capsule containing nigella sativa oil extract each day,for 8 weeks; the other group will take two placebo capsules a day for the same period of time. Questionnaires,anthropometric measurements,and fasting blood samples were collected at baseline and at the end of the trial.
Results: there is significant increase in Percentage CD4+ CD25+ regulatory T cell in the N.s group($P < 0.05$) compared to placebo group($P < 0.05$). Percentage CD4+ T cell non-insignificantly Increase in N.S group ($P = 0.08$). Also decrease Percentage T cytolytic cell (CD8+) significant in the N.S group ($P = 0.02$). The CD4+/CD8+ proportion significantly increased in the N.S group ($P = 0.01$); the changes were not statistically significant in the placebo group ($P =0.054$).
Conclusions: This study indicates that N.S could improve autoimmune diseases in patients with RA and suggested N.S may be a beneficial adjunct therapy in this population of patients. It also recommended that additional doses be used in future studies.
Keywords: Rheumatoid arthritis,autoimmune diseases,Nigella sativa,Cytokine,Randomized clinical trial

Effect of Zinc Supplementation on Inflammation,Infection and Severity of Disease in Severe Head Trauma Patients: A Clinical Trial double-blind Study

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Background: Studies have shown that zinc deficiency can be increase inflammatory response and stress oxidative also morbidity and mortality in patients with severe head trauma. This study was designed to estimate the effect of zinc supplementation on inflammation,infection and severity of disease in severe head trauma patients.
Methods: Fifty patients with severe head trauma (GSC=5 to 8) that hospitalized in ICU of Kamyab Haspital,Mashhad,Iran were entered into a randomized double blind clinical trial study. The patients were randomly divided into 2 groups: intervention groups(n=25),receiving zinc supplementation enterally (120 ml elemental zinc) and the placebo groups(n=25),receiving placebo,for 15 days. Plasma Zn,CPR,ESR,albumin,WBC count and body temperature were monitored on 1th,7th and 16 th day of study. APACHE II score,in first 24 hours and 16th day of study was evaluated. Patients were assessed for mortality rate on 28th day of study. Data were analysis with SPSS statistic software.
Results: The mean age of patients was 34 years old. There were no significant differences in Plasma Zn,CPR,ESR,Albumin,WBC count,body temperature and APACHEII score between groups at the baseline of study ($P\leq0.05$). On the seventh day of study,the plasma Zn level in the intervention group was significantly higher than control group ($P\geq0.05$). On the sixteenth day of study,APACHEII score,serum CPR,ESR,WBC count,body temperature levels were significantly lower in the intervention group than control group. The mortality rate in the control group was two times higher than in the intervention group but these difference was no significant.
Conclusion: Zinc supplementation in severe head trauma patients,improve APACHEII score and normalize in-

flammatory indices,CPR,ESR,WBC count,body temperature and also decrease mortality rate. Future studies are recommended APACHE II ،CRP
Keywords: Zinc, Severe Head Trauma, APACHEII, CRP

Does coenzyme Q10 improve fatigue and depression in multiple sclerosis patients,a double blind randomized clinical trial.
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Background: Multiple sclerosis (MS) is the chronic inflammatory and demyelinating disorder of Central Nervous System (CNS) which is accompanied with disability and negative life style changes such as fatigue and depression. The aim of this study was to investigate the effect of Coenzyme Q10 (CoQ10) supplementation on fatigue and depression in patients with MS.
Methods: We performed a randomized,double-blinded,placebo-controlled trial to determine the effect of CoQ10 supplement (500 mg/day) versus placebo for 12 weeks. Fatigue symptoms were quantified by means of Fatigue Severity Scale (FSS) and the Beck Depression Inventory (BDI) was used to assess depressive symptoms.
Results: A significant decrease of FSS was observed in CoQ10 group during the intervention (P= 0.001) and significant increase of FSS change was observed within placebo group (P= 0.001). Comparing changes of FSS and BDI between groups showed significant decrease rather than placebo group (P=0.001,P=0.01 respectively).
Conclusion: our study suggests that CoQ10 supplementation (500mg/day) can improve fatigue and depression in patients with multiple sclerosis.
Keywords: Depression, Inflammation, Multiple sclerosis,Q10

Quality evaluation o honey there is in West Azerbaijan province post marketting
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Background :Honey is a natural product of plant exudates and leachates was collected by bees in the hive is saved,changes have happened in and stored in the hive. Honey is a complex mixture of water,sugar,gloconic acid,lactones,nitrogen compounds,enzymes,hormones and antibiotics,minerals and some vitamins. Today,due to bad management of apiaries such as the poor honey production due to low awareness of the relationship and the high price of honey has caused to profiteering some people to decrease the nutritional value and poor quality of food. Important criteria for determining the quality of honey are tests such as HMF,glucose to froctose ratio,sucrose percentage,diastase. So in order to evaluate the quality and fraud of honey sale in West Azerbaijan province in 1390 tests such as HMF,glucose to froctose ratio,sucrose percentage,diastase were done.
Methods; This study was done by using laboratorial findings on 115 samples of sale in West Azerbaijan province were sampled by project partners randomly and transferred to the laboratory. Statistical analysis was performed using the statistical software and the chemical properties were evaluated according to the National Standard No.92,and was commented on the quality of the samples.
Results; Regarding to the results,of 105 samples were analyzed with a label,the percentage of conformance samples was 36/19% and 63/8% of them were non-conformance.
Conclusion: Always there is a fraud that makes in honey is not true that cause to this nutritional food with actual quality and value not to reach to consumers but sometimes improper management practices or negligence in the process may waste efforts and the bee. Finally,given the high percentage of nonconforming samples and the lack of consumer awareness from the quality of honey it is recommended that all regulatory agencies to control and monitor the supply levels are higher in the samples.
Keywords: Honey,chemical properties and West Azerbaijan Province

Vitamins deficiency and risk of cerebral vascular thrombosis in Iranian patients
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Background: Cerebral vascular thrombosis (CVT) is the thrombosis of intracranial and sinuses. CVT is a non-infective disease with wide spectrum and various clinical symptoms that diagnosed with delay. All causes of deep vein thrombosis in the legs,genetic,malignancy, prothrombin related disorders,deficiency of folic acid and vitamin B12,hyper-homocysteinemia are the main risk factors for CVT. The aim of this is to estimate of risk of deficiency of folic acid and vitamin B12,hyper-homocysteinemia for CVT in Iranian patients.
Methods: A total of 26 patients with definite CVT diagnosed by computed tomography (CT) or MRI and 36 healthy controls participated in the study from May 2010 to March 2012. The control participants were chosen from partner with no cancer,liver and renal disease and surgery and the presence of circumstantial thrombosis risk factors such as oral contraceptive drugs intake,pregnancy,cancer,surgery and trauma were reported for both patients and controls. Concentrations of Serum total homocysteine were determined by HPLC (High-performance Liquid Chromatography) method,coupled with fluorescence detector. Levels of Folate and vitamin B12 were measured simultaneously by a double labelled radioassay kit .The deficient levels of folic acid and vitamin B12 defined as 90th percentile of homocysteine of control group. Crude odds ratios and 95% confidence interval (CI 95%) with Mantel–Haenszel statistics used for estimating risk of hyper-Hcy,vitamin B12 and folate deficiencies for CVT. Also,multiple logistic regression analysis used for determining of adjusted odds ratio.
Results: Patients had higher levels of tHcys than controls (14.7±6.5 vs. 6.4±2.7 μmol/l,P=0.001),levels of vitamin B12 and folic acid did not differ between groups. Although a significant negative correlation was found between levels of tHcys and vitamin B12 (r=-0.32,P=0.01),no significant association was observed between tHcys and folic acid neither between vitamin B12 and folic acid levels. Hyper-Hcys and low vitamin B12 were significantly more prevalent in CVT patients than controls (70.7% vs. 7.9%,P=0.001; 58.3% vs. 2.6%,P=0.001) and showed significant independent association with risk of CVT (adjusted OR 13.5,95%CI,2.5-72.5,P=0.002) (adjusted OR 3.2,95%CI,1.8-34.5,P=0.015) respectively.

Conclusion: hyper-Hcys and low vitamin B12 level were related significantly with high risk for CVT and folic acid was not associated directly with risk of CVT.
Keywords: Vitamin B12; Folic acid; Hyperhomocysteinemia; cerebral vascular thrombosis

Consider some of the properties and effects on infants and children anthropometric indicators

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Background: the demographic characteristics the parents, especially the mother,have important role in infant and childhood anthropometric indicators. this study with goal of consider some of the properties and effects on infants and children anthropometric indicators.
Methods: the results of this study was carried out by sistematic sampeling in this study the data needed,and complete the information from of the records of mother and children in heath centers (the house of health) were existed in Khash city. one handred cases was completed in 2012-2013 year were studied.
Results: the results of this study showed that the mean age of mother 28.52 years with standard deviation of 5.87 and BMI of 24.3 with a standard deviation of 4.5 birth weight with mean 3133.14 g and standard deviation 558.1 with mean of height of 49.03 cm and standard deviation was 2.76 person correlation test was used to determine the relationship between mother and baby were some quantitative variables. the results showed that with increasing age of mother,body mass index increased(p=0.016 and r=0.27). correlation was not found between age of mother and birth weight while of six mother was showed relation with age of mother significant (p=0.03 and r=0.39). between head circumference at birth,birth height,height of six mother and nine months, there was a direct correlation (p<0.0001 and r=0.43).f
Conclusions: there is the association between some mother demographic variables such as age and some anthropometric parameters such as weight babies and children up to six month,a relationship was observed,and the weight of three,six,nine month is directly related to mother age and birth weight.so with increase age of mother,weight of children increased.
Keywords: Birth weight, Mother's age, Antropometric parameters, Demoghrafic charactrestics

Assessment of Knowledge and Attitude of People about Foods that Contain Probiotics

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Background: Today, effects of probiotics is incontrovertibly proven while many people may not be aware of. The purpose of the study is to investigate the level of knowledge and attitude of people in the probiotic-containing material.
Methods: The present cross-sectional study on 150 families of Tabriz that referred to Tabriz hypermarket inquiry and direct observation method was used. Economic and social information and people's knowledge and attitude about probiotics fabricated assessed by a self administered questionnaire in a face to face method. Assessments of status into tertiles were determined.
Results: Half of responsible for purchase were men and more than80%of them had higher than diploma education. Since only 36.7% of participants had heard the probiotics word and Long familiar with the term in nearly one third of the study population less than 1 year. More than half of the people who heard these word have been know that packed Commercial products containing probiotic and they aware of keeping situation ,differs from many other materials also these people were aware of probiotics Indications. Only about one fifth of those with knowledge of the products they buy and use, 60% of these had zero Point aware and average were 2.323.32. Nearly 70% of people who had heard the word believed that probiotic food is beneficial and 58.3% believed that old people can use these products. Most important source of information in order to were media, advertising shop and Friends.
Conclusion: The findings suggest a lack of knowledge so More than half of the subjects Therefore, raising the level of awareness with different learning styles is suggested.
Keywords: probiotics, attitude, knowledge.

Effect Of Cooking and Refrigeration Processes On the Level of Nitrite and Nitrate in Spinach

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Background: Nitrates and nitrites are unwanted compounds in diet that can cause cancer, methemoglobinemia, and other disorders. Overall, 70-90% of the dietary nitrates are derived from vegetables**.** Spinach is one of the vegetables with a high concentration of nitrate which is affected by various processes, including cooking and refrigeration before consumption. These processes can affect spinach's nitrate and nitrite levels. The present study aimed to investigate the effect of a cooking method that has not been studied before. The effect of refrigeration was studied, too.
Methods: Spinaches were bought from green groceries and after removing their visible soil and non-edible parts, they were cut into 4-7 cm pieces. Then, they were washed with deionized water for 3 times and were drained. A part of raw spinach was set aside to measure nitrate and nitrite and the other part was used for cooking (heating until all water of spinaches evaporated) and refrigerating processes (4 ºC for 5 days). The HPLC method was used to measure nitrite and nitrate levels.
Results: The means of nitrate and nitrite concentrations in raw spinach were 336.54±182.2 and 26.49±10.07 mg/kg, respectively. Cooking process caused a significant increase in the level of nitrate (P=0.012), while refrigeration process led to a significant decrease in this regard (P=0.012). Besides, a slight reduction was observed in nitrite level after the cooking process, but the change was not statistically significant. Refrigeration also had no significant effects on nitrite level of spinach.
Conclusion: Based on the usual content of nitrate and nitrite reported in spinach, the raw spinach was characterized by a low content of nitrate but a high content of nitrite. This could be due to weather conditions, amount

of used fertilizers, and other growth conditions. Moreover, it can indicate damage to the spinach tissue and activation of nitrate reductaseduring harvesting, transporting, or preparing the spinaches. Considering the conversion of nitrate to nitrite in body and non-significant changes in nitrite levels in this study, it seems that cooking, unlike refrigeration, is not a proper method to reduce the intake of nitrates and nitrites.

Keywords: Nitrate; Nitrite; Cooking; Refrigerating; Spinach

Relationship between Serum 25-Hydroxy Vitamin D and Vitamin D Dietary Pattern in Patients with NAFLD

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Background: As vitamin D which is activated in the liver regulates many genes involved in metabolic disorders and prevalence of non-alcoholic fatty liver (NAFLD) associated with vitamin D deficiency is increasing in Iran, this study was aimed to investigate the association between serum level of 25 (OH) D and vitamin D dietary pattern in patients with non-alcoholic fatty liver (NAFLD) .

Methods: In this study, a 43-food item Food Frequency Questionnaire (FFQ) was completed to assess vitamin D dietary patterns as well as exposure to sunlight for 50 NAFLD patients confirmed by ultrasonography. After 12 hours fasting, blood samples was taken and serum levels of 25(OH) D was assessed using ELISA technique. Serum 25(OH) D and weekly frequency consumption of foods was compared based on sunlight exposure status.

Results: Mean age was 35.06 ± 8.84 years and 78% and 20% of the patients suffered from mild and moderate NAFLD, respectively. Vitamin D deficiency (less than 20 ng/ml) and insufficiency (20-30 ng/ml) was found in 88% and 6% of the subjects, respectively. Average sunlight exposure per week was 3.9 hours. After adjusting for sunlight exposure, no significant association was observed in weekly frequency consumption of vitamin D rich foods as well as serum 25 (OH) D.

Conclusion: This study was failed to demonstrate the association between vitamin D dietary pattern and serum level in patients. However, it seems case-control studies by assessing metabolic factors is required.

Keywords: NAFLD, serum 25(OH) D, dietary pattern

Prevalence of vitamin D deficiency and its relationship with blood pressure in female adolescents 17-14 years, Boukan

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Background: Vitamin D deficiency is widespread and an unknown public health epidemics around the world. The objective of this study was to investigate the vitamin D status and its relationship with blood pressure in 14-18 years old adolescent girls, attending high school in Boukan, Iran.

Methods: In this cross-sectional study a sample of 216 girls 14 to 18 years old was selected from among high school students in Boukan city during winter in 2012 by a multistage random sampling technique. Weight, height, waist circumference (WC), blood pressure (BP), daily energy and vitamin D intakes, physical activity and serum 25-hydroxyvitamin D (25(OH)D) levels of all the subjects were evaluated. Data were analyzed by using SPSS software and descriptive statistics tests and partial correlation test.

Results: The Mean of serum 25(OH)D was 7.26 ±2.81 ng/ml and 96% of subjects had vitamin D deficiency. In univariable regression analysis after adjustment for body mass index (BMI), energy intake and physical activity levels, No significant relationship was found between serum 25(OH)D levels and BP.

Conclusion: The present study showed that vitamin D deficiency was a major health problem in adolescent girls. Improvement of vitamin D status among adolescents is necessary to prevent the development of MetS and its chronic diseases complications in their later life.

Keywords: Vitamin D, Adolescent girl, blood pressure

Association between Waist to Hip Ratio and Physical Activity Level with Blood Pressure among Adult Population in Khorramabad City in 2011

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Background: Hypertension is considered a hidden and noiseless risk to human health and its complications are among the most important causes of death and disability in most parts of the world.Anthropometric measurements such waist to hip ratio is good predictor for hypertension. The purpose of the present study was to examine the association betweenwaist to hip ratio and physical activity level with blood pressure among adult population in Khorramabad City.

Methods: This study was a cross-sectional, descriptive study that the statistical population consisted of all students' parents in Khorramabad City, of whom 211 people were randomly selected as a sample.Data was analyzed by using correlation coefficient of Pearson.

Results:Results indicated that mean and standard deviation of systolic and diastolic blood pressure were in women 124.40±14.62 and 75.60±12.83 andin men 121.80±11.07 and 78.76±8.33and mean and standard deviation of waist to hip ratio in women and men were 0.81±0.06 and 0.89±0.07, respectively.There wasn't a significant relationship between waist to hip ratio and systolic and diastolic blood pressure in women (P<0.07 and P<0.18) and systolic in men (P<0.17)but there was a significant relationship betweenwaist to hip ratio and diastolic blood pressure in men (P<0.03) and in total, a significant relationship was seen between waist to hip ratio and diastolic blood pressure. Furthermore the significant association was not seen between physical activity and systolic and diastolic blood pressure in women (P<0.580 and P<0.302) and men (P<0.635 and P<0.251).

Conclusion: The present study showed that waist to hip ratio and physical activity level have no effect on blood pressure in men and women but generally waist to hip ratio has effect on diastolic blood pressure.
Keywords: WHR, Physical activity level, blood pressure

The effects of ginger on fasting blood sugar, Hemoglobin A1c, apolipoprotein B, apolipoprotein A-I and malondialdehyde in type 2 diabetic patients
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Background: Diabetes mellitus is the most common endocrine disorder, causes many complications such as micro- and macro- vascular diseases. The number of patients suffering from diabetes, among the 25-64 years old Iranians is 7.7%. Ginger is known to contain a number of potentially bioactive substances, mainly gingerols and their related dehydration products, the shogaols, as well as volatile oils including sesquiterpenes, such as beta-bisabolene and zingiberene, and monoterpenes, mainly geranial and neral. Anti-diabetic, hypolipidemic and anti-oxidative properties of ginger have been noticed in several researches. The present study was conducted to investigate the effects of ginger on fasting blood sugar, Hemoglobin A1c, apolipoprotein B, apolipoprotein A-I, and malondialdehyde in type 2 diabetic patients.
Methods: In a randomized, double-blind, placebo-controlled, clinical trial in Iran, a total of 41 type 2 diabetic patients randomly were assigned to ginger or placebo groups (22 in ginger group and 19 in control group), received 2 gr/day of ginger powder supplement or lactose as placebo for 12 weeks. The serum concentrations of fasting blood sugar (FBS), Hemoglobin A1c (HbA1c), apolipoprotein B (Apo B), apolipoprotein A-I (Apo A-I) and malondialdehyde (MDA) were analyzed before and after the intervention.
Results: Of fifty patients initially recruited, 41 persons (22 in the ginger group and 19 in the control group) completed the study. The study showed ginger supplementation significantly reduced the levels of FBS (p=0.000), HbA1c (p=0.000), Apo B (p=0.000), (Apo B/Apo A-I) (p=0.000) and MDA (p=0.001) in ginger group in comparison to baseline, while it increased the level of Apo A-I (p=0.000). As well, the levels of FBS (p=0.048), Apo B (p=0.000), Apo B/Apo A-I (p=0.000) and MDA (p=0.004) increased, and Apo A-I (p=0.008) decreased in placebo group during the study. However, the statistical analysis indicated that the observed changes in control group may be the result of time effect, placebo empathic effect or other unknown factors, and it's not intervention dependent.
Conclusion: It seems that oral administration of ginger powder supplement can improves fasting blood sugar, hemoglobin A1c, apolipoprotein B, apolipoprotein A-I, apolipoprotein B/apolipoprotein A-I and malondialdehyde in type 2 diabetic patients. So it may have a role in alleviating the risk of some chronic complications of diabetes.
Keywords: ginger, glycemic status, apolipoproteins, malondialdehyde, diabetes mellitus

Comparison of the effects of Eicosapentaenoic Acid and Docosahexaenoic Acid on the level of serum lipoproteins in Helicobacter pylori positive patients
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Background: Helicobacter pylori infection is the most common chronic bacterial infection around the world and an important cause of gastrointestinal disorders that may be involved in the pathogenesis of some extra-gastrointestinal disturbances, as well as change in serum lipid profile. Hypolipidemic property of omega-3 Fatty Acids have been studied in several research studies. The objective of the present study was the comparison of the effects of Eicosapentaenoic Acid (EPA) and Docosahexaenoic Acid (DHA) supplementation on the level of serum lipoproteins in Helicobacter pylori positive patients.
Methods: In a randomized, double-blind, placebo-controlled clinical trial in Iran, 105 Helicobacter pylori positive patients (35 patients in the EPA group, 35 in the DHA and 33 in the control group), randomly selected, received two grams daily of Eicosapentaenoic Acid, Docosahexaenoic Acid or Medium Chain Triglyceride (MCT) oil as placebo, along with conventional tetra-drug Helicobacter pylori eradication regimen, for 12 weeks.
Results: From 105 included patients, 97 (31 in the EPA group, 33 in the DHA group and 33 in the control group) were analyzed. The levels of total cholesterol (TC), low density lipoprotein cholesterol (LDL-C), high density lipoprotein cholesterol (HDL-C) and the ratios of TG/HDL-C, TC/HDL-C and LDL-C/HDL-C were not significantly different between the three groups, while the level of triglyceride (TG) was statistically different. DHA (-16.6 ± 30.34) and control (+15.32 ± 56.47) groups were statistically different with regard to triglyceride (TG) levels (p=0.000).
Conclusions: two grams of Eicosapentaenoic Acid or Docosahexaenoic Acid supplementation for 12 weeks had no significant differential impact on the levels of total cholesterol, LDL-C, HDL-C, TC/HDL-C, TG/HDL-C and LDL-C/HDL-C. However, it had a desirable effect on the level of TG in Helicobacter pylori positive patients.
Keywords: Helicobacter pylori; Eicosapentaenoic Acid; Docosahexaenoic Acid; Lipoprotein, Triglyceride

The effect of Ginger (Zingiberofficinale) on glycemic markers in patients with type 2 diabetes
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Background: Ginger (*Zingiberofficinale*) is one of the Functional Foods which contains biological compounds including: gingerol, shogaol, paradol and zingerone. Ginger has been proposed to have anti-cancer, antithrombotic, anti-inflammatory, anti-arthritic, hypolipidemic and analgesic properties. Here, we reported the effect of ginger supplementation on glycemic indices in Iranian patients with type 2 diabetes.
Methods: A double-blind, placebo-controlled, randomized clinical trial was conducted on 20-60 years old patients with type 2 diabetes who did not receive insulin. Participants in the intervention and control groups were daily received 3 grams of powdered ginger or placebo (lactose) (in capsules) for 3 months. Glycemic indices, total antioxidant capacity, malondialdehyde, C reactive protein, serum paraoxonase, dietary intake and physical activity were measured at the beginning and end of the study, and after 12 hours fasting.
Results: Comparison of the indices after three months showed that the differences between the ginger and placebo groups were statistically significant as following: serum glucose (-19.41 ± 18.83 versus 1.63 ± 4.28 mg/dl, p<0.001), HbA1c percentage (-0.77 ± 0.88 versus 0.02 ± 0.16 percent, p<0.001), insulin (-1.46 ± 1.7 versus 0.09 ± 0.34 µlU/ml, p<0.001), insulin resistance (-16.38 ± 19.2 versus 0.68 ± 2.7, p<0.001), hs-CRP (-2.78 ± 4.07 versus 0.2 ± 0.77 mg/l, p<0.001), PON-1 (22.04 ± 24.53 versus 1.71 ± 2.72 U/l, p<0.006), TAC (0.78 ± 0.71 versus -0.04 ± 0.29 µlU/ml, p<0.01) and MDA (-0.85 ± 1.08 versus 0.06 ± 0.08 µmol/l, p<0.001)were significantly different.
Conclusion: This report shows that the three months supplementation of ginger improved glycemic indices, total antioxidant capacity and paraoxonase-1 activity in patients with type 2 diabetes.
Keywords: Ginger**,** Glycemic markers**,**paraoxonase**,** Type 2 diabetes

Effect of active learning techniques on nutritional knowledge of primary school children

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Background: Obesity and chronic diseases are increasing in children. Having more nutritional knowledge in this age group may help improving nutrition behaviors. Nutrition education using some techniques such as active learning could enhance nutritional knowledge of children. The aim of this study was to evaluate the impact of nutrition education on nutritional knowledge of school children and their mothers.
Methods: A total of 219 students participated in this study (116 as intervention group and 103 as controls). Demographic information was taken before the intervention. Also nutritional knowledge questionnaire was completed by children and their mothers before and after the intervention. Content validity and reliability of the questionnaire were assessed by 8 nutritionists and a group of 20 students and their mothers respectively. Cronbach's alpha was 0.64 for the children questionnaire and 0.71 for mothers' inventory. Children's training included 5 sessions using active learning methods, done every two weeks. Mothers' education was carried out by lecture and question-answer sessions also via sending SMSs and Pamphlets. 155 children and 83 mothers completed the study. Student T test, paired T test, and correlation were used for data analysis. P-value less than 0.05 was considered statistically significant.
Results: At baseline, nutritional knowledge of mothers with primary education was significantly less than mothers with a high school education or higher (P<0.05). Also there was a weak positive significant correlation between mothers' and children's nutritional knowledge (P<0.036, r=0.2). Nutrition knowledge scores of students before and after the training were significantly different (P<0.0001). After intervention, nutritional knowledge was significantly different between intervention and control group (P<0.0001) although, there was no significant differences before the intervention between them. Maternal nutritional knowledge was not significant between the intervention and control groups before and after intervention.
Conclusion: Increasing nutritional knowledge which is the first step in changing unhealthy eating behaviors could be improved via active learning techniques in children, but it seems that factors other than the nutritional knowledge must be considered in mothers.
Keywords: nutritional knowledge, active learning techniques, school-based intervention

A Survey on the Contamination of Siahmazghi Cheeses (Traditional Cheese in Guilan province) To Listeria monocytogenes

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Introduction: Tracing of bacterial contamination in food is an important aspect of food hygiene. Since the presence of Listeria monocytogenes in food is considered as an important hazard for public health especially in immunocompromised persons, many studies have been performed about food contamination with this bacterium in various countries including Iran.
Due to the ability to persist in food-processing environments and growth and proliferation in refrigeration temperatures, L. monocytogenes is considered as an important threat to public health. Although the organism is destroyed by proper pasteurization, sometimes it can be found in some cheeses made from pasteurized milk maybe because of secondary contamination.
Purpose: The aim of this study was to examine the presence and load of L. monocytogenes in Siahmazgi cheeses (Iranian traditional cheese in Guilan province).
Material and methods: MPN technique was used for estimating of L. monocytogenes.
Results: A total of 10 fresh cheeses were examined for this purpose and L. monocytogenes was isolated from 10% (1) of samples and contamination load was estimated 2 g^{-1}.
Discussion and conclusion: Regarding to the high risk of L. monocytogenes in foods even in small numbers, extensive research must be carry out about the application of general principles of food hygiene and Hazard Analysis and Critical Control point guidelines during production.
Keywords: Listeria monocytogenes, Siahmazgi, cheese, Iran

Authors Index L

Effect of barberry juice on lipid profiles inpatients with type 2 diabetes

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Introduction: Diabetes causes dislipidemia in most diabetic patients. Barberry juice is known to have polyphenole and antioxidant. The purpose of this study was to determine the effects of barberry juice consumption on lipid profiles in patients with type 2 diabetes.
Methods: This study was a randomized clinical trial performed on 42 diabetic patients (55.4±7.6) recruited from Iranian Diabetes society- Babol,and were randomly allocated to either the Barberry juice consumption or the control group. Patients in the Barberry juice group consumed 200 ml of Barberry juice daily for eight weeks. The questionnaires for general characteristics,and 24 hour food recall were completed by interview. Serum concentrations of triglycerides,total cholesterol,HDL-c,LDL-c and anthropometric measurements,including weight and height,were measured at baseline and at the end of the study. SPSS software was used for data analysis and Chi Square,Paired T-test,Independent T-test and Covariance analysis test were conducted.
Result: The mean body mass index,nutrients intake,drug regimen and physical activity of patients did not change during the study. In the barberry juice consumption group,the mean Concentrations of total cholesterol (P< 0.001) were significantly decreased compared with baseline. The mean total cholesterol (P< 0.01) was significantly different between the barberry and control groups after intervention.
Conclusion: Considering the positive effect of barberry juice consumption in reducing total cholesterol in patients with type 2 diabetes it may be recommended for hypercholesterolemia prevention in these patients.
Keywords: Barberry juice,Type 2 diabetes,lipids profiles

Impact of proper nutritional support on IL-10 level in Burned Patients

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Background: Patients suffering from severe burns develop metabolic imbalances and systemic inflammatory response syndrome (SIRS) which can lead to malnutrition,impaired immunologic response,multiple organ failure and death. Prolonged and persistent hyper catabolism is characterized by the loss of lean body mass,as well as progressive decrease of host defenses that impairs the immunological response and lead to sepsis. Studies have shown that providing an early and adequate nutrition support can lower the adverse effects of exaggerated hyper metabolic response,reducing morbidity,and improves outcome. This study was designed to assess the effectiveness of adequate nutritional support on IL-10 levels in thermally burn patients.
Methods: Thirty Patients with severe thermal burn (>20% of Total Body Surface Area [TBSA] burned) on the first day in the ICU,joined this single-blinded randomized controlled clinical trial. Patients were randomly divided into two groups: control group (group C,15 patient),received hospital routine diet (liquid and chow diet ad libitum) while Intervention group (group I,15 patients) received commercially prepared solution with oral or tube feeding. The caloric requirement for Intervention group was calculated according to the Harris-Benedict formula. IL-10 level was measured at day 1 and 9 of admission,The Sequential Organ Failure Assessment (SOFA) score was measured on admission (SOFA0),day 2 (SOFA1),day5 (SOFA2),and day 9(SOFA3) consequently. The difference between last measurement (SOFA3) and day 2 (SOFA1) was calculated.
Results: The results showed that IL-10 level at day 9 were significantly decreased in intervention group [-4.00(-20.00,-1) vs. -1.90(-39.00,12.15) p=0.002]. There was also a significant change between SOFA3,[1.0(0.0,2.0) vs. 2.0(1.0,3.0),p = 0.039]. As a consequence,we suggest the use of SOFA measurement as a reliable predictor of IL-10.
Conclusion: This study shows that an adequate nutritional support is a fundamental part of clinical treatment in thermally burned patients. A proper enteral nutritional support in patients with severe burn injury can improve SOFA Score which correlates with a lower IL-10 level,because of decrease in negative nitrogen balance and improved immunity leading to decrease in the incidence of infection. In summary,we believe that health care providers and policy makers should pay closer attention to nutrition factor as it plays a key role in improving clinical outcome.
Keywords:Enteral Nutrition,Burns, Nutritional Support, Organ Dysfunction Scores, Systemic Inflammatory Response Syndrome

Determining the prevalence of anemia in the elderly,and some other related factors in 2013

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Background: The elderly are prone to malnutrition. Increasing age is associated with an increased risk of micronutrient deficiency and anemia associated. The aim of this study was to determine the prevalence of anemia in the elderly,and some other related factors.
Methods: This cross-sectional study of 541 elderly 60 years and older living in his house and was apparently healthy. Anthropometric,dietary survey and interviews were conducted by questionnaire. CBC and hemoglobin were performed in a reference laboratory. Data were analyzed statistically using ANOVA,and t-test.
Results: The prevalence of anemia based on hemoglobin,in the whole was reported 23/71% respectively,So that was in men 8/13% and for women,35/06%. the difference was statistically significant (p = 0/00). Based on MNA nutritional status of the elderly was not significantly associated with anemia (p = 0/38).
Conclusions: Anemia is prevalent in free-living elderly. Despite fortification of flour with iron and folic acid appears to interventions such as education,nutrition and food support for the elderly poor,especially women,is necessary.
Keywords: anemia,elderly,hemoglobin,malnutrition

Assessment of Effective Demographic Factors on Knowledge, Attitudes and Mothers Practicein Complementary Feeding Of Children Less Than One Year in Ahar Province (2013)

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Background: Since several factors is effective on knowledge, attitude and mothers practice in complementary feeding of children, therefore this study was aimed Assessment of effective demographic factors on knowledge, attitudes and mothers practice in complementary feeding of children less than one year in Ahar province.

Methods: This cross-sectional study was conducted on 68 mother contain of children underoneyear ofcoveragesanitary- care centersbyface to faceinterviewandquestionnaireconsisted offour parts: data of mothers demographicandbackground, formsof knowledge, attitude and practicein the supplementary feeding. Knowledge, attitudes and practice score were 0-12, 0-16 and 0-7, respectively, than was divided the "weak", "medium" and "appropriate". Data was analyzed by SPSS software.

Results: The mothers had: 53% (diploma and upper education), 51.2% (one child), 69.1%(housewives), 57.4% (no history of supplementary nutrition education). The fathers had: 55.9% (diploma and upper education) and 50% (self-employed).Between father and mother education and father job with knowledge and attitude situation was founded significant correlation ($P<0.05$). But these factors didn't show any correlation with mothers practice. Also, between children number and rating with mothers knowledge there was significant correlation but wasn't with attitudes and practices any significant correlation. Between mothers job and history of education there wasn't any correlation.

Conclusions: Whereas knowledge, attitude and mothers practice in complementary feeding and the effect of social, economic, cultural are effective on the promotion of knowledge, attitude and mothers practice, special educational strategies appears to be required.

Keywords: complementary feeding, knowledge, attitude, practice

Authors Index **M**

The value of salt intake to predict metabolic syndrome: a population base study in Iran

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Background: In order to direct global association between high salt intake and increased risk for main components of metabolic syndrome, the present study assessed whether high salt intake was associated with an increased risk of metabolic syndrome in Iranian population.
Materials & methods: A population-based, epidemiological research among a cohort of 820 individuals who were residence in Isfahan city addressed the information of the risk profile of metabolic syndrome and its components. Metabolic syndrome was diagnosed based on the revised the amended National Cholesterol Education Program's Adult Treatment Panel III (ATP-III) criteria for Asian population.
Results: The mean level of 24-h urinary sodium secretion (indicating sodium intake) was significantly higher in individuals suffered metabolic syndrome than those without this state (247.00 ± 83.04 mmol versus 152.69 ± 54.78 mmol, $p < 0.001$). The amount of secreted 24-h urinary sodium was positively association with each component of metabolic syndrome including waist circumference, body mass index, systolic blood pressure, diastolic blood pressure, fasting blood sugar, and serum triglyceride level. Through multivariable logistic regression model, the amount of salt intake could effectively predict presence of metabolic syndrome adjusted for gender, age, body mass index, and current smoking. According to the ROC curve analysis, the amount of24-h urinary sodium secretion had an acceptable value for discriminating metabolic syndrome from normal condition (c = 0.818,95% CI: 0.774 – 0.862). The optimal cutoff point of secreted 24-h urinary sodium for discriminating these two metabolic conditions was 185mmol yielding a sensitivity of 73.1% and a specificity of 72.3%.
Conclusion: In this regard, high daily salt intake can strongly predict metabolic syndrome state in Iranian population.
Keywords: salt intake, metabolic syndrome, cutoff, Iran

The metabolic syndrome and associated lifestyle factors among the Iranian population

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Background & aim: This study aims to evaluate the impact of the Isfahan Healthy Heart Program (IHHP) interventions concerning healthy behavior,on the prevalence of the metabolic syndrome (MetS) and its components in the Iranian population.
Materials and Methods: The IHHP targeted the population at large in three districts in central Iran from 2000 to 2007.Numerous interventional activities were performed to improve their lifestyle to a healthy one, such as, healthy nutrition, increased physical activity, and quitting tobacco. The main intervention strategies were public education through mass media, intersectoral cooperation, health professional education, marketing and organizational development, legislation and policy development, as well as research and evaluation. In this sub-study, participants with MetS were analyzed. MetS was defined based on the Adult Treatment Panel (ATP) III definition. The logistic regression method was applied to explore the relationship between lifestyle factors such as nutritional habits, smoking, and physical activity,with components of metabolic risk factors.
Results: The mean age of the participants was 44.68 ± 14.43 years in 2001. The mean values of the MetS components differed from 2001 to 2007. The mean of systolic blood pressure (SBP) decreased from 126.7 ± 22.31 to 124.21 ± 20.0 and from 129.47 ± 23.08 to 126.26 ± 21.88 among females in both the intervention and reference areas. Similar changes were observed among males. However,the mean diastolic blood pressure (DBP) and triglycerides decreased significantly in the intervention area and increased significantly in the reference area in both sexes. High density protein cholesterol (HDL-C) was decreased in both sexes,from 2001 to 2007,in the intervention and reference areas. A strong relationship between tobacco control with high SBP and hypertriglyceridemia was found ($p< 0.01$).
Conclusion: Lifestyle improvement programs could be useful to improve the MetS status among men and women. Physical activity, healthy diet, and quitting smoking, more specifically, had benefits with respect to hyperglycemia and dyslipidemia.
Keywords: Iranian adults, lifestyle modification, metabolic syndrome

Dietary patterns and mortality from cardiovascular disease: Isfahan Cohort Study

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Background & aim: We are aware of no prospective study reporting the association between dietary patterns and cardiovascular mortality from Middle-Eastern countries. We aimed to evaluate the association between major dietary patterns and cardiovascular mortality in Iranian adults.
Materials & methods: This population-based prospective cohort study was done among 4834 randomly selected participants aged ≥35 years in central Iran (2001-2010) in Isfahan Cohort Study (ICS). Dietary intakes were assessed using a food frequency questionnaire and major dietary patterns were identified by means of exploratory factor analysis. Subjects or their next of kin were interviewed biannually looking for possible occurrence of events. Cardiovascular mortality was defined as mortality from fatal myocardial infarction and other ischemic heart disease, fatal stroke and sudden cardiac death.
Results: During the median follow-up of 9.0 years and 50282 person-years, we found a total of 116 cardiovascular mortalities. Four major dietary patterns were identified: "Western", "Mediterranean", "Animal fat" and "Fast food". Adherence to the Mediterranean dietary pattern was protectively associated with cardiovascular mortality; such that those in the highest quartile were 46% (HR: 0.54; 95% CI: 0.32-0.91; P for trend=0.03) less likely to have incident cardiovascular mortality than those in the lowest quartile. Further adjustment for potential confounders, strengthened this association (HR: 0.42; 95% CI: 0.19-0.96; P for trend=0.02). Adherence to other dietary patterns had no significant association with

cardiovascular mortality.
Conclusion: We concluded that even in the setting of a developing country, consumption of a Mediterranean dietary pattern was associated with reduced risk of cardiovascular mortality.
Keywords: Factor analysis, dietary patterns, cardiovascular disease, mortality, Mediterranean diet

Drugs in cachexia and muscle of pharmacological agents in the research and indigenous herbal medicines

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Background: Cachexia is a complex metabolic syndrome associated with underlying illness and characterized by loss of muscle with or without loss of fat mass. Bone mineral density may be affected as well. 30% up to 80% mortality rate of cachexia is reported according to different underlying diseases. Early management of cachexia is of essential The purpose of this article is to review the conventional and in research phase drugs and also herbal drugs beneficial in cachexia management
Methods: A complete search performed about the cachexia management in electronic databases such as ISI web of science, PubMed, Scopus and google scholar.
Results: The cachexia management is complicated and needs an early multimodal management approach including nutritional support, proper physical activity and multiple drugs. Combination drug therapy is recommended in most of the cases. Among orexigenic agents progestines are recommended for the first line and also cannabinoids, antiserotoninergic drugs (Cyproheptadine, 5HT3 receptor antagonists), corticosteroids, melanocortin antagonists, thalidomide and Ghrelin (Anamorelin) can be useful. Anti–catabolic agents such as inflammatory cytokine inhibitors (Anti-TNF α, Anti-IL-6, anti myostatin agents), IL-15, β2-adrenergic agonists; and anabolic agents such as GH, IGF-1, androgenic hormones, SARMs are definitely important in cachexia management but need more research. Herbal drugs such as Curcumin, Resveratrol, pomegranate extract, fenugreek seeds and other herbal drugs seem to be beneficial but need more clinical investigations.
Conclusions: Because cachexia has a complicated multimodal management and there is no agreement on management of cachexia more studies should be performed to treat cachectic patients successfully.
Keywords: cachexia, muscle, Pharmacotherapy, Herbal medicines

Investigation of the relationship between nutritional status and anthropometric measurements in pregnant women with low birth weight deliveries in Tehran Shahid Akbar Abadi

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Background:Low birth weight (LBW),is one of the most important indicators of the world Health Organization as a determinant of mortality in newborns. Pregnancy is associated with changes in body weight and nutritional status. Several factors,including maternal health status and quality of food intake before and during pregnancy can have an effect on birth weight. In the present study the examination of the effects of anthropometric status,maternal weight gain and some factors affecting the feeding of LBW infants have been done.
Methods: This case- control study was conducted on pregnant women who gave birth in 1389 in Tehran,Iran,Shahid Akbar Abadi Hospital. 100 mothers whose babies were born weighing less than 2500 g were included in the study group. Control group were women whose babies' weight was normal. Information including weight,height. BMI before pregnancy,maternal weight gain of the mother during pregnancy,iron supplementation,consumption of snake food,HG pregnancy,bulimia and foos hates information contained on case or questions from mothers were completed. Statistical analyzes were performed using SPSS version 16.
Results: Supplementation in pregnancy ($p< 0.021$ and OR=0.48) and iron supplementation ($p< 0.02$ and OR=0.53),trying to reduce the weight of the mother during pregnancy ($P< 0.002$ and OR=0.12) increase the odds of LBW.
Conclusion: The relevance of proper control weight gain during pregnancy and pregnancy complecations such as gestational hyper emesis in pregnancy and insistence on supplemental iron supplementation in pregnancy is critical component in preventing LBW. While the principle of counceling mothers about proper weight loss and prevention of weight gain during pregnancy and insisting on self-sufficiency in food consumption between meals can have a preventive role.
Keywords: Nutritional status, Anthropometric

Sesamin supplementation modulates cardiovascular risk in women with rheumatoid arthritis

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Background: Rheumatoid arthritis (RA) is an inflammatory disease with the increased mortality from cardiovascular disease (CVD). Oxidative stress has a critical role in the pathophysiology of RA and CVD1-3. Sesamin, the main lignin constituent of sesame, has several antioxidant and anti-inflammatory effects. This study was aimed to investigate the effects of sesamin supplementation on anthropometric indices, lipid profile, blood pressure and oxidative stress markers in women with RA.
Methods: In this randomized, double – blind controlled clinical trial, 44 patients with RA were randomly divided into two groups (intervention and control). Patients consumed 100 mg/day sesamin supplement and placebo in the intervention and control group, respectively for 4 weeks. At the baseline and end of the study, anthropometric indices and blood pressure were assessed. Serum concentrations of lipid profile, malondialdehyde (MDA) and total antioxidant capacity (TAC) were also determined.
Results: At the end of study, sesamin supplementation significantly decreased serum levels of MDA (P=0.018) and increased TAC and HDL-C levels in patients with RA (P=0.020 and P=0.007, respectively). In the intervention group, the mean of weight, body mass index, waist to hip ratio, body fat, systolic blood pressure, and the concentration of other lipid profiles (TG, total cholesterol and LDL-C) were also significantly decreased at the end of study compared to the baseline values (P0.05).
Conclusion: These findings confirm antioxidant, anti hypertensive, and serum lipid-lowering effects of sesamin. Therefore, sesamin supplementation could modulate the cardiovascular risk in patients with RA. However, further investigation is suggested in this regard.
Keywords: Sesame, oxidative stress, cardiovascular disease;

rheumatoid arthritis

Efficacy of Vitex Agnus Castus with placebo in post-menopausal women with some menopausal symptoms

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Background: Menopause is defined as the complete cessation of menses for one year,because of a decline in estradiol levels. Most postmenopausal women experience some of the early and late symptoms related to vasomotor instability or neuro-cognitive dysfunction. Vitex agnus castus(Vitex) is a well-known herb and its fruit is composed of Volafile essence,fatty oil and flavonoid which can be used as an alternative to estrogen in women having a contraindication to use of female sex hormones. This study conducted to compare the efficacy of Vitex Agnus Castus with placebo in postmenopausal women with some menopausal symptoms (Kupperman index: including hot flashes, insomnia, night sweats, irritability, depression, fatigue, headaches, frequent urination and bladder pain).
Methods: Sixty postmenopausal teachers with 45-60 years old participated in a clinical trial conducted in an academic center in Gorgan-Iran. The participants divided in two equal groups randomly and treated with Vitex or placebo,40 drops per day for 8 weeks. Data collected by using interview, individual characteristics questionnaire and evaluated by Blatt-kapperman's index at four follow-up visits. Statistical analysis was carried out by using descriptive statistics and Independent t-test.
Results: The results showed that the difference in Blatt-Kupperman index was not significant on the 2nd week of treatment (p=0.198); however,it was statistically significant between the two groups on the 4th,6th,and 8th week of treatment (p=0.008,p=0.00,p=0.00 respectively). Some adverse events recoded between groups were statistically significant (p=0.012). Also, the results showed that the complete remission of hot flashes after eight weeks in control group was 80% and in the placebo group was 12.5%.
Conclusions: Despite some unimportant adverse events,Vitex can be used as a natural therapeutic agent and effective treatment for the early symptoms of postmenopausal women((Kupperman index) especially in women having a contraindication to use of female hormones.
Keywords: Menopausal, Vitex Agnus

Association of dietary patterns and quality of life in patients with type 2 diabetes

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***Background**: The diet is one of the effective factors on quality of life and plays a main role in the control and treatment of diabetes. The present study aimed to evaluate the association dietary patterns and quality of life in patients with diabetes.*
***Methods:** This cross-sectional study was carried out on 110 patients with diabetes attending to the diabetic clinic of Ahvaz in 2013. The demographic and anthropometric data were collected by questionnaires. Semi-quantitative food frequency questionnaire, quality of life questionnaire SF-36 and audit of diabetes-dependent quality of life (ADDQOL) were also used. Independent sample t- test and multivariate linear regression were used for statistical analysis.*
Results: In this study, three major dietary patterns were identified: healthy, western and high-protein dietary patterns. Healthy dietary pattern was associated with smaller amounts of weight, BMI, body fat percent and blood glucose (P<0.05). A significant positive correlation was also found between healthy dietary pattern and quality of life indices (physical functioning, general health, vitality, self-confident, positive feeling about the future and freedom to eat). In contrast, the traditional dietary pattern was associated with lower score of quality of life (P<0.05).
Conclusion: Following of the healthy dietary pattern, by positive impact on the anthropometric indices, blood glucose control and increased self-confidence and hope in the future, will improve quality of life in patients with diabetes.
Keywords: Dietary Pattern, Quality of Life, Diabetes

The relation between Basal Metabolic Rate and activity of the sympathetic-parasympathetic system with Iranian Traditional Medicine warm and cold temperament

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Background: Our body's energy demand consists one of the most essential pillars of medicine. Basically, human beings consume energy to maintain life's vital processes and the expenditure of this total energy is affected by several factors. Nowadays, modern medicine has shown to have side effects, is expensive and have low efficacy in some cases; thus, complementary medicine is a gaining attention worldwide. From the Iranian Traditional Medicine point of view, temperament is a basic concept that helps in the maintenance of health and diagnosis of disease. It could be assumed that there is a relationship between the factors affecting temperament and metabolism. In this study, this relationship was investigated by assaying the Basal Metabolic Rate and activity of sympathetic–parasympathetic system between warm and cold temperamental people.
Methods: In this study, based on the standardized questionnaire, the subjects were divided into two groups including warm and cold temperament. Accordingly, basal metabolic rate, sympathetic and parasympathetic function and thyroid function, body composition and nutritional status of the two groups were compared. At the beginning of the study blood samples were taken and indirect calorimetry, body temperature, heart rate and blood pressure was measured. After a six day wash out period, the investigations were repeated. The data were analyzed using the SPSS statistical software.
Result: In this study 45 participants were enrolled that two people of them were excluded. The 43 people completed the study . They were 20 males (5/46%) and 23 women (5/53), respectively. Men are divided to two groups containing 10 cold and 10 warmth temperament. The stimulated Basal Metabolic Rate (BMR) was 1909/48 and 1668 kcal in warmth and cold temperament participants, respectively. The stimulated amount ofT3 and TSH were 1/40, 1/26 and 1/38, 1/99 in warmth and cold temperament participants, respectively. The results of our study showed that body fat percentage was significantly higher in cold temperament than warmth temperament participents also BMR, HR, SBP,T3, TSH in warmth temperament participants was more than cold temperament.
Conclusion: This study is the first study that evaluates the relationship between human temperament and the metabolic rate. We believe that the result of our study, i.e. explaining the relationship between food temperaments from

the viewpoint of Iranian traditional medicine with modern medicine principles, will create a new window in nutritional science that can be a step forward in improving health.
Keywords: Temperament, Iranian Traditional Medicine, Basal Metabolic Rate, sympathetic-parasympathetic system, thyroid

The Effect of Zataria multiflora Boiss and Rhus coriaria L. (Sumac) on the thermic effect of food, activity of sympathetic - parasympathetic system: Comparison between warm and cold temperament people based on Iranian Traditional Medicine

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Background: Human s demand to energy is one of the most essential principles in the science of medicine. Basically, human beings need to consumption energy in order to maintain their life and several factors affect the total energy expenditure. Nowadays, in the world, because of side effects and high costs of classical medicine and low efficiency in some cases, Complementary medicine is a growing concern. Temperament is one of the basic concepts in health and disease diagnosis. It seems that there is a basic corresponding between the effective factors on the temperament and metabolism which in the present research such relationship has been examined.
Methods: The present study has been conducted in two stages. Stage One: The subjects were divided into two groups including warm temperament and cold temperament by using the validated questionnaire. Accordingly, basal metabolic rate, nervous system and thyroid function, body composition and nutritional status of the two groups were compared. Stage Two: In order to measure thermic effect of Zataria multiflora Boiss (thyme) and Rhus coriaria L. (Sumac) a double blind randomized crossover trial study had designed. In this design, the subjects in each of the groups divided into two subgroups randomly and each member of each subgroup gave a single dose of thyme or sumac and then they had monitored for 4 hours at rest. At the beginning and end of the study blood samples were taken and indirect calorimetry, body temperature, heart rate and blood pressure were measured in half an hour interval duration. After six days wash out period, crossover investigations were repeated. The data were analyzed by using SPSS statistical software and using the equations crossover clinical study.
Results: The results of our study showed that Basal Metabolic Rate, HR, SBP,T3, TSH in warmth temperament participants was more than cold temperament and Thyme with a warmth temperament increased above parameters but sumac affected them as reversed.
Conclusion: with regard to our results there is probably a direct relationship between neuroendocrine system and temperament. So more investigations about the viewpoints of ITM as a different approach to human body and energy consumption are helpful.
Keywords: Basic Metabolism, Thyroid, Sympathetic and Parasympathetic System, Iranian Traditional Medicine, Temperament

Evaluation of the knowledge status in urban and rural households in the Lorestan province regarding dietary fibers

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Background: One of the most common causes of nutritional problems is lack of nutritional knowledge,and thereby,inappropriate performance in this regard,which causes problems such as malnutrition and developing various communicable diseases. Use of dietary fibers has an important role in the prevention of overweight and obesity and many of non-communicable diseases. Therefore,this study was designed and carried out to evaluate the knowledge status in urban and rural households in the Lorestan province regarding dietary fibers.
Methods: Sampling was done at households level using cluster sampling method with clusters of equal size. The study population included urban and rural households in Lorestan province that a total of 57 8-person clusters (individuals with study criteria) in urban and rural areas were studied. The required data in this study were collected using structured questionnaires and through performing interviews by interviewers in the households. Data required in the study was at health staff of physicians and medical experts levels,and data collection was done based on self-report questionnaires.
Results: Only 17% of the surveyed households had knowledge about the dietary fibers. A ratio of 39% of households knew the role of dietary fiber in the body as helping the GI movement. Less than 35% of households surveyed were aware of other roles of dietary fiber such as prevention of cancer,diseases,overweight and obesity.
Conclusion: The results obtained from this study show that many families do not know dietary fiber,and in most of cases of knowledge on dietary fiber,the knowledge of families regarding the role of fiber is at a poor level. Given the role of dietary fiber in the prevention of many non-communicable diseases, nutritional education is as of methods to increase the awareness of people,which would promote the health of families by changing the beliefs and modifying the behavior. Also, employing active teaching methods should be as the goals of nutrition education.
Keywords: Dietary fiber; Knowledge; Urban and rural households

Serum Lipids and lipoproteins and their relationship with dietary fat intake in adolescents

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Background: Dyslipidemia is an important risk factor for cardiovascular disease (CVD) and an important cause of dead in adults. Long-term follow-up studies have demonstrated that dietary fat consumption in children and adolescent is one of these risk factors of dyslipidemia in adulthood. The purpose of the current study was to assess the dietary fat intake of Iranian adolescents and their relationship with serum lipid profiles.
Methods: In this population based cross-sectional study 717 adolescents (391 girls and 326 boys), aged 10 to 19 years, were randomly selected from the fourth phase of Tehran Lipid and Glucose Study. Usual dietary intakes were assessed using valid and reliable food frequency questionnaire and a fasting blood sample was given from all participants to analysis serum lipid profile.
Results: Among serum lipid levels, only triglyceride (TG) concentration was higher significantly in boys. In girls, the percent of energy intake from total fat, poly unsaturated fatty acid (PUFA), mono unsaturated fatty acid (MUFA) and trans fatty acids were higher significantly. After adjustment for sex and age, serum levels of TG and HDL-C showed a significant decreasing and increasing trend according to the

quartiles of percent of energy intake from PUFA, respectively. No significant difference was observed between other fatty acids and serum lipid profile.
Conclusion: In conclusion, although the percent of calorie intake from fat and different types of fatty acids have effect in determining serum lipids levels, but they are not the most important factors for determining the serum lipid profile.
Keywords: dietary fat intake, lipid profile, saturated fatty acid, polyunsaturated fatty acid, trans fatty acid, monounsaturated fatty acid

The effect of omega-3 supplementation on antioxidant status after global hippocampal ischemia in the rats

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Background: The studies have showed that lack of Docosahexaenoic Acid and Icosapantanoic Acid in Hippocampus led to decline in learning in animals and humans and promote to Alzhimer disease at last. It has been demonstrated that Hippocampus Ischemia and it,s stress is somehow due to oxidative stress that PUFA omega-3 may protect the hippocampus from ischemi.
Methods: Wistar male rats were selected for this study.Rats were grouped: IR,IR+Omega-3,Sham.case group was given PUFA omega-3(EPA+DHA) (0/4 gr/Kg/day) for 1 month. Then ischemia reperfusion (10 minutes ischemia followed by 24 hours reperfusion) was done to all groups.Then the rats were anesthetized and killed by decapitation and the brain was removed from the skull. Levels of NO,MDA and the activity of SOD and CAT were measured 24 hours after global hippocampal ischemia in the hippocampus tissue.
Results: IR led to increased MDA($p<0.01$) and NO($p<0.01$) and decreased SOD($p<0.05$) and CAT($p<0.01$) in hippocampous tissue. Treating with PUFA omega-3 increased the level of SOD($p<0.05$) and CAT($p<0.01$) activity and decreased the level of MDA and NO(($p<0.05$) in hippocampus tissue. Conclusion: The results of present study suggested that PUFA omega-3 could protect hippocampus against sever ischemia through decreased oxidative stress. Keywords: Ischemic reperfusion, hippocamp, omega-3 fatty acids, oxidative stress

The Prevalence of Dyspepsia and Its Correlation with the Quality of Life among Qashqai Migrating Nomads in Fars Province, Southern Iran

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Background: Dyspepsia is a prevalent disorder that greatly affects the quality of life while its predictive factors are still ambiguous. This study was undertaken to determine the prevalence of dyspepsia and its correlation with the quality of life in Fars Qashqai migrating nomads, Southern Iran.
Methods: During 2010, seven hundred and forty eight Qashqai migrating nomads in Southern Iran aged 25 years or more were enrolled using a multiple-stage stratified cluster random sampling method when referring to their tents in summer quarters. A questionnaire was used to collect data on demographic information, lifestyle and gastrointestinal symptoms. A questionnaire consisting of demographic factors, lifestyle data and gastrointestinal symptoms was completed for each participant for dyspepsia and SF-36 questionnaire was completed for participants too. The prevalence of dyspepsia and its correlation with the quality of life was determined.
Results: The prevalence of dyspepsia was 48% among participants. The prevalence was higher in young thin female adults (<35 years old). The rate was also higher in married underweight participants. Among subjects, 39.6% were male and 60.4% were female. The dyspepsia questionnaire was completed for 717 subjects (response rate: 89%) while SF-36 questionnaire was completed for 397 subjects (response rate, 55%). The correlation between dyspepsia and quality of life was statistically significant. The classified dyspeptic patients were as ulcer-like (27.9%), dysmotility-like (26.2%), and unspecified dyspepsia (45.9%) groups. There was a statistical significant correlation between dyspepsia and consumption of vegetables and dairy products, drinking water and tea, smoking, dysphagia, reflux, heartburn and taking acetaminophen.
Conclusion: Dyspepsia was shown to have a relatively high prevalence in Fars Qashqai migrating nomads, Southern Iran and had a significant correlation with quality of life and life style. So there is a need for educational health program in these tribes to decrease the prevalence of dyspepsia.
Keywords: Dyspepsia, Quality of life, SF-36, Nomads, Life style

Identification the characteristics of dietary pattern in patients with NAFLD compared with data reported by clinically healthy subjects

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Background: Non-alcoholic fatty liver disease has become the most common cause of liver disease worldwide. The aim of this study was to identify the characteristics of dietary pattern in patients with NAFLD compared with data reported by clinically healthy subjects.
Method: This case-control study was performed on 280 subjects (140 patients with NAFLD vs.140 healthy subjects) who were attended to nutrition clinic,Ghaem Hospital,Mashhad,Iran. Dietary intake was assessed using an Iranian semi-quantitative food frequency questionnaire (FFQ),including a list of 160 items. Dietary patterns were identified by factor analysis. Regression models were fitted to assess the relation between major dietary patterns and non alcoholic fatty liver disease.
Results: Two major dietary patterns- healthy and unhealthy- were extracted. After adjustment for confounders,the healthy dietary pattern was associated with 52 percent lower odds of non-alcoholic fatty liver disease (OR 0.48; 95 % CI 0.35 – 0.66; $P < 0.001$) while the Western dietary pattern was associated with about 2 fold higher odds of the disease (OR 1.90; 95 % CI 1.30 – 2.79; $P < 0.001$).
Conclusion: The healthy dietary pattern was associated with lower risk of NAFLD whereas the Western dietary pattern was associated with an increased risk of NAFLD.
Keywords: NAFLD, dietary patterns, FFQ, factor analysis

Dietary intake and its relationship with Non-Alcoholic Fatty Liver Disease (NAFLD)

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Background: Non-alcoholic fatty liver disease is becoming the most common cause of liver disease worldwide. However,there are few reports about the intake of various nutrients in nonalcoholic fatty liver disease. The aim of this study was to identify the characteristics of dietary intake and their associations with NAFLD.
Methods: This case-control study was performed on 280 subjects (140 patients with NAFLD vs.140 healthy subjects) who were attended to nutrition clinic, Ghaem Hospital, Mashhad, Iran. Dietary intake was assessed using an Iranian semi-quantitative food frequency questionnaire (FFQ). Dietary intake was compared with data reported by clinically healthy individuals. Regression models were fitted to assess the relation between dietary patterns and non- alcoholic fatty liver disease.
Results: The means (and SD) age of the population samples were 39.3 ±11.4 years for NAFLD group and 38.6 ± 11.3 years for the controls. After adjustment for total energy intake,NAFLD group had higher carbohydrate intake (235.60±31.12g vs. 222.47± 21.18 g,P<0.001). But the consumption of vitamin E,folate and potassium were significantly less in patients than controls (P<0.001 .(After adjusting for total calorie intake,BMI,smoking,serum triglyceride and HDL-C,higher intake of carbohydrate was significantly associated with an increased risk for NAFLD (OR=4.15,1.66–10.38; P<0.05),While higher intake of fat,vitamin A and folate was significantly associated with lower odds of the disease (P<0.05). Conclusions: It seems that within an Iranian population,there was an association between diet and NAFLD. A large-scale trial and more prospective studies are yet warranted.
Keywords: Non- Alcoholic Fatty Liver Disease, Carbohydrate, Food Frequency Questionnaire

The effect of education of health and safety of food to mothers by the health belief model

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Background: Food origin diseases a public health problem is large and growing, and training in this area can be an important principle in the prevention of this diseases. Considering the central role of mothers in the family and their impact on the health and safety of food study aims to improve food hygiene was performed using the health belief model.
Methods: The people in this study were 100 mothers attending health centers who were divided to two intervention (50 people) and control (50 people) groups. The information was gathered two times from completing the questionnaire, before training intervention and one month after that.
Results: Cognizance marks, perceived severity, Perceived susceptibility, perceived menace and perceived benefits increased in intervention group on the comparison of control group. (p<0.001). Increasing of operation marks were also in intervention group more than control group. (p<0.001). Conclusion: The performance of Health Belief Model will be confirmed in the training of food safety health.
Keywords: health belief model, food safety, education, mothers

Beneficial effect of nutritional supportive plan among under-nourished children in poor families in Iran with collaborating Ministry of Health and Emam Khomeini

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Background: Malnutrition in the form of Protein – Energy Malnutrition (PEM) and micro nutrient deficiencies,is one of the most important health problems in developing countries,Iran included. The purpose of this study was to improve nutritional status among under-nourished children in poor families
Methods: A total of 85,000 children under 5 (girls and boys) in 30 provinces in Iran which suffered by moderate and severe malnutrition participated (<-2SD weight for age) in this program. Malnourished children belong to poor families were determined; weights and heights were measured and anthropometric indicators were determined based on WHO,2007. Then,these malnourished children were introduced to Imam Khomeini Foundation. Khomeini Foundation as one of the biggest NGO in Iran which supports poor families since 1979. This study collaborated with Ministry of Welfare,Ministry of Health and Emam Khomeini. They have started to receive monthly supportive food basket which could support their daily nutritional requirements. This basket included (meat,egg,cheese,legumes,milk,tuna fish,chicken,liquid oil). Along with food support community health workerswere actively involved with counseling of mothers on the nutritional requirements of children. Nutritional support cut for whoever has been improved nutritional status. However,nutritional education still had continued.
Results: The results of monitoring & evaluation (according to anthropometric indicators) of this plan have shown around more than 45% of children that received food basket had consistently improved nutritional status.
Conclusions: Likewise other intervention nutrition programs in developing countries this project showed that inter sector collaboration have been the best way for decreasing malnutrition in children.

Assessing the association between food insecurity as well as some other socio-economic factors and rheumatoid arthritis, in patients with rheumatoid arthritis

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Background: Food insecurity is defined as the limited or uncertain availability of enough food for an always active and healthy life Rheumatoid arthritis is an autoimmune disease that results in a chronic,systemic inflammatory disorder that may affect many tissues and organs,but principally attacks joints. Previous study had not been conducted to assess food insecurity and accociation rheumatoid arthritis in Iran,thus the objective of this study was assessing the association between food insecurity as well as some other socio-economic factors and rheumatoid arthritis,in newly diagnosed patients.
Methods: A case-control study was conducted on 60 patients with rheumatoid arthritis as cases (9 males,51 females,mean age 41.95) Were admitted to the clinics of Shariati and Imam Khomeini Hospital in Tehran and as controls (9 males,51 females,mean age 41.7) while age and sex and had matched,in 2013. General,Demographic and socioeconomic characteristics and food insecurity status assessed using general,demographic and socioeconomic characteristics and 18-items USDA household food security questionnaires,respectively. Chi square and conditional lo-

gistic regression tests were applied using SPSS IBM20.0 statistical software.
Results The prevalence of food insecurity was 82% in cases and 18% was food secure. Variables including food insecurity,economic level,job,education level,marriage. However after multiple conditional logistic regression,only variables including food insecurity and marriage were significantly associated to rheumatoid arthritis (P<0.05). Food insecurity score were significantly associated to pain score,severity of illness,morning stiffness and joint inflammation (P<0.001).
Conclusion: In this study many risk factors including food insecurity and marriage were significantly associated to rheumatoid arthritis. Apparently,food insecurity is one of the important risk factors for rheumatoid arthritis,planners should pay attention to it. Assessment and identifying of food insecurity and associated factors can greatly help policymakers,officials and other institutions in order to design programs,intervene where is needed and evaluate.
Keywords: food insecurity, rheumatoid arthritis, Iran

Serum Retinol Concentration in Relation to Goiter: a systematic review and meta-analysis of cross-sectional studies
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Background: Endemic goiter occurs in the following of thyroid hormogenesis disturbance, and iodine deficiency. Although, IDD is known as the fundamental factor in goiter occurrence, also vitamin A has essential and critical role in goiter incidence. The aim of this review was to summarize the relation serum retinol concentration and incidence of goiter.
Methods: Google scholar, PubMed, ISI (web of science), and Scopus were searched and Observational studies that have been conducted on the association between endemic goiter and serum retinol levels were included in our study. Studies reported means and standard deviation (SD) of blood retinol concentrations in goiter and non-goiter individuals were included in meta-analysis.
Results: Regarding the adherence to the serum retinol concentration and the incidence of goiter, only 8 studies met our criteria to be included in this systematic review. Four studies in meta-analysis showed that there is not a significant association between serum retinol concentrations and goiter prevalence adolescents (Mean Difference: 0.83, 95% CI, -0.45 to 2.12). However, analysis of the mentioned relation on adult population revealed that participants with goiter have significantly lower serum concentrations of retinol compared to non goiterous individuals (MD: -9.27, 95% CI, -15.30 to -3.24).
Conclusions: In conclusion, our results showed that vitamin A has essential role in goiter prevalence and goitrous subjects exhibit a further decrease in the circulating serum retinol versus non-goitrous people.
Keywords: Retinol, Goiter prevalence, cross-sectional studies

The effects of Descurainia Sophia on body mass index (BMI), blood sugar and inflammatory factors in patients with type 2 diabetes mellitus
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Background: Diabetes mellitus, especially type 2 diabetes mellitus (T2DM) is a worldwide problem that is associated with significant morbidity and mortality. Recent studies have shown that herbal medicines and nursing care as a complementary and alternative medicine (CAM) can be effective in the management of T2DM. This study aimed to assess the effect of descurainia sophia consumption on the management of T2DM.
Methods: In this double blind randomized clinical trial, 44 diabetic patients received 75 gram D.sophia per day in addition to routine treatment. 38 patients receiving routine treatment were considered as control group. Body mass index, hemoglobinA1c (HbA1c) and C-reactive protein (CRP) were measured from all patients at the beginning and end of study and mean changes in interventional and control group were compared by appropriate statistical methods.
Results: In this study, we found that 8 weeks consumption of D.sophia decreased serum levels of CRP in both men and women (P 0.05). However, this reduction was not significant compared with control group. In addition, intake of D.sophia did not significantly affect the levels of HbA1c between groups and within groups. Mean changes of Body mass index was not significantly changed in both D.sophia and control group.
Conclusions: Descurainia sophiaintake had no effect on BMI, HbA1c and CRP in patients with type 2 diabetes mellitus. More studies are needed to confirm our findings.
Keywords: Descurainia Sophia, body mass index, blood sugar, inflammatory, diabetes mellitus

Nutritional knowledge of health care staff in Ajabshir and Bonab cities
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Background: Nutritional knowledge is one way to achieve proper and balanced nutrition in whole life. Since infants are vulnerable groups of community, nutrition in this period plays significant role in health status during adulthood. As mothers get most of their information from health centers and the knowledge of the staff in health centers on complementary feeding is necessary for proper education,in this study, nutritional knowledge of health care staff was investigated in Ajabshir and Bonab city.
Methods: In this study,sixty staff randomly selected from health care centers in Ajabshir and Bonab cities. In order to assess the knowledge on complementary feeding,staff completed a questionnaire containing 22 questions. For evaluation,the questionnaire was adjusted based on 20 scores and subjects was divided into three groups with poor,average and good knowledge based on the scores on the questionnaire. SPSS software program was applied for data analyzing.
Results: The results showed that in Ajabshir city,27% of staff had good knowledge on complementary feeding,60% had moderate knowledge and awareness of 13% was poor. In Bonab city,33.3% of staff had good knowledge on complementary feeding,63% had moderate knowledge and awareness of 3.3% was poor.
Conclusions: According to the results,the knowledge of most health care staff was not proper on complementary feeding. Given the importance of complementary feeding and the need for proper education to mothers,and since a significant percentage of the staff did not have adequate knowledge of complementary feeding,training courses for health care workers is essential in this regard.
Keywords: knowledge,complementary feeding, health care staff, West Azarbaijan

The effect of vitamin D supplementation on body com-

position parameters in patients with non-alcoholic fatty liver disease (NAFLD)

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Background: Non-alcoholic fatty liver disease can be associated with obesity. In recent years, clinical trials demonstrate that vitamin D supplementation might reduce body weight. So, in this study we try to assess the effect of vitamin D supplementation on different kinds of body composition parameters in patients with NAFLD.
Methods: This randomized placebo-controlled clinical trial was conducted on 60 patients with NAFLD. Patients received 50,000 IU vitamin D3 pearl in intervention group and placebo pearl in control group, weekly. Fasting blood sample was taken at baseline and after 10 weeks of intervention. Body composition parameters were measured by bioimpedance analysis method. Ultrasound was done to diagnose non-alcoholic fatly liver disease. Students t-test, chi-square test and analysis of covariance (ANCOVA) were used to assess the effect of intervention in two groups. SPSS software (version16.0) as used to data analysis.
Results: After 10 weeks of taking vitamin D supplementation, weight, BMI, percent body fat (PBF), lean body mass (LBM), soft lean mass (SLM), mass of body fat (MBF), waist circumference (W.C) and waist to hip ratio (W.H.R) in patients in intervention group decreased non-significantly in comparison with patients in placebo group. But, total body water (TBW) in intervention group increased in comparison with patients in placebo group, significantly.
Conclusions: Vitamin D supplementation had not significant effect on body composition markers. However, TBW in intervention group increased significantly in comparison with patients in placebo group.
Keywords: non-alcoholic fatty liver disease, vitamin D, body composition, obesity

The relationship between zinc levels and intractable epilepsy: a systematic review and meta-analysis on case–control studies

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Background: Epilepsy is one of many health concerns in humans. It has been suggested that serum trace elements concentrations in epileptic patients show some abnormalities. Zinc is packaged into synaptic vesicles in hippocampus and can be co-released with neurotransmitters. Zinc may reduce GABA response, extracting hyper-excitability of neurons and augmenting epilepsy risk, against zinc can inhibit neurotransmitter and regret likelihood of epilepsy. This systematic review and meta-analysis is conducted to investigate the relationship between zinc and epilepsy.
Methods: PubMed, Proquest, Science Direct, Scopus and Google Scholar were searched for related studies for Keywords including partial epilepsy, sensory epilepsy, tonic epilepsy, clonic epilepsy, motor epilepsy, post traumatic epilepsy, generalized epilepsy, absence epilepsy, myoclonic epilepsy, epilepsy, petit mal epilepsy, grand mal epilepsy and zinc. We reviewed case-control studies up to January 2014.
Results: Our search led to 6 eligible case-control studies which had data on serum zinc level in relation with epilepsy. Meta-analysis on their results showed that serum levels of zinc in intractable epilepsy attacks is protective (Mean difference=-0.31, 95% CI:-0.93,0.31, p value<0.001), but not statistically significant in comparison with healthy subjects. This study suggest that an optimal level of vesicular zinc ion protects brain against epilepsy induction, while an excess amounts of zinc ion can even result in neuronal death.
Conclusions: Our findings show that maintenance of Zn homeostasis in brain is important to prevent epilepsy development, and a proper brains Zn supply can reflect epilepsy-preventive effects.
Keywords: zinc, intractable epilepsy, case control

Antimicrobial resistance of Escherichia coli O157:H7/NM isolated from hamburger in Isfahan

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Background: Although,antibiotics serve as the most important agent to save millions of human lives by improving human and animal health,but there are some concerns about their using in food-producing animals which affect public health and food safety. Excessive and irregular use of such antibiotics in animals in the recent years has caused to emerging antibiotic resistant bacteria. Objective: This study was conducted to determine the prevalence rate and antimicrobial resistance of Escherichia coli O157:H7/NM isolated from hamburger in Isfahan,Iran.
Methods: A total of 120 hamburger samples were collected from 4 randomly selected factories in Isfahan,Iran. They were evaluated for the presence of Escherichia coli O157: H7/NM using microbiological culture and polymerase chain reaction (PCR). The isolated E. coli O157: H7/NM strains were tested for antibiotic resistance to eleven antimicrobial disks obtained from HiMedia Laboratories, Mumbai,India, including Nalidixic acid, Cefuroxime, Erythromycin, Tetracycline, Streptomycin, Gentamicin, Amoxicillin, Ampicillin,Kanamycin,Doxycycline and Chloramphenicol. The test was carried out by the Kirby-Bauer disc diffusion method on Mueller-Hinton agar plates (HiMedia Laboratories,Mumbai,India) supplemented with 5% defibrinated sheep blood,according to the Clinical Laboratory Standards Institute (CLSI,2006).
Results: The current study showed that from a total of 120 hamburger samples analyzed,four samples (3.3%) were contaminated with E. coli O157. Of four E. coli O157 isolated,only one sample was serotype E. coli O157:H7 and others were serotype E. coli O157:NM. All isolates (100%) were resistant to one or more antimicrobial agent. Antimicrobial susceptibility testing in our study indicated that there is a high resistance of E. coli O157 to Gentamycin,Tetracycline and Erythromycin but,intermediate resistance to Amoxicillin,Cefuroxime and Streptomycin. On the other hand 50% of isolates were resistant to Ampicillin,Nalidixic acid and Streptomycin as well as 25% to Chloramphenicol and Doxycycline, respectively.
Conclusions: The results of our study shown that E. coli O157:H7 and E. coli O157:NM have developed resistance to antibiotics,also multiresistance which was defined as resistance to three or more of drug tested was found in 27% of E. coli O157 strains and this is a major public health concern.
Keywords: Antimicrobial resistance, E. coli O157: H7/NM, hamburger

The assessment of major foods of western dietary pattern in relation with body mass index and abdominal obesity in young women

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Background: Growing prevalence of overweight and heavy

economic and healthy outcomes is a concerning disaster in developing country. Lifestyle change and nutrition transition strength malnutrition in young individuals as economic power of country. In this study, several components intake of western dietary pattern including ready to use foods, beverage and cakes were assessed in relation with body mass index

Methods: The present cross sectional study is conducted on 123 young girls, 18-35 years whom were selected using cluster sampling method. A valid food frequency questionnaire was completed by trained dietitian. Anthropometric indices including weight, height, hip circumference, waist to hip ratio (WHR) and body mass index (BMI) measured based on standard methods. Data analyzed using spearman test (SPSS;version 20).

Results: Mean age and BMI of participants were 23.04±2.7 yrs and 21.08± 2.8 kg/m2, respectively. Average of WHR was 0.74±0.039 cm/cm. Mean of ready-to-use, beverages and cakes consumption were 68, 38 and 37 grams, respectively. Correlation between BMI and ready-to-use, beverages and cakes consumption were 0.335, 0.175 and 0.231, respectively. There was significant association between WHR and beverages (r=0.186).

Conclusions: There was direct relation between increasing consumption of western dietary pattern food items including ready-to-use, beverages and cakes consumption, general and abdominal obesity.

Keywords: Western dietary pattern, general obesity, abdominal obesity, waist to hip ratio, body mass index

The relationship between dairy intake and sleep quality in student boys in Ahvaz Jundishapur University of Medical Sciences

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Background: Sleep disorder is a common problem in many communities. Sleep disorder leads to many complications like fatigue, decreased levels of physical and mental functions, decline of concentration and focus. These problems have negative effects on health life. According to the effects of nutrition on many aspects of life, we decided to investigate the relationship between dietary pattern and sleep disorder in student boys in Ahvaz Jundishapur University of Medical Sciences.

Methods: One hundred and eighty three student boys from Ahavz Jundishapur University of Medical Sciences participated in this study in spring 2014. The score of sleep disorder was determined by Petersburg sleep quality questionnaire and daily dietary pattern was assessed by food pyramid guideline. Data were analyzed using SPSS version 17.0.

Results: Among different food groups, milk and dairy products group showed relationship with sleep disorder. The mean (±SD) of serving intakes of dairy products per day (during 3 months pass), were as follows: milk 0.7± 0.5, yogurt 0.8±0.65, dough (a traditional Iranian dairy beverage) 0.6±0.5, ice cream 0.6±0.7 and cheese 0.7±0.6. Negative significant relationships were observed between the score of sleep disorder with milk (P= 0.039, r = -0.153), dough (P= 0.014, r = -0.181) and total dairy intakes (P=0.006, r = -0.202).

Conclusions: The negative relationship between intake of milk and some dairy products reveal that students with less consumption of this food group may suffer from sleep disorder, so more intakes of dairy products to less sleep disorder could be recommended.

Keywords: sleep disorder, dairy products, university students, boys

Identification of the relationship between the tendency to viewing TV and content of television programs on food groups' intake and BMI of children

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Background: The formation of food habits begins from early childhoods and is established in adolescence. The mass media especially television is one of the important factors affecting the formation of food habits and child BMI through changing appetite,the desire to consume junk foods and reducing physical activity. Because of childhood obesity had doubled in the past 10 years and to identify factors contributing to obesity and overweight,this study aimed to identify the relationship between the tendency to viewing TV and content of television programs on food groups' intake and BMI of children.

Methods: This Descriptive – analytical cross sectional study was conducted on 114 children aged 2 to 6 years old who were enrolled in kindergartens in Tehran. Data on the level of viewing TV was collected with questionnaire. Data about the content of television programs viewed by children was collected with a validated questionnaire. Food frequency questionnaire (FFQ) was completed by the researchers through interviews with parents. Height and weight of children were measured by standardized procedures. The Pearson correlation test and ANOVA were used by performing SPSS version 21 to analyze the data.

Results: The results showed that more than 60% of children watched TV more than the daily recommendation (2 hours). Cartoons and child's programs,television advertisements and movies were the most popular programs of TV in children. Boys were more interested in watching TV than girls (3.16±0.77 vs. 2.95±0.71). The results of the analysis showed that BMI significantly increased in children by the increase in their interest in watching TV (p=0.008). There was a positive significant correlation between the time spent on watching television and age (p=0.032),intake of snacks and desserts (p=0.018) and simple sugars (p=0.012).

Conclusions: According to the result of this study,the probability of watching TV in preschool children increase as they grow older. Also Increasing tendency to watch TV leads to an increase in BMI and consumption of junk foods.

Keywords: viewing TV, BMI, food group'intake, children

The effect of anthocyanin supplementation on systolic and diastolic blood pressure and mean arterial pressure in athletes

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Background: cardiometabolic disorders in several kinds of fruits, vegetables, and herbal sources. In this study, we assessed the effects of anthocyanin supplements on systolic and diastolic blood pressure values and mean arterial pressure in athletes. Materials and methods This randomized double-blind clinical trial conducted on 54 athletes.Participants in intervention group were taken 100 mg anthocyanin supplements, daily for 6 weeks and control group received similar placebo. Systolic blood pressure (SBP), diastolic blood pressure (DBP) and mean arterial pressure (MAP) were determined before and after performing treadmill test. Dietary intake and physical activity of subjects had been assessed at baseline and after intervention period.

Data analyzed using analysis of covariance (ANCOVA) test by using SPSS software (version 21.0).Pvalue lower than 0.05 was set as significant level. Results SBP is similar between two groups before intervention while its mean value increased after performing treadmill test. SBP and DBP increase was not affected by taking treatments after exercise. SBP increase was higher in placebo group in compare to anthocyanin group, after exercising. MAP was not different before and after taking pills, significantly. Anthocyanin supplements did not affect SBP, DBP and MAP values after performing treadmill exercises in non-professional athletes, significantly. Conclusion Data shows that performing the mentioned exercise causes a significant increase in MAP values in both groups, while this enhancing did not show a statistically significant difference between intervention and control groups.

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anthocyanin, blood pressure, obesity

The effect of antioxidant vitamins E and C on lipid profile in elderly residents in Isfahan-Iran

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Background: Disturbances in blood lipid profile have long been recognized, as a risk factor for cardiovascular disease. Several human and animal reports point to the potential beneficial influence of antioxidant vitamins on lipid metabolism.

Methods: This randomized double-blind study was conducted on 210 elderly people aged 60-75 years. The subjects received 400 and 300 mg daily of vitamin C and E respectively or placebo for one year. General background information was collected through a questionnaire and dietary intake using three-day food records was collected every two months.

Results: There was no statistically difference between antioxidant received and control groups in food intake, except energy intake from fat and dietary cholesterol. Results of analysis of variance with covariates controlling cholesterol and fat intake, for TG, TC, LDL, and HDL showed that there was no significant difference between intervention and control groups over time (P> 0.05).

Conclusion: According to our results, combined supplementation with vitamins E and C does not influence the lipid profile.

Keywords: Supplementation, Vitamins E and C, Lipid Profile, Elderly

Association of Food Intake with Bladder cancer: a case control study

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Background: Bladder cancer is the second most common cancer of the urinary tract in the world and the third most common cancer in Iranian men. Despite the relatively high incidence of bladder cancer in Iran, no study has examined the relationship between dietary factors and bladder cancer. The aim of the present study was to investigate this association.

Methods: To investigate the potential relationships between diet and risk for bladder cancer in Iran this case–control study was carried out. Study included 55 bladder cancer patients (cancer confirmed by pathology) and 110 controls. Dietary information was obtained by using a food frequency questionnaire. Case–control comparisons were based on tertiles of average daily intake of food items. The odds ratios were computed for each tertile, with the lowest tertile defined as the reference category.

Results: Our findings show an important role for animal fat (OR=19.76), fat (OR=12.92), junk foods (OR=8.1), organ meat (OR=5.47), processed meat (OR=5.34) and sweets (OR=3.62) in bladder carcinogenesis. An inverse association was recorded between consumption of low fat dairy products (OR=0.31), yoghurt (OR =0.14), fish (OR = 0.13), some fruits (OR=0.13) and the development of bladder cancer.

Conclusion: The study indicated a potentially important role for animal products and saturated fat in bladder carcinogenesis. A protective effect was recorded between consumption of olive oil, some vegetables, fruits, cultured and low fat dairy products and the development of bladder cancer.

Keywords: bladder cancer, dietary factors, food items, food groups

ω-3 PUFAs are effective against weight loss in cachectic cancer patients

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Background: Unintentional weight loss (Cachexia) is a common symptom experienced by people with advanced progressive illness especially patients with cancer and can be of great concern to those affected and of even greater concern to caregivers. The treatment approaches for de-

creasing weight loss are pharmacological treatments including anabolic steroids and megestrol acetate and non pharmacological interventions including nutritional support such as eicosapentaenoic acid (EPA), progressive resistive exercise and aerobic exercise. The current review focuses particularly on protective effects of EPA on cachexia and its mechanisms.
Methods: The PubMed and Science Direct were systematically searched to review epidemiological and review articles published from 2002- 2013.
Results: ω-3 polyunsaturated fatty acids (PUFAs), specifically eicosapentaenoic acid (EPA), have been shown to reduce the development of cachexia in animal models with retention of both fat and muscle protein. EPA has been shown to decrease the production and action of a lipolytic factor, zinc-α2-glycoprotein (ZAG), involved in loss of adipose tissue in cachectic patients. EPA also conserves skeletal muscle in cachexia by reducing the increased protein degradation, without any effects on the depression of protein synthesis. The effect on protein degradation is related to down regulation of the increased expression and activity of the ubiquitin-proteasome proteolytic pathway by preventing nuclear binding of the transcription factor nuclear factor-κB (NF-κB). Clinical studies also confirm the ability of ω-3 PUFAs particularly EPA to reduce weight loss in cachectic cancer patients with resulting in weight stabilization. However, when it used in combination with a high calorie and high nutritional supplement of protein, weight gain was obtained, although this outcome was not consensus between all large-scale placebo-controlled trials.
Conclusion: This finding suggest that ω-3 PUFAs particularly EPA could be effective in managing cachexia, however further clinical studies are warranted to confirm that and whether it is equally effective in the treatment of cachexia in different types of cancer.
Keywords:ω-3 PUFAs, Cachexia, cancer, weight loss, NF-κB

The relation between consumption of healthy and unhealthy food groups intake and body shape

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Background: Body image is a mental concern based on individuals' impression and cognitive believes of physical appearance that effect on different aspects of life especially food choice and adherence food items diversity. In this study, we assessed the relation between healthy and unhealthy food groups intake and body shape
Methods: In this cross-sectional study 123 young girls between 20 to 35 years selected using multiple phases cluster sampling method. 168-item Food frequency questionnaire and 34-item body shape questionnaire (BSQ) completed, individually. Data analyzed using analysis of variance (ANOVA) and spearman correlation tests (SPSS software; version20).
Results: Body image questionnaire scored according to Taylor standard method (140). Individuals in the highest quartile of BSQ consumed higher amount of fast food, rice, and potato in comparison with subjects in the lowest quartile of BSQ. Data analyzed using analysis of variance (ANOVA) and spearman correlation tests (SPSS software; version20).
Conclusions: Individuals who consumed higher amount of healthy food items including cereals, dairy and fruits and experience lower body image concern
Keywords: Body shape, healthy food groups, unhealthy food groups

Status of food security and stress in pregnancy and its association with low birth weight infant

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Background: Food security and Stress experience, depression and anxiety are involved among the factors that can also interact with lifestyle and nutritional intake of mothers of low birth weight infant. The present study has been conducted to investigate the status of food security and stress in pregnancy and its association with low birth weight infant.
Method: This study is a case –control study that was performed on pregnant women who give birth in 2010 in Tehran Akbar Abadi hospital. 100 mothers whose babies were born weighing less than 2500 g were included in the study group. Control group of women were mothers who were born normal weight babies. Information about father's occupation, mother's primary education, unwanted pregnancy, abortion and birth weight of newborns of mothers were collected from hospital records. Food security status and stress, respectively, were completed by using USDA questionnaires and DASS questionnaires. Statistical analyzes were performed by using SPSS version 16. Finding: 82.1% of mothers who had low birth weight were in the state of food insecurity (0.001>p). Percent of mothers with LBW infant, have the average and severe stress were respectively 35.8% and 23.2% and in contrast 18.1%,and 4.8% of mothers with normal infant have moderate and severe stress (0.001>p). Likelihood of LBW babies born to mothers with food insecurity were 10.46 times more than mothers who were food security situation (20.43- 5.36: CI 95%,10.46 OR = and 0.000>1 p). Experiencing stress in mothers showed that stress causes the chance of LBW birth is higher compares with non-stress conditions. (5.93- 1.78: CI 95%,0.30 OR = and 0.0001>p).
Conclusion: Food –insecurity in family and existence of stress, anxiety and depression in mothers during pregnancy can each independently contribute to LBW newborns. With regard to the high prevalence of stress in households with food insecurity, it is probable that stress can have a synergistic effect on LBW babies.
Keywords:food security, stress, pregnancy, low birth weight, infant

Evaluate the laboratory and anthropometric status of children with phenylketonuriain 1393

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Background: Phenylketonuria is a common congenital metabolic disorder. This disease causes severe mental retardation and children have hyperactivity with aimless movements. Failure to control the disease causes severe mental and motor retardation that is progressive and irreversible. Early diagnosis and appropriate treatment regimen could help person to have normal IQ. Therefore, this study aimed to evaluate the laboratory and anthropometric status of children with phenylketonuria.
Methods: In this descriptive study, 65 children with phenylketonuria who admitted to PKU clinic at Motahari Hospital were examined in 1393. Sampling method was census. Patients under the supervision of an expert on nutrition received diet restricted in protein and phenylalanine with a special formula without phenylalanine. Patient data were extracted from their medical records and anthropometric measurements by specialist clinics, with light clothes and without shoes, was performed according to WHO standards.

Results: Average age of 37% of children referred to the center were less than 5 years,36% between 5-10 years,15% between 15-10 years and 12% of children were over 15 years. Number of children with this disease in families, in 89/2% of families had one sick child and in 10/8% of families had two children with phenylketonuria disease. 58/4% of parents of children referred to the clinic had parental consanguinity and 41/6% of them were non-consanguineous marriage. Average weight for age of 38/4 of children was over percentile 50% and 61/6 of children were lower than percentile 50%. The mean height for age in 53/8% was above of percentile 50% and 46/2 was lower than percentile 50%. Ages of diagnosis in 21/5% of children were at birth and 78/5% of them were diagnosed after one months of age. Mean serum levels of phenylalanine in 63/2% were between 2-6 mg/dc, in 26/1% between 6-10 ml/dc and 10/7% was above 10 mg/dc.

Conclusion: Due to the harmful effects caused by the late diagnosis of the disease and its consequences, as well as damage to individual, family and community; the need for timely diagnosis of the disease ,and promote a culture of non-consanguineous marriage and nutritional support are as important programs that should be addressed by the proper authorities.

Keywords:laboratorystatus, anthropometric status, children with phenylketonuria

Bioaccessibility to 5-hydroxymethylfurfural from Frequently Consumed Iranian Dried Fruits

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Background: 5-hydroxymethyl-2-furfural (HMF) is formed in carbohydrate rich food during acid-catalyzed dehydration and in the Millard reaction. HMF,among other Millard reaction products, is regularly consumed in our diet. Dried fruits are the main exposure source. The aim of the current work was to estimate levels of dietary exposure to this food contaminant from the selected food items.

Methods: Twenty five samples (5 samples of each group) from frequently consumed types of dried fruits were randomly selected from local markets of Tabriz, East Azerbaijan Province, Iran. The fruits selected were date, currant, plum, apricot, fruit bread. The analysis of HMF was carried out by HPLC with UV-Detector.

Results: The amount of HMF in the tested samples varied from 314.8±166.18mg/kg to 2496.3±2301.20mg/kg. The highest level of HMF content was obtained for fruit bread and lowest one was for date. There was no significant difference in the HMF content between different dried fruit groups (P>0.05). This yields a 8.7,244.8,80,208,55.2 mg HMF from one serving of date(28.3g),currant(144g),plum(50g),apricot(130g),fruit bread(23g),respectively. In comparison to daily tolerable level of HMF which is equal to 1.6 mg HMF/day,it is concluded that consumption of one serving of dried fruits exceed the level.

Conclusion: It is concluded that recommendation of dried fruit should be re-evaluated with regard to possible health hazards coming from HMF.

Keywords: HMF, Bioaccessibility, Dried fruits

Survey of the number of NPO patients,it's duration and it's reason,the feeding way of before going on an NPO status and other nutritional cares about patients during NPO period at Ghaem Hospital

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Background :NPO represents for Nothing Per Oral. There is a defined instruction for undergoing patients to NPO status and If it is not properly done,it will cause problems for patients. For surgeries,Biochemical tests,gastro intestinal problems and consciousness disorders,an NPO status is necessary. Insufficient knowledge about the conditions of making NPO is prevalent in many hospitals within the team works. With promotion of nutrition teams of any hospitals and allocation a nutrition team to every wards of hospitals,it can be better for either patients an working teams to decrease incorrect NPO status and decrease other subsequent complications. The objective of this audit is for survey of the number of NPO patients,it's duration and it's reason,the feeding way of before going on an NPO status and other nutritional cares about patients during NPO period at Ghaem Hospital and compare with ASPEN guidelines**.**

Methods : This audit takes for one week in all wards of Ghaem Hospital by filling defined questionnaires for the study in a cross-sectional way.

Results : The results show that the number of total NPO patients in all wards of Ghaem hospital for a week is 80 cases and is 10-12% of all hospitalized patients of the hospital for one day. 56.2% of these is for undergoing operations,26.2% for gastrointestinal problems,8.8% for fever and seizure,5% for consciousness disorders,2.5% for biochemical tests,and 1.3% for therapeutic team carelessness. 92.5% of these has oral feeding before undergoing an NPO status and 7.5% has NGT feeding. 52.5% of these underwent a NPO status for less than one day,12.5% for 1 to 2 days,20% for 2 to 5 days,15% for more than 5 days. 62% of this has parentral feeding during their NPO period,that this involves all patients with more than one day NPO.

Conclusion: This audit shows that at Ghaem hospital,the correct instruction of NPO status is not done well with therapeutic team. Ghaem hospital therapeutic team must be trained fo correct NPO instruction. With promotion of nutrition team and training the therapeutic team,it would be possible to improve the NPO status of patients.

Keywords: NPO, parentral feeding, nutritional cares

Assesment of the number of NPO inpatients, stay time, prior nutrition status and nutritional care during NPO status, Ghaem Hospital, Mashhad

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Background: NPO represents for Nothing Per Oral. There is a defined instruction for undergoing patients to NPO status and If it is not properly done,it will cause problems for patients. For surgeries,Biochemical tests,gastro intestinal problems and consciousness disorders,an NPO status is necessary. Insufficient knowledge about the conditions of making NPO is prevalent in many hospitals within the team works. With promotion of nutrition teams of any hospitals and allocation a nutrition team to every wards of hospitals,it can be better for either patients an working teams to decrease incorrect NPO status and decrease other subsequent complications. The objective of this audit is for survey of the number of NPO patients,it's duration and it's reason,the feeding way of before going on an NPO status and other nu-

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Conclusion: This audit shows that at Ghaem hospital,the correct instruction of NPO status is not done well with therapeutic team. Ghaem hospital therapeutic team must be trained fo correct NPO instruction. With promotion of nutrition team and training the therapeutic team,it would be possible to improve the NPO status of patients.

Assesment of changes in lynohocyte subgroups during weight loss

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Background: To study the effect of weight loss program on plasma count of important lymphocyte subtypes (CD3, CD4, CD8, CD19, CD16/56) in obese premenopausal females and comparison to the control group.
Methods: In a randomized controlled trial, 29 non-pregnant, non-lactating, healthy obese females with BMI ≥ 30 were enrolled. Body composition, serum zinc and iron status and plasma count of lymphocyte subpopulations were measured, at baseline and at the end of the intervention. Case group received a low calorie diet (3976.7 kJ/ 950 kcal per day) plus Lipase inhibitor (Orlistat: 120 mg per dose), soluble fiber (5g per dose), and daily moderate physical activity (VO2max 60%), until 10-15% weight loss. Data were analyzed and compared between case and control groups.
Results: After weight loss program Natural killer cells (CD16/56) and CD3 T-lymphocytes decreased significantly among case participants (p=0.02 and 0.001 respectively), but there was no significant changes in other immune markers. Serum zinc and iron decreased significantly among case group as well (p<0.001 and p=0.03 respectively). Decrease in CD16/56 was correlated with BMI, weight, fat mass and trunk fat changes during weight loss.
Conclusions: Current findings suggest that weight loss program even with a balanced but calorie restricted diet together with daily moderate physical activity, might adversely affect immune system. Therefore, energy restriction could be an independent factor that affects some aspects of immunity. Further clinical trials based on other weight loss programs and evaluating other immune system markers might better identify the relation between weight loss and immunity.

Is Chlorella vulgaris supplementation can improve metabolic parameters and blood pressure in patients with nonalcoholic fatty liver?

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Background: Nonalcoholic fatty liver disease (NAFLD) is the most prevalent cause of hepatic injury in the worldwide that is considered as the hepatic manifestation of metabolic syndrome. There is no consencus for treatment of NAFLD. Functional food such as microalgae is a new approach for improvement of metabolic factors in these patients. Therefore this study was aimed to assess the effect of C. vulgaris supplementation on metabolic factors and blood pressure in patients with NAFLD.
Methods: This double-blind randomized placebo-controlled clinical trial was conducted on 70 NAFLD patients confirmed by ultrasonograohy. The subjects were randomly allocated into two groups: 1) "intervention" (n=30) received 400 mg/day vitamin E plus four 300 mg tablets of C.vulgaris before breakfast (1 tablet),lunch (2 tablets) and dinner (1 tablet) and,2) "placebo" (n=30) received 400 mg/day vitamin E and four placebo tablets per day for 8 weeks. systolic blood pressure (SBP),Diastolic blood pressure (DBP),Serum glucose,total cholesterol (TC),low-density lipoprotein cholesterol (LDL-c),high-density lipoprotein cholesterol (HDL-c),triglyceride (TG), Alanine aminotransferase (ALT),Aspartate aminotransferase (AST) and Alkaline phosphatase (ALP) were assessed at baseline and after 8 weeks.
Results: No statistically significant differences exist in Anthropometric and biochemical indices between the two groups at baseline (p 0.05). SBP,DBP,serum glucose,TC,LDL-c,TG,ALT,ALP decreased significantly and HDL-c increased significantly in both groups (p<0.001). AST declined only in intervention group (p=0.04). The mean change of serum glucose,and ALP were significant between the two groups (P= 0.02 and P= 0.041 respectively).
Conclusion: C.vulgaris supplementation could be considered as an adjunctive therapy to improve metabolic factors,blood pressure and liver function alongside other treatment for NAFLD patients

The Effect of Garlic on Plasma lipid levels in Patients With Coronary Artery Disease

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Background: Study was designed to estimate the effect of garlic powder tablets on the plasma lipids in patients with coronary artery disease (CAD).
Methods: A randomized,placebo-controlled,clinical trial was conducted on 56 CAD patients between the ages of 25 and 75 years. The patients were randomly divided into 2 groups: garlic groups(n=27),receiving garlic powder tablet (400 mg garlic) twice daily and the placebo groups(n=29),receiving placebo for 3 months. Fasting blood samples were taken before angioplasty (baseline) and after 3 months. Lipid levels were measured using commercially available kits and using a direct assay.
Results: The mean age of 56 subjects was 59.37±1.28 years old. The frequencies of one,two and three vessel CAD were 61%,35.1% and 3.9%,respectively. Plavix,aspirin,ACE inhibi-

tor/ARB and atorvastatin were prescribed to all subjects of the study. After 3 months,lipid levels (included plasma total cholesterol,LDL cholesterol,HDL cholesterol and triglycerides) increased in both groups. However,this increased trend in garlic group was lower compared to placebo group. There were no significant differences when mean changes in garlic-treated subjects were compared with mean changes in placebo-treated subjects.

Conclusion: These results demonstrate that treatment with garlic-based drugs may be an effective treatment and considered as a safe adjunct treatment in CAD patients that undergoing angioplasty. The increase in lipid levels in our study can be related to different dosage of statin prescribed to patients before and after angioplasty. Future studies are recommended.

Keywords:coronary artery disease,garlic,lipids

Correlation between body mass index, inflammatory factors and lipid profiles in coronary artery disease patients

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Background: cardiovascular disease is a main problem in all of countries. Many factors are related to incidence of cardiovascular disease. The most important risk factors are inflammation and dislipidemia .The purpose of this study is assessment the effect of body mass index on inflammation factors and lipid profiles in cardiovascular disease patients .

Method: The population of this analytical cross-sectional study,was 76 coronary artery disease patients with 25-70 years old referred to Rajaie Cardiovascular Medical & Research Center. Coronary artery disease (lumen diameter stenosis >50% in at least 1 major coronary artery) determined by coronary angiography. Blood testing such as lipid profile,apolipoprotein A-1 and B and hs-CRP levels were measured and subjects height,weight and body mass index were measured by the same study coordinator. All statistical analyses were performed using SPSS software.The level of significance set for all statistical analyses was p< 0.05.

Results: The mean age of patients was 58.27±1.13 years old.71.4% were male and 28.6% were female. The mean of weight and body mass index were 73.67±1.59 kg and 26.11±0.43 kg/m2 respectively. In this study weight had significant correlation with sex,age,hs-CRP and apolipoprotein A-1.The mean plasma levels of LDL-C (p=0.02) and apolipoprotein B (p=0.03) were significantly higher in obese patients than normal weight patients,also HDL-C(p=0.01) and apolipoprotein A-1(p=0.02) were significantly lower in obese patients than normal weight patients.

Conclusions: The results of this study showed that in coronary artery disease patients,overweight and obesity through negative effect on lipid profiles and inflammation factors can progress coronary artery disease and controlling body weight can be a treatment method in this patients.

Keywords:coronary artery disease,lipid profile,inflammatory factors,body mass index .

Association between Major Depression Disorder in adult women and household food insecurity

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Background: Major depressive disorder (MDD) is a type of mood disorders which could affect person s motivation,e nergy,sleeping,appetite and weight. Considering the role of food in mental health; the present study was aimed to investigate the relationship between major depression,food insecurity,and dietary intakes in patient with MDD and healthy women.

Methods: In this case-control study,food insecurity status,dietary intakes and socioeconomic status were comprised between 72 adult women with major depression (as case group) and 143 healthy adult women (as control group). Major depression was diagnosed by psychiatrist through structured interview based on DSM-IV (Diagnostic and Statistical Manual of Mental Disorders). Food insecurity,socio-economic status,dietary intakes,and physical activity data were collected using HFIAS (Household Food Insecurity Access Scale),general questionnaire,FFQ (Food Frequency Questionnair) and Physical activity quest ionnaire(Met),respectively. Data were analyzed by SPSS 18. Logistic regression was used to determine the odds ratio for being depressed among different food insecurity status. Differences in qualitative and quantitative variables were examined by 2 and t-test,respectively.

Results: Significant positive relationship was found between severe food insecurity and major depression,even adjusting for confounding variables (OR=3.34,CI 95% =1.04–8.90,P<0.05),so with increasing food insecurity intensity,the liklehood of major depression was increased. Significant differences in energy,fat and protein intake were shown between case and control group (p<0.05). Physical activity (PA) level in case group was significantly lower than control group (p<0.01); however,physical activity level and number of children was significantly related to major depression,too (p<0.05).

Conclusion: This case-control study has compared the food insecurity status among women with and without MDD,whereas past studies in this field have studied prevalence of depression among food insecure families. Therefore,the present study was incomparable with others and could confirm the relationship between major depression and food insecurity,even after adjusting for socioeconomic variables. This study showed high prevalence of food insecurity in major depressed Iranian women,too.

Keywords: Major depression,Food insecurity,Food intake,Socio-economic status

Promotion of knowledge,attitude and nutritional practice of secondary school girls by educational booklet

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Background: Nutrition is a major factor to achieve healthy life style and has an important role to increase the health ,growth,development,intellectual ability and academic achievement. Increasing knowledge and attitude via edu-

cation lead to increase individual practice Because of the important role of school in high school girls education this study was objected to first: to achieve basic data about knowledge,attitude and nutritional practice,second: education effectiveness on these variable.

Methods: This study was interventional and descriptive – analytical. Research samples were 100 secondary school girls randomly were selected as research samples. Data collection material included a questionnaire containing demographic questions and 36 questions about knowledge,attitude and practice. After initial testing,nutrition education booklet was distributed among students and two months later the same were performed for after education test.

Results: There were significant differences between mean of knowledge,attitude and practice of students before and after training by using paired samples T-test (P< 05/0). There were significant correlation among knowledge and attitude and nutritional practice scores otherwise people who has better pretest scores were better in the post test phase and vice versa (r=0/51,p= 0/027). There were not significant correlation among household size,parent jobs and education and nutritional practice.

Conclusion: Education had an important role for improving knowledge,attitude and nutritional practice of girls. Thus,nutritional programs for continuing education in schools is designed to promote hereby to help students be healthy**.**

Keywords: education,nutritional booklet,knowledge,attitude,express practice

Acute effects of vitamin C supplementation for four weeks on antioxidant capacity and total creatine kinase activity following a meeting extrovert male athletes

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Background: The aim of present study was to investigate the effect of four weeks supplementation of vitamin C on serum levels of total antioxidant capacity and Creatine kinase among inactive males following the eccentric exercise off to check.

Methods: According the aim of present study,20 male non-athletic healthy volunteers (24±1.6 years,body fat percentage 22.59±2.62 and maximal oxygen uptake 48.96±3.58 mL/kg/min) was matched into two randomized groups of vitamin C (1000mg/day) and placebo groups. The Middle Four subjects were withdrawn from work. After four weeks of supplementation,all subjects in the intermittent aerobic exercise on a treadmill with 80% oxygen consumption (The negative slope of 10 degrees) ran for 45 minutes. Initial blood samples at baseline before supplementation,a second blood sample after completion of the supplementation period and the third sample were taken immediately after the exercise. Normalized data were analyzed using repeated measures,Bonferroni t-test and the five percent level of significance with SPSS software version 21 was investigated.

Result: Four weeks supplementation of vitamin C and eccentric then,the capacity for total anti-oxidation (p0.05). Four weeks of vitamin C supplementation not significantly Reduce Creatine kinase in the base case,But reduced peak Creatine kinase.

Conclusion: Based on the present findings,we can conclude that vitamin C supplementation may be increased by the total anti-oxidation capacity; adverse changes in markers of oxidative stress damage caused by aerobic exercise did on downhill non-athletic men.

Lifestyle status of graduate students dwelling in dormitory of ShahidBeheshtiUniversity of Medical Sciences

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Background: Lifestyle is patterns of healthy behaviors based on people choices and corresponding to their life situation. Graduate students have the large distribution of population that because of their situation,life circumferences,special period of life and friends,it is established diversity of thoughts and feelings which affect their personal life and health and the others lifestyle. The purpose of this study was the determination of graduate student lifestyle dwelling in dormitory of Shahid Beheshti University of Medical Sciences in 1393.

Methods: This cross-sectional descriptive study was carried out on 300 female graduate student inhabitants in dormitory of Shahid Beheshti University of Medical Sciences in 1393. Sampling was done randomly and the lifestyle was assessed by a HPLPII questionnaire. This questionnaire contents the questions about nutritional status,psycho-social status and physical activity. SPSS (version 16) was used to analyze the data and k-square and spearman correlation coefficient statistical tests were employed to interpret the data.

Results: Mean of age was 25.6 ± 5.59. The range of total score of lifestyle was 74 – 168 with mean of 124.94 ± 11.16 that indicate weak to good level of lifestyle between female graduate students. The assessed students were categorized into four levels namely 26.3% in very weak,22.3% in weak,39.3% in good and 12% in very good level. There is no significant relation between age and lifestyle; however,it was observed a statistic significant relation between the levels of education and lifestyle.

Conclusion: This study showed lifestyle status in graduate students dwelling in dormitory was ranged between weak to good based on categorization (very weak,weak,good,very good). It is concluded we need a purposive plan to improve lifestyle status of graduate students in dormitories,especially nutritional status and physical activity.

Keywords: lifestyle,graduate students,dormitory

Comparative analysis of the effects of melatonin and low calorie diet on anthropometric measurements of obese women: A randomized controlled clinical trial

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Background: Obesity has become a global epidemic problem throughout the world. It is estimated that 13.6% of men and 29.5% of women are obese in Iran. The alarming prevalence and an increased risk for various co-morbidities of obesity suggest that current methods in controlling obesity are not efficient enough. It seems more reasonable to consider the other means in addition to the current treatments for obesity such as dietary intervention,behavioral modification and lifestyle changes,to prevent the adverse health consequences of obesity. New data has revealed the beneficial effects of melatonin as a nutritional supplement in weight regulation. The aims of this study were to compare the influence of melatonin supplementation and low calorie diet in obese women.

Methods: Forty-four obese women were randomly assigned to melatonin (n = 22) and low calorie diet receiving (n = 22) groups. Subjects were supplemented with a daily dose of 6 mg melatonin or received low calorie diet for 40 days. At the onset and end of the study,body weight,BMI,waist and hip circumference was measured. Independent t test and paired t test were used to compare parameters between and within groups,respectively. An analysis of covariance test was used to adjust the effects of confounding factors. P value 0.05). After intervention,significant reduction was observed in mean bodyweight,BMI,waist and hip circumferences in both study groups (P0.05).

Result: There were no significant differences in the baseline measures between the melatonin and low calorie diet receiving groups (P>0.05). After intervention,significant reduction was observed in mean bodyweight,BMI,waist and hip circumferences in both study groups (P<0.05). Although the reduction was greater in melatonin supplemented group than low calorie diet receiving group,but the comparison of changes between groups was not statistically significant (P>0.05).

Conclusions: The results showed that,melatonin supplementation may ameliorate obesity and can be recommended as a part of comprehensive strategy involving diet and exercise in managing obesity. However,future studies with higher doses of melatonin and prolonged supplementation period are awaited to confirm our findings.

Keywords: obesity,melatonin,low calorie diet,anthropometric indices

Beneficial effects of melatonin supplementation on glucose homeostasis and adipokine levels in obese women: A double-blind,placebo-controlled clinical trial

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Background: Obesity is a major public health problem worldwide. Around 50% of adults are overweight or obese now. In obese patients,there is an abnormal profile of adipokine production and action,which result in insulin resistance,dyslipidemia and other metabolic disorders. Recent evidences suggest a role of melatonin on glucose homeostasis,insulin secretion and action through modifying the circulating levels of a number of hormones and adipokines such as leptin,adiponectin and insulin. The aims of this study were to investigate the effects of melatonin supplementation on glucose homesotasis and adipokine levels in healthy obese women undergoing weight loss diets.

Methods: In randomized,double blind,placebo-controlled trial,44 obese women were randomly assigned to melatonin (n = 22) and placebo (n = 22) groups. Subjects were supplemented with a daily dose of 6 mg melatonin or placebo with low calorie diet for 40 days. Serum fasting blood suger (FBS),insulin and leptin levels were assessed before and after intervention. Insulin resistance was calculated by HOMA-IR. Independent t test and paired t test were used to compare parameters between and within groups,respectively. An analysis of covariance test was used to adjust the effects of confounding factors. P value

Results: In the melatonin group,the mean insulin (p= 0.006) and HOMA-IR (p=0.001) levels reduced significantly and FBS levels decreased insignificantly. However,significant changes in HOMA-IR levels (P= 0.02) were observed in the melatonin group when compared with the placebo group. The mean serum adiponectin concentration increased significantly (p= 0.01) in the melatonin group,whereas it remained unchanged in the placebo group. The increment of adiponectin levels in the melatonin group was significant (p= 0.03) in comparison with that in the placebo group. Melatonin supplementation reduced serum leptin levels insignificantly.

Conclusions: According to our results,melatonin supplementation may have an antidiabetic effects through improving insulin resistance and glucose concentration accompanied by other metabolic benefits,such as increment of adiponectin and reduction of leptin levels. However, these findings require confirmation from future trails.

Effect of Arctium lappa linne (Burdock) root tea consumption on inflammatory status and oxidative stress in patient with knee osteoarthritis

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Background: Arctium lappa l. has many useful properties,but up to now there have been no human studies to evaluate the effects of Arctium lappa l. Therefore,considering the high prevalence of OA and useful properties of Burdock root,this study was designed to examine the effect of Burdock root tea on inflammatory markers and oxidative stress indicators in patients with knee osteoarthritis (OA).

Methods: Present study is a single-blind randomized controlled clinical trial that was was conducted on patient with OA for six weeks duration. Thirty-six patients (10 men and 26 women) aged 50-70 year-old with knee osteoarthritis referred to the physical medicine and rehabilitation department of the Tabriz University of Medical sciences Hospitals,were selected for the study and divided into two groups randomly. Anthropometric measurements in-

cluding height,weight and body mass index (BMI) were measured. For all individuals along the 42 days of study period,the same drug treatments including two lots of 500 mg acetaminophen twice a day and one glucosamine 500 mg once a day,were considered. The intervention group received daily 3 cups of Burdock root tea (each cups contain 2g/150 mL boiled water) half-hour after the meal. control group received 3 cups contain 150 cc boiled water daily. We assessed inflammatory markers such as high sensitivity C reactive protein (hs-CRP) and interleukin-6 (IL-6) and oxidative stress indicators such as total antioxidants capacity (TAC),glutathione peroxidase (GPX),superoxide dismutase (SOD) and malondialdehyde (MDA) before and after the intervention.
Results: The results showed that burdock root tea significantly decreased the levels of serum IL-6,hs-CRP and MDA while the levels of serum TAC and activities of SOD were significantly increased. GPX activities increased but not-significantly. **Conclusions:** The results suggested that Arctium lappa l. root tea improves inflammatory status and oxidative stress in patients with knee osteoarthritis.
Keywords: Arctium Lappa l.; Oxidative stress; IL-6; Hs-CRP; Knee Osteoarthritis

The effect of educational levels according to the educational degrees on the type of consumed oil and daily fruit intake in Iran
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Background: During these years education levels have increased in different population. However, nutritional actions of these populations have changed inappropriately. Nutritional action is more important for some population groups such as type 2 diabetic patients, because of their special conditions. According to studies, the correct selection of oil for consuming and sufficient intake of fruit plays an important role in health of the patients. It has suggested that educational level is associated with nutritional knowledge. This study is the first one that has investigated the effect of educational levels, according to the educational degrees in Iran, on the type of consumed oil and daily fruit intake.
Materials and Methods: With questionnaire we obtained age, sex, medications, exercise, disease, education level, type of consumed oil and daily fruit intake of 200 patients with type 2 diabetes from diabetic society of Natanz, then their height and weight were also measured. Laboratory tests (blood glucose and lipids and indicators of renal and hepatic performance) were also measured. Data were analyzed using SPSS version 16 software with X2 test.
Results: Results shows that about half of the patients (48.6 %) are illiterate or with low education level. The consumption of liquid vegetable oils is more dominant other than other oils. After controlling for age and sex, it has found that there is a positive relation between education level and type of consumed oil and a negative relation between education level and daily fruit consumption. The mean fruit consumption of the patients was 2 servings per day.
Conclusion: According to the results, increases in the education level have significant effect to improve type of consumed oil selection and increase daily consumption of fruits. In general, an education level of diabetic patients was low. Average fruit consumption of them was on the borders of the food pyramid recommendations and the consumption of liquid vegetable oils in them was the highest than other oils. General, it seems that increasing in the education level (academic degrees) will be able to make a positive impact on the nutritional knowledge of diabetic patients.

Determination of the effect on Melatonin supplementation on body weight and body fat percentage of people with overweight or class-I obesity
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Background: Obesity is the most popular metabolic disorder in the. Many experimental studies show that Melatonin consumption diminishes overweight and body fat percentage in animals. The aim of the present study was to determine the effect of Melatonin supplementation on body weight,and body fat percentage of people with overweight or class-I obesity.
Material and Methods: 38 overweight or class-I obese adult people participated in the study (8 men and 30 women). Participants were randomized blocked based on gender and were allocated to one of two bellowing groups: Melatonin or Placebo. Participants received 3 milligram Melatonin a day as a pill 2 hours before bedtime for 12 weeks (intervention period) in Melatonin group. In order to detect differences at significance level of 0.05,repeated measure ANOVA and Paired t-test; or their non-parametric equivalent tests were used.
Results: Although the results of the present study showed a significant reduction in weight and BMI of participants of both groups at the end of the study (P = 0.001),these changes were only significant in the first-six-weeks of the study (P = 0.001). Body fat mass percentage of participants only in Melatonin group reflected a significant reduction at the end of the study compared to the initial amounts (P = 0.008). Moreover; at the end of the twelfth week,salivary Melatonin levels were higher and lower than their initial amounts in Melatonin and Placebo groups,respectively. However,none of the differences in salivary Melatonin levels were statistically significant.
Conclusion: According to the results,Melatonin consumption at the dose of 3 milligram a day did not make a significant change in weight and BMI,but significantly reduced body fat mass percentage. However,more investigations are required to determine the effect of this supplement on body weight and body fat mass percentage.
Keywords: Melatonin,Overweight,Obesity,Body Fat mass Percentage

The relationship between different kinds of oils consumption and blood pressure parameters in patients with type 2 diabetes in diabetes center of Natanz
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Background: in recent years the prevalence of hypertension has raised. Diabetes is a contributor for hypertension. This study first, has investigated the effect of high consumption oils of Iran on type 2 diabetic patient's blood pressure.
Materials &Methods: After measuring height, weight and blood pressure and calculating BMI, the Consumed Oils of 200 patients (30 to 65 years old) with type 2 diabetes (26.3% men, 73.3% women) in Diabetes Center of Natanz was obtained through a questionnaire. Lipid and glucose laboratory tests was also obtained. The data is analyzed with SPSS V.16 software, with Anova One Way, independent T test, and compare means statistic tests.

Results: In compare means test, the highest mean systolic blood pressure was in men consuming solid vegetable oils and women consuming animal fat; and the lowest was in men consuming liquid vegetable oils and in women consuming soli vegetable oils. The highest mean diastolic blood pressure was in patients consuming animal fat; and the lowest was in patients consuming olive oil. The highest mean arterial blood pressure was in patients consuming animal fat; and the lowest was in men consuming liquid vegetable oils and in women consuming solid vegetable oils. In ANOVA test, it was a significant relation between consumed oil with HbA1C (p=.049) and with diastolic pressure (p=.032). In T-Test test, The systolic blood pressure of 103 patients was over or equal to 80 and of 61 patients was under 80 mmHg. 81 patients have a systolic blood pressure over or equal to 130 and 83 patients a systolic blood pressure under 130. Correlation between consumed oils and variables in Eta was only large for HbA1c.
Conclusion: The highest mean figures of blood pressure was in patients consumed oils with Trans and saturated fatty acids; and the lowest was in consumers of oils containing unsaturated fatty acids. However, the results were different for women consumed solid vegetable oil. Generally, the results shows that consumption of oils containing Trans and saturated fatty acids, especially animal fat, increase blood pressure of diabetic type 2 patients, but the consumption of olive oil, and to a lesser extent liquid vegetable oils, is related to lesser increase of their blood pressure.

Relationship acid compositions and thermal stability of olive oils

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Background: Fatty acids are one of the most important compounds in edible oils. Oils stability depends on the composition of fatty acids. The purpose of this study was to investigate the relationship between fatty acid compositions on the thermal stability in extra virgin olive oils.
Methods: Eight samples of olive oil were tested in this study. Oils were heated at 120 ° C for 4 h to evaluate the thermal stability, were sampled every 2 hours. Fatty acid composition, Peroxide value, Anisidine value, Totox value, was conducted in accordance with Iranian national standards.
Results: Results showed that oleic acid, the major fatty acid in olive oil, its value is between 69 to 74 percent. Between Palmitoleic acid and Totox index in second time (r=0/786) and Fourth Time (r=0/762), and between linoleic and Totox index in second time (r=0/643) and Fourth Time (r=0/786) there was a significant relationship. But between oleic acid and Totox index in Fourth Time (r=-0/833) is a significant inverse relationship.
Conclusion: Interpretation of the results suggests that linoleic acid and palmitoleic in extra virgin olive oil are decrease in thermal stability. But, Oleic acid increases the stability of the oils in during heat treatment process.
Keywords: Edible Oil, Fatty acid composition, Thermal Stability

Comparison of Thermal Stability of Extra Virgin Olive Oil

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Background: Heating at high temperatures creates a large change in the chemical properties of oils.Further research is necessary to choose the type and quality of the oil is due to its effects on health.Extra virgin olive oil is considered one of the best due to the beneficial effects of dietary oils.The aim of this study was to compare the thermal stability of extra virgin olive oil, Iranian and foreign.
Methods: Eight samples of olive oil were tested in this study. Oils were heated at 120 ° C for 4 h to evaluate the thermal stability,were sampled every 2 hours. Fatty acid composition, acid value, peroxide value, anisidine value,totox value, oxidative stability Rancimat, was conducted in accordance with Iranian national standards.
Results: Results showed that oleic acid, the major fatty acid in olive oil, its value is between 69 to 74 percent. There was a significant relationship between time and acid value (P= 0/013), peroxide value (P≤ 0/001), anisidine value (P≤ 0/001), totox value (P≤ 0/001). There is no significant relationship between changes in oil and acid value, peroxide value, anisidinevalue,But with totox value (P= 0/003) a significant relationship was observed.
Conclusion: Interpretation of the data suggests that the thermal process is changing the index of acidity, peroxide, anisidine and totox. The changes will further increase with time.The results will be receiving extra virgin olive oil external to the Iranian type features are better and are more resistant to heat.
Keywords: Edible Oil, Olive Oil, Thermal Stability

The effect of coenzyme Q_{10} supplementation on blood pressure, inflammation, and lipid profile in type 2 diabetes

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Background: Diabetes is considered as a metabolic disorder associated with inflammation. Coenzyme Q_{10} (CoQ_{10}) is a lipophilic substance that has recently been regarded as an anti-inflammatory compound. The current study evaluated the effect of CoQ_{10} supplementation on blood pressure, inflammation, and lipid profile in type 2 diabetics.
Methods: Fifty two patients with type 2 diabetes were involved in a randomized, single-blind, placebo-controlled clinical trial. The participants were randomly allocated to two groups: one group received CoQ_{10} supplements (100 mg twice a day) while the other received two placebos for 8 weeks. Systolic and diastolic blood pressures were determined for each of the participants before and after the study. Blood samples were collected at baseline and at the end of the intervention following an overnight fast. These were analyzed for an inflammatory marker (hs-CRP) and lipid profile (triglyceride, total cholesterol, LDL-C and HDL-C). Independent and paired t-tests were performed to make statistical comparisons between and within the groups
Results: CoQ_{10} supplementation resulted in a significant reduction in systolic blood pressure compared to the control group (p = 0.001). Moreover, a comparison of the parameters within groups indicated that systolic blood pressure de-

creased in the CoQ_{10} group ($p < 0.001$) and hs-CRP increased in the placebo group ($p = 0.03$). However, no changes were observed for lipid profile within or between the groups.
Conclusion: CoQ_{10} supplementation may decrease systolic blood pressure in type 2 diabetics and may prevent the elevation of inflammation in this group of patients. However it may not have any effects on lipid profile of diabetics.
Keywords: Coenzyme Q_{10}, Diabetes mellitus, Blood pressure, Inflammation, Lipid profile

The effect of CoQ_{10} supplementation on glycemic control and oxidative stress of type 2 diabetics

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Background: Oxidative stress is supposed to be a main risk factor in initiation and development of diabetes. Coenzyme Q_{10} (CoQ_{10}) is considered as a strong lipophilic antioxidant. The principal aim of the present study was to assess the effect of CoQ_{10} supplementation on glycemic control and oxidative stress in type 2 diabetic patients.
Methods: Fifty two patients diagnosed with type 2 diabetes participated in a randomized, single blind and placebo controlled trial. They were randomly divided into two groups. One group received 100 mg CoQ_{10} bid for eight weeks, while the other received placebo capsules bid during the same period. Blood samples were obtained at baseline and at the end of intervention after an overnight fast. They were analyzed for markers of glycemic control (fasting blood glucose and HbA_{1c}) and a marker of oxidative stress (MDA). Moreover, a dietary recall was filled out for each of the participants before and after the study. For statistical analysis, independent and paired t-tests were used to determine the between or within group differences, respectively.
Results: Results of the investigation indicated that CoQ_{10} supplementation resulted in a significant reduction in malondialdehyde levels within the experimental group ($p=0.03$). However, the between group differences obtained for this factor were not significant. Furthermore, no significant alterations were observed in fasting blood glucose or HbA_{1c} levels.
Conclusion: In conclusion, 100 mg CoQ_{10} supplementation twice a day for eight weeks may reduce oxidative stress in diabetic patients. Nonetheless, it may not have any effects on markers of glycemic control.
Keywords: Coenzyme Q_{10}, Diabetes mellitus, Blood glucose, Oxidative stress

Effect of vitamin D supplementation on symptoms and C-Reactive Protein among patients with migraine

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Background: Migraine is the most common headache around the world including Iran.In recent years, particular notice has been to the relationship between vitamin D with migraine.Therefore, the pupose of current study is to survey relationship between serum vitamin D levels with CRP and migraine symptoms among migraine patients.
Methods: This study was randomized, double-blind clinical trial study. Sixty-five patients with migraine aged 10-61 years were included in this study. To investigate effect of vitamin D supplementation on symptoms including severity,duration, frequency of headache attacks and headache diary result(HDR) were used multivariate analysis of covariate and univariate analysis of covariate
Results: Significant difference was seen in mean headache frequency and headache diary result (HDR)in two groups($P=0.06$ and $P=0.04$) . However, mean difference of migraine frequency was significance threshold ($P=0.06$). The relationship was not determined between migraine headache with c-reactive protein(CRP).
Conclusion: The use of **vitamin** D supplementation isuseful in reduced migraine symptoms including frequency of headache attacks and headache diary result.
Keywords: Vitamin D, Migraine, CRP

Ginger (Zingiber officinale Roscoe) immune-nutritional behavior: an overview

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Background: Ginger is an important horticultural crop in tropical Southeast Asia, which contains anti-oxidative, anti-inflammatory and immunomodulatory properties. This study was conducted to determine the effects of ginger rhizome on lymphocyte reactivity to mitogens and lymphocyte subsets among healthy male Sprague-dawley rats.
Methods: Three groups of rats (n=24) were supplemented ginger powder suspension (250, 500 and 750 mg/kg body weight) for 6 weeks, the control group was used as a reference. Immunological responses of ginger were determined by lymphocyte proliferation assay using lipopolysaccharide (LPS) and phytohemagglutinin (PHA). Meanwhile, phenotyping assay recruited flowcytometer to measure the expression of CD25+, CD4+, CD3+, CD45RA+ and CD161a+.
Results: Ginger enhanced activation of T cells in response to PHA, which was more evident in the lowest dose of supplementation (250 mg/kg body weight) compared with other supplemented and control groups ($p<0.05$). The lymphocytes had no activation in response to LPS. Moreover, flowcytometry analysis indicated that the lowest dose of ginger increased the expression level of CD45RA+ (the marker of B cells) ($p<0.05$). Similarly, the expression level of CD3+ and CD161+ which are the makers of T and NK cells increased in group of 250 mg/kg but these increases were not statistically significant. Other markers including helper T cells and regulatory T cells did not change following ginger feeding except regulatory T cells (CD4+CD25+) which was increased significantly with the highest dose of ginger ($p<0.05$).
Conclusion: The overall quality and character of the cellular arm of the immune response that was recognized by the proliferation assay highlighted the role of ginger in improving lymphocyte responses against super-antigens like PHA. Current work also emphasizes on the benefits of ginger in the lowest concentration of supplementation due to increasing levels of B cells, T and NK cells; while the highest

dosage suppressed the immune responses via increasing level of regulatory T cells.
Keywords: Ginger, immune, nutrition, behavior

Assessment of nitrate and nitrite in drinking water and mineral water in Guilan in 1392
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Background: Nitrate (NO_3) is one of the most soluble inorganic anions in aerobic conditions, is produced from the oxidation of nitrogen, ammonia and ammonium in water. Nitrogen as a nutrient (fertilizer) is used in abundance in gardens and crops. In addition to its organic form of nitrogen in the soil comes from the decomposition of plants and animals and Converted by bacteria into ammonium ions and over a portion of the ammonium ion is converted to nitrite and then to nitrate and the ease with water through soil layers into the ground and due to severe rainfall or irrigation arrives groundwater.Excess of nitrate ions in water is a potential risk to human health and the ion can increase the risk of various diseases, especially in children, can lead.
Methods: 7100 photometer device for measuring nitrate and nitrite was used.performance is based colorimetric method using the standard pills and powders are associated with each element.
Results: In this study, a total of 27 drinking water samples and 14 mineral water samples that were collected during 1392 from Production of Guilan province,were studied In terms of contamination with nitrates and nitrites.The results show that 100% of thedrinking and mineral waters are contaminated to the extent permitted.Tables 1 and 2 shows mean and standard deviation of samples of drinking and mineral waters and charts 1 and 2 shows concentration nitrate in drinking and mineral waters and charts 3 and 4 shows concentration nitrite in drinking and mineralwaters throughout the year in 1392 .
Conclusion: Although the average nitrate and nitrite concentrations in all samples is below the limit,But given the risks of drinking water containing nitrate and nitrite ions especially for children,Safety and protection of groundwater resources against ingress of contaminants is necessary.
Keywords: Nitrate, nitrite, drinking water, mineral water, Guilan province

The relationship between different kinds of oils consumption and blood pressure parameters in patients with type 2 diabetes in diabetes center of Natanz
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Background: in recent years the prevalence of hypertension has raised. Diabetes is a contributor for hypertension. This study first, has investigated the effect of high consumption oils of Iran on type 2 diabetic patient's blood pressure.
Methods: After measuring height, weight and blood pressure and calculating BMI, the Consumed Oils of 200 patients (30 to 65 years old) with type 2 diabetes (26.3% men, 73.3% women) in Diabetes Center of Natanz was obtained through a questionnaire. Lipid and glucose laboratory tests was also obtained. The data is analyzed with SPSS V.16 software, with Anova One Way, independent T test, and compare means statistic tests.
Results: In compare means test, the highest mean systolic blood pressure was in men consuming solid vegetable oils and women consuming animal fat; and the lowest was in men consuming liquid vegetable oils and in women consuming soli vegetable oils. The highest mean diastolic blood pressure was in patients consuming animal fat; and the lowest was in patients consuming olive oil. The highest mean arterial blood pressure was in patients consuming animal fat; and the lowest was in men consuming liquid vegetable oils and in women consuming solid vegetable oils. In ANOVA test, it was a significant relation between consumed oil with HbA1C (p=.049) and with diastolic pressure (p=.032). In T-Test test, the systolic blood pressure of 103 patients was over or equal to 80 and of 61 patients was under 80 mmHg. 81 patients have a systolic blood pressure over or equal to 130 and 83 patients a systolic blood pressure under 130. Correlation between consumed oils and variables in Eta was only large for HbA1c.
Conclusion: The highest mean figures of blood pressure was in patients consumed oils with Trans and saturated fatty acids; and the lowest was in consumers of oils containing unsaturated fatty acids. However, the results were different for women consumed solid vegetable oil. Generally, the results shows that consumption of oils containing Trans and saturated fatty acids, especially animal fat, increase blood pressure of diabetic type 2 patients, but the consumption of olive oil, and to a lesser extent liquid vegetable oils, is related to lesser increase of their blood pressure.
Keywords: hypertension, type 2 diabetes mellitus, consumed oil

The effect of low calorie diet on plasma levels of miR-33, lipid metabolism and the state of insulin resistance in obese women with type II diabetes
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Background: To date only a small part of the molecular mechanisms of diabetes and obesity have been identified. micro RNAs (miR) are non-coding small RNAs with transcriptional and posttranscriptional regulatory effects on gene expression. They are proposed as ideal non-invasive biological markers for rapid prediction of some obesity related metabolic diseases and any disturbance of them could be involved in the pathogenesis of obesity. Recent evidences show the dysregulation of various lipid and glucose metabolic pathways by increased circulating miR-33 in glucose and lipid metabolic diseases, including cholesterol efflux, fatty acid metabolism and insulin signaling. Hypo-calorie diet is a one of key treatments of insulin resistance and diabetic metabolic complications. We examined the effect of hypo-calorie diet on circulating miR-33 and glucose and lipid metabolic parameters in obese diabetic women.
Methods: Totally 23 eligible obese (BMI≥ 30 kg/m2) women with type 2 diabetes BETWWEN 25-60 years old were randomized in two groups, control (patients usual diet) or hypo-calorie diet therapy for two month. Laboratory and anthropometric measurements include FPG, OGTT and lipid profile, ALT, AST, fasting insulin, plasma insulin 2 hours postprandial, serum glucagon and TNFa, and HOMA-IR, weight, height, BMI, WHR and skin fold measurements, were performed before and after intervention. In this order, nutrients intakes were obtained via 24- hour recall from each patient in three successive days. Patients have been followed each month. We used quantitative real time PCR to examine the folding change of circulating miR-33 before and after treat-

ment. All nutrients and data analysis were done using Nutrition and SPSS version 18 soft wares.
Results: We found non-significant effect of hypo-calorie diet in increased the circulating levels of miR-33. In addition, we demonstrated significant negative relation between the increased circulating miR-33 and decreased subcutaneous adipose tissue in patients with hypo-calorie diet (P= 0.01). Also, the effects of hypo-calorie diet have been showed in decreasing and control of patients FPG, 2hPG, weight , BMI, all skin fold measurements , ALT (P< 0.01), visceral adipose tissue, waist and hip circumference (P< 0.05) and significantly increased the logarithm of serum adiponectin level (P= 0.02).
Conclusions: The negative relation between subcutaneous adipose tissue and increased circulating miR-33 can introduce subcutaneous adipose tissue as a protective factor against cardiovascular risk factors in obese type 2 diabetic patients.
Keywords: Hypo-calorie diet, subcutaneous obesity, T2DM, miR-33

Effects of hypo-calorie diet therapy on glucose and lipid metabolism in obese-diabetic women

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Background: Obesity is one of the most important causes of cellular insulin resistance and diabetes. Hypo-calorie diet therapy and weight management is a one of key treatments of insulin resistance and diabetic metabolic complications. In this study we examined the effect of hypo-calorie diet therapy on anthropometrics and glucose and lipid metabolic parameters in obese diabetic women.
Methods: Totally 23 eligible obese (BMI≥ 30 kg/m2) women with type 2 diabetes between 25-60 years old were randomized in two groups,control (patients usual diet) or hypo-calorie diet therapy for two month. Laboratory and anthropometric measurements include FPG,OGTT and lipid profile,ALT,AST,fasting insulin,plasma insulin 2 hours after meal and HOMA-IR,weight,height,BMI,WHR and skin fold measurements,were performed before and after intervention. In this order,nutrients intakes were obtained via 24- hour recall from each patient in three successive days. Patients have been followed each month. All nutrients and data analysis were done using Nutrition 4 and SPSS version 18 soft wares.
Results: We found significant effects of hypo-calorie diet in decrease and control of patients F PG,2hPG,weight,BMI,all skin fold measurements,ALT (P< 0.01),visceral adipose tissue,waist and hip circumference,systolic and diastolic blood pressure (P< 0.05). Hypo-calorie diet therapy significantly increased logarithm of serum adiponectin level (P= 0.02). We could not find any significant effects of hypo-calorie diet therapy on other biochemical measurements in this study.
Conclusions: These findings showed the necessity of hypo-calorie diet therapy in obese diabetic patients to control type2 diabetes mellitus and prevention some of its metabolic complication,by increasing the circulating levels of adiponectin and control of some important cardiovascular risks factors in these patients.
Keywords: Hypo-calorie diet,Obesity,T2DM.

Evaluation of insulin resistance after bariatric surgery

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Background: The prevalence of obesity is increasing in many parts of the world. Impaired glucose metabolism is strongly associated with body weight. The aim of this study was to compare effect of three methods of bariatric surgery(gastric bypass,adjustable band and sleeve gastrectomy) on insulin resistance in patients with morbid obesity.
Methods: This intervention study was performed on patients with morbid obesity referred to obesity surgery clinic of Razi Hospital in Ahvaz 2011-12. Patients according to type of surgery (gastric bypass or other procedures) enrolled in two groups. Insulin levels,fasting glucose,glycosylated hemoglobin,and insulin resistance were compared between groups before,3 weeks and 2 months after surgery. Data were analyzed by independent t tests and repeated measures test of SPSS #18 software.
Results: in total,15 patients (2 male,13 female) were enrolled. patients in the gastric bypass group showed a greater reduction in insulin resistance compared to the other groups(p>0.001),While the comparison of weight loss between the two groups was not statistically significant(p>0.05).
Conclusion: Mechanisms of short-term reduction in insulin resistance in patients undergoing gastric bypass surgery are not only related to weight loss and other factors are may be involved.
Keywords: Insulin resistance,gastric bypass,adjustable gastric banding,sleeve gastrectomy

The effect of carrot pulp as a rich source of antioxidant and dietary fiber on histological features & physicochemical of cake

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Background: Carrot (Daucus Carota L) is one of the popular root vegetable that is grown around the world.carrot an important source of phytonutrients including polyphenols and carotenoids polyacetylene With respect to the substantially different combinations, are as functional foods with health promoting properties is significant (Hanger and Howard, 2006) Carrots contain high Fibery and these fibers have an important role in human health. The purpose of this study was to investigate the apparent viscosity carrots, size and distribution of air bubbles in the batter, carrots review the physicochemical characteristics of the products and contain more fiber.In this study, in order to increase the fiber in the manufacturing of pulp carrot cake manufacturing used in histological features, physicochemical.
Methods:evaluated in a completely randomized design with three replications project analysis and sensory evaluation using Hedonic and mean comparison using Duncan test done. Boyer, (2004) & Liu studies showed that the use of natural fibers causes dilation and prevent wrinkles too cakes are. (2009), Koksel these results that the fiber in cakes and bread to help with digestive problems, and the special properties of the final product.(Galdeano et al., (2006); Gorecka et al., (2010 stated that the use of fiber from fruits such as apples and pears, whole grains such as oats, barley and sugar beet, with goals of increasing its nutritional properties and health and for increasing the shelf life of food products to be effective.
Conclusion: conclusion of this study is to improve the sensory properties of carrot pulp carrot cake and add lemon sponge cake formulation on physicochemical properties

such as texture and volume of product moisture content and protein and fiber influence.
Keywords: Carrot Pulp, Dietary Fiber, Cake

Survey of relationship of eating attitudes and body image among students in Qazvin University of Medical Sciences in 2012

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Background: Eating disorder behavior is prevalent on college campuses,especially among women. Potential risk factors were related to eating behaviors and attitudes that body image dissatisfaction is the most important. The narrow studies assessed prevalence of disordered eating behaviors and attitudes and its related factors in college campuses. The aim of the present study was to determine relationship between eating attitudes and body image in students of Qazvin University of Medical Sciences.
Methods: In this cross-sectional study, we assessed 394 students of Qazvin University of Medical Sciences. Students completed three-part questionnaire (socio-demographic characteristics, EAT-26, BSQ). The Data were analyzed withdescriptive and deductive statistic methods (Generalized Linear Models) at α<0.05 using SPSSv.16 software.
Results: Mean age of students was 21.80 ± 2.9 years and majority were male (53%). The mean of EAT-26 and BSQ scores was 11.86 ± 10.97, 66.75 ± 29.80 respectively. In univariete analysis, eating attitudes was statistically related to age (r= -0.115, p<0.026), body image (r=0.331, p<0.001) and diet type (p<0.001). In regression analysis, age (p<0.001), body image (p<0.001) and weight decreasing diet (p<0.001) were related to eating attitudes.
Conclusion: In present study body image disturbance is considered central to development of eating pathology. Eating disorder is complex and multi-factorial; Hence, interdisciplinary and team treatment are necessary for achievement of optimal outcome.
Keywords: Eating attitudes, body image, student

The Prevalence of Household Food Insecurity in Zahedan and Its Relationship with Some of the Socio - Economic and Demographic Factors

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Background: Food insecurity as "limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways" is expressed. Today, more than one billion people in the world are very poor and suffer from food insecurity. Studies of food insecurity in different regions of the world have shown. This study aimed to determine the prevalence of household food insecurity in Zahedan and related factors were compared.
Methods: This cross-sectional study was conducted on 2,160 households in Zahedan. Socioeconomic and demographic information through interviews with the mother households, or the person responsible for the preparation of food were collected. Household food insecurity situation with using the USDA 18-item questionnaire household food security measured.
Results: The prevalence of food insecurity in households studied 58.8% (food insecurity without hunger 31.7%, moderate food insecurity with hunger 19.7%, and with severe hunger 7.4%). Household food insecurity with the education, occupation, age and ethnicity of household head, as well as education, age, occupation and mother households showed a significant relationship (P<0.0001).
Conclusions: The results showed that more than half of the households studied in overcrowded situation of food insecurity that brings more attention to these households. Food insecurity disproportionately among low-income families with low socioeconomic status occurs, however, interventions or dietary supplement income families are not eradicate food insecurity because of insecurity simply out of poverty not economical. Interventions to improve the eating habits of low-income people should be trained to improve their knowledge, skills and attitudes related to healthy eating, food preparation, as well as improve access and availability of healthy foods, and how to choose healthy food selection, especially with a limited budget, focused.
Keywords: food insecurity, socio-economic factors, Zahedan

Effect of Traditional Cooking Methods on Some Nutritional Aspects of Camel Meat

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Background: Camel meat is known as a low fat source of red meat in human diet while it is comparable to the other sources of red meat in terms of many nutritional points of view. The present study aimed to investigate how fat and iron content of camel meat are affected by the traditional cooking methods currently are in use in Iran.
Methods: pouching, frying and grilling were applied in this study to process the camel meat samples. The time and the temperature were selected according to the habitual of the Iranian households. Moisture, ash and cooking loss were determined using standard methods while the method of Folch was adapted to measure the fat content. Total iron was measured by atomic absorption spectrophotometer at 248 nm and heme Iron was determined using colorimetric method at 640 nm.
Results: Boiling and frying resulted in the least and most fatty material in the cooked camel meat respectively. The changes of the ash content reflected the effectiveness of grilling and frying in reserving the mineral content of cooked camel meat, while about 40% of ash was shown to be lost during boiling. Despite no significant difference P>o. o5 in total iron content between the three applied cooking methods, it underwent significant changes from raw meat to the cooked ones, Heme Iron concentration, instead, appeared to be significantly different between trail in a way that grilling led to the most heme iron content.
Conclusions: In grilling, increase in fat content is less than that of other cooking methods. Also, the highest available iron content can be provided by grilling comparing to the other trials. Shorter cooking time period and less internal

temperature of the pieces of samples in grilling may give rise to what was resulted in this study.
Keywords: Camel meat, Cooking methods, Fat, Iron

Quercetin Supplementation Caused No Beneficial Improvement in Lipid Profile of Patients with Type 2 Diabetes

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Background: The role of different doses of quercetin in improvement of lipid profile in experimental model of diabetes mellitus is almost confirmed in numerous studies; however, the impact is seldom investigated in human studies. Thus the objective of the following study was to evaluate the probable beneficial effect of oral quercetin supplementation in patients with type 2 diabetes mellitus.
Methods: Forty seven 30 to 60 year old diabetic patients were allocated randomly into 2 different groups; treatment group (receiving 250 mg quercetin) and placebo (receiving cellulose) for 8 weeks. Lipid profile including triglyceride, total, LDL- and HDL-cholesterol, total-C:HDL-C and LDL-C:HDL-C as well, were measured in blood samples after 12-h fasting. The data were analyzed using SPSS ver. 13, paired t-test and also independent sample t-test.
Results: The results of the present study revealed that oral quercetin supplementation resulted in no statically significant improvement in all-above components of lipid profile in patients with type 2 diabetes ($p>0.05$).
Conclusion: Since quercetin supplementation had no significant effect on lipid profile of type 2 diabetic patients, investigating further studies, applying both other doses and study periods as well as considering different inclusion criteria for diabetic patients, is recommended.
Keywords: Quercetin, lipid profile, diabetes mellitus.

The Effect of Oral Quercetin Supplementation on Glycemic Control and Oxidative Stress in Patients with Type 2 Diabetes

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Background: Quercetin is the most abundant flavonol, naturally found in various kinds of fruits and vegetables, the effect of which on glycemic control of type 2 diabetic patients, still remains questionable. Thus, the purpose of the current study was to investigate the impact of glycemic control and oxidative stress in type 2 diabetic patients.
Methods: Forty seven patients with controlled type 2 diabetes, aged between 30 to 60 years, were randomly assigned to receive either 250 mg quercetin or placebo for 8 weeks. Fasting blood sugar, glycosylated hemoglobin, insulin concentration, total antioxidant capacity and oxidized LDL were measured in fasting blood samples. The data were analyzed using SPSS ver. 13, paired t-test and independent sample t-test.
Results: The results of the study indicated that although quercetin improved the insulin concentration in the interventional group to some extent, no statically significant changes were observed in FBS, Hb A1c and insulin level throughout the the study period in either groups ($P>0.05$). Oral quercetin supplementation, however, caused significant increase in serum TAC concentration in comparison to placebo ($P=0.043$) and also resulted in statically significant reduction in just the teatment group ($P<0.001$).
Conclusion: Oral quercetin supplementation was beneficial in improving the antioxidant status of patients with type 2 diabetes while having no other significant effect on glycemic control; however, conducting further studies, using both different doses and study periods, on the glycemic control of the population seems to be valuable.
Keywords: Quercetin, glycemic control, oxidative stress, diabetes mellitus.

Effect of Low-Fat Milk Consumption Compared to Apple Juice and Water on the Energy Intake among 10-12 Year Obese Boys: A Three Way Cross-Over Clinical Trial

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Background: Appetite lowering characteristics of dairy have attracted scientists to look for its effect on energy intake particularly among children. In the present study we tried to assess the effect of low fat milk compared to its iso-volumic and iso-volumic iso-energetic controls on total and short-term energy intake among obese boys in a randomized three way cross-over clinical trial.
Methods: Thirty four 10-12 years old obese boys were randomized to consume three beverages (low fat milk [M], apple juice [J] or water [W]) with a fixed energy breakfast for two consecutive days, one week apart. Ad-libitum lunch was provided for subjects 5 hour later. The energy intake from breakfast till lunch and total energy intake on intervention days, and two days after intervention were compared. Generalized linear model (GLM), repeated measures procedure in which test beverages were considered as repeated factors
Results: Energy intake from breakfast till lunch was lower when low fat milk consumption was included in the breakfast compared to water and apple juice (adjusted mean ± standard error (SE): M=1484.33± 15.30 Kcal, J=1543.39±20.70 Kcal, W=1606.6±19.94 Kcal; $P<0.05$). The energy intake on a day before interventions, total energy intake on intervention days, and two days after intervention was not statistically different between intervention periods ($P>0.05$).
Conclusion: one serving of Low fat milk might affect the energy intake in a short term period. The possible effect of frequent consumption of dairy products on long-term energy intake among children is needed to be examined.
Keywords: Low fat milk, apple juice, energy intake, obese boys

Effects of Low-Fat Milk Consumption at Breakfast on Satiety and Short-Term Energy Intake among 10-12

Y Obese Boys: A Randomized Three-Way Cross-Over Controlled Clinical Trial

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Background: Although controversy exists, some researchers have proposed that dairy products increase the sense of satiety and decrease the energy intake; however data about these effects are lacking for children. Our objective was to assess the effect of low-fat milk compared to its iso-volumic and iso-volumic iso-energetic controls on satiety and energy intake at lunch among obese children using a randomized three-way cross-over controlled clinical trial.

Methods: Thirty four obese boys aged 10-12 y were randomized to consume a fixed content breakfast with low fat milk (LFM), apple juice (AJ), or water (W) for two consecutive days. Total appetite, hunger, fullness, desire to eat and prospective consumption were measured using a visual analogue scale (VAS) every one hour after breakfast until an ad libitum lunch. VAS scores and energy intakes were compared.

Results: All participants completed the study. The energy intake was significantly lower after intake of LFM compared with AJ and W (adjusted mean± standard error (SE) of energy intake: LFM=1010±16.07Kcal,AJ=1060.68±22.05Kcal ,W=1238.06±19.92 Kcal; P<0.001). The total appetite score and its components were significantly changed by time for all intervention beverages (P <0.05). Obese children reported higher satiety score after drinking low fat milk with breakfast compared with water and apple juice (P<0.05).

Conclusion: Low-fat milk consumption might have favorable short-term effects on satiety and energy intake among obese boys. Future studies with more participants from both genders and longer follow-up periods might be supportive.

Keywords: Low fat milk, breakfast, satiety, energy intake, obese boys

Prevalence of Hydrogen Peroxide in Industrial Milk Samples Distributed in Isfahan

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Background: Hydrogen peroxide with the chemical formula H2O2 as an additive in many branches of science including food industry that is decontamination of equipment and supplies related to transportation, mixers, storage and packaging of food. In some cases, the use of H2O2 used in packaging, the packaging is imported In this case, it is required that the decomposition of H2O2 process. One of these is the using of raw milk and milk packaging in industrial processes. The target of this study is to measure the prevalence of H2O2 in the case of industrial milk is distributed in Isfahan.

Methods: In this study is measured H2O2 by enzymatic method that finally H2O2 levels in the sample were measured by light absorbance method. According to the Food Standards CODEX H2O2 levels in milk production must be less than 0.5 ppm.

Results: Of the 20 samples distributed in Isfahan Industrial milk which examined, number of 15 samples (75%) H2O2 levels exceeded standards the highest value was 2.28 ppm. The other five samples (25%) amounts of H2O2 were the standard. The values that measured were confirmed by retesting.

Conclusion: Our results suggest that contamination of milk is processed during packaging given the risks of H2O2, was not properly controlled, it can cause serious risks to public health that can cited including of cancer risk, gene mutation, respiratory problems and severe skin damage. In addition seems the need for designing and mandatory standards in food-sensitive search for H2O2.

Keywords: Hydrogen peroxide - Milk

Title: Effect of saffron extract and crocin on blood glucose and plasma lipids in obese male rats induced by high-fat diet

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Background: Increased blood glucose and lipids are of the most common disorders that are due to various factors. Saffron is an herb used in traditional Iranian medicine to treat many diseases. Recent studies showed the role of saffron in the treatment of diabetes and reduction of blood lipid levels. The aim of this study was to investigate the effect of saffron extract and crocin on plasma glucose, triglyceride, total cholesterol, low density lipoprotein and high density lipoprotein in obese rats induced by high-fat diet.

Methods: In this study, after 12 weeks feeding with high fat diet and obesityinduction in male Sprague-Dawley rats, animals were randomly divided into 5 groups (n=6): (G1) control diet (HFD), (G2) HFD + ethanolic extract of saffron (40 mg/kg body weight), (G3) HFD + ethanolic extract of saffron (80 mg/kg body weight), (G4) HFD + crocin (40 mg / kg body weight), (G5) HFD + crocin (80 mg / kg body weight). The specific dose of saffron extract and crocin were mixed with the diet and fed to animals for 8 weeks. At the end of the study, measurements of glucose, triglycerides, total cholesterol, low density lipoprotein and high density lipoprotein in plasma samples were determined using an automatic analyzer machine.

Results: The results showed that blood glucose levels following the administration of saffron extract and crocinin G3 (p<0.05) and G5 (p<0.001) were significantly reduced. Also, a significant decrease in triglyceride level in G3 (p <0.05) and total cholesterol levels in G3 and G5 (p<0.05) was observed when compared with the control group. While the atherogenic index (ratio of low density lipoprotein/high-density lipoprotein) between the groups, indicate that G4

(saffron at 40 mg/kg body weight) had the greatest impact on reducing the risk of cardiovascular attacks.
Conclusion: These findings indicate that intake of saffron extract and crocin as a dietary supplement can reduce blood glucose and plasma lipids and have a significant impact on decreasing obesity disorders among the rats.
Keywords: Saffron, crocin, blood glucose, lipid profile, obesity

The survey of microbial contaminations of a traditional fermented dairy_cereal based product as a functional food in Iran

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Background: Nutritive, safe and hygienic food production has become very important with increasing population. Fermented foods can cause increase the shelf life, flavor, aroma, tissue and minerals bioavailability by production-Lactic Acid Bacteria (LAB). One of the fermented dairy-cereal based products is Tarkhineh that be made traditionally in the west of Iran (Kurdistan, Kermanshah and Hamedan provinces). Wheat meal (bulgur or cracked and bran-free parboiled wheat) is soaked or boiled in sour doogh or dugh (a beverage prepared by beating unflavored yogurt until smooth), and it is then fermented spontaneously for 7-10 days. Subsequently, some flavoring dried vegetables, salt and spices are added to dough-like mixture and exposed to sunlight in small pieces to get dried. . One of the reasons for tendency to consumption of Tarkhineh is improving the flavor and consistency of different soups, also decreasing of people illness. So Tarkhineh can suitable for growth of probiotic microorganisms, specially Lactobacillus pp. During fermentation the growth of pathogens, are frequently inhibited through antimicrobial components produced by Lactic Acid Bacteria (LAB)). Reports have shown that LAB-produced organic acids, hydrogen peroxide, carbonic acid can work in combination to display a strong inhibitory activity against many food-borne pathogens, such as Salmonella; E.coli, Bacillus cereus,, Clostridium perfingens and Staphylococcus aureus .So,this survey show these microbial contamination.
Methods: In this study, 40 samples of Tarkhineh from different parts of Hamedan and Kermanshah province had been collected and was investigated for bacterial total count, *lactobacillus* count, Coliforms, *E.coli*, *Staphylococcus aureus*, *mold* and *yeast*, *Clostridium perfringens* and *Bacillus cereus*.
Results: The results showed log CFU/g of mean ± se (Minimum and Maximum) for total bacterial count Log10 5.68±0.29 (2.95 and 9.73), Lactobacillus 2.53±0.69 (0.00 and 7.07), Coliforms 1.58±0.37 (0.00 and 6.70), *Staphylococcus aureus* 3.90± 0.34 (0.00 and 7.54), mold and yeast 5.033±0.22 (2.00 and 7.96) and *Bacillus cereus* 3.41±0.37 (0.00 and 6.75), respectively. Also, bacterial contamination such as *E.coli*and *Clostridium perfringens wasn't seen*.
Conclusion: Tarkhineh probably contaminated with *Staphylococcus aureus*by the suppliers of this product, *Bacillus cereus* due to dairy and molds and yeast by source of grains. It seems that decreasing pH and increasing value of salt had been effective on the microbial reduction. Finally; it is recommended commercial production of this product after chemical analysis, application of PCR technique for identification of all kind of LAB can be useful;as a functional food .
Keywords: Tarkhineh; microbial contamination, Traditional fermented dairy-cereal; functional food

The effect of eight weeks swimming endurance training on Endorphin and Cortisol levels and consumption of Ginkgo biloba extract in young girls

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Background: Swimming benefits are the physical, social and psychological, such as reduced anxiety and mental stress and increase energy and vitality. Ginkgo biloba is one of the oldest plants in Asia that applied in traditional medicine to treat a variety of diseases such as depression and anxiety. One of hormonal changes during exercise is Endorphin and Cortisol secretion. The aim of this study was to investigate the effect of eight weeks endurance training swimming on Endorphin and Cortisol levels with Ginkgo biloba extract young girls untrained.
Methods: 40 healthy females aged 22-27 girls as subjects of this study were selected and randomly divided into four groups of 10 people (1- swim training with Ginkgo biloba extract, 2- swimming with no Ginkgo biloba extract 3-extract Ginkgo biloba and 4- control groups). Swimming endurance training protocol three times per week and 60 minutes per session with 60 to 80 percent of maximum heart rate, respectively. Preparation of aqueous extract of Ginkgo biloba, and a dose of 80 mg in 200 ml water at a concentration of 400 mg daily for two groups (complementary and swimming with supplementation) was administered. blood samples from Vein of the left arm was used to measure Endorphin and Cortisol levels in pre and after eight weeks and were measured by ELISA. Data were analyzed by t-test and ANOVA.
Results: The results showed that endurance training in untrained young girls in the research group after endurance exercises significantly higher levels of Endorphin and Cortisol ($P < 0.05$). **Conclusion:** The present study was effective in improving depression with Ginkgo biloba consumption; decrease anxiety and increase Vitality suggest that related to flavonoid and antioxidant activity of this plant with endurance training.
Keywords: Swimming, Endurance training, Ginkgo biloba, Endorphin, Cortisol.

Determination of the basal metabolic rate and its relationship with body composition and anthropometric indices in patients with NAFLD

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Background: Nonalcoholic fatty liver disease (NAFLD), as one of the most common liver abnormalities has a high prevalence mainly due to progressing rate of obesity. Lower metabolic rate can be considered as one of the main causes

of weight gain and fat accumulation in the liver. There are limited and conflicting data on the relations between basal metabolism and disease status. The aim of this study was to clarify the relationship between the components of body composition and anthropometric indices in NAFLD patients compared with control group.

Methods: In this cross-sectional study 151 individuals including 75 NAFLD patients and 76 healthy subjects aged between 20 -50 years old were recruited. Their BMI was between 25-39.9 kg/m^2. Anthropometric data, BMR and body composition were measured. Statistical analysis was performed with SPSS 16.0.

Results: Mean BMR was non-significantly higher in NAFLD patients. However the mean of fat mass, lean body mass and BMI showed no significant differences between groups. Waist to hip ratio (WHR) in NAFLD patients was significantly higher than healthy subjects (P= 0.017). In both groups, a positive significant correlation was observed between BMR, lean body mass and WHR (r = 0.989, r = 0.507, P<0.001). There was negative correlation between BMI, fat mass and basal metabolic rate.

Conclusion: The current study showed that lean body mass and WHR were in strong relationship with BMR in these patients. Also, in subjects with NAFLD, WHR was significantly higher than control group. Further studies are warranted to better clarify the role of BMR in the pathogenesis of NAFLD.

Keywords: Nonalcoholic fatty liver, basal metabolic rate, body composition

Relationship between serum levels of adipocytokines and lipid profile in women with different grades of obesity

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Background: Obesity is a chronic complication that becomes a major health problem and tends to have more health complications. Based on this important, and closed relationship of dysregulation and abnormal production of adipocytokines from fat mass, recent study with aimed to evaluated the relationship between adipocytokines levels and anthropometric indices and lipid profile in non-diabetic Iranian women with normal weight and different grades of obesity.

Methods: This research as an analytical-descriptive study on 149 non-diabetic women with aged 15-49 years old has been done. Based on BMI, subjects divided into five groups including, 33 normal weight (BMI<25) and 116 as overweight and in the different grades of obesity (BMI>25). Serum fasting blood glucose, CRP and lipid profile, and adipocytokines levels were measured by glucose oxidize, enzymatic and RIA methods, respectively.

Results: With increasing BMI, excepted to mean serum HDL-C and adiponectin, the mean lipid profile, glucose, CRP and other adipocytokines levels had increased. Based on leptin/BMI ratio>1.60 as a leptin-resistance index, 9 (29.3%) overweight showed the highest frequency, and 1(3.30%) normal weight and 1(3.70%) obese grade III had the lowest frequency. Serum leptin had a positive correlation with resistin (r=0.286) and IL-6 (r=0.214) in all subjects (p<0.05). It had a positive correlation with TSF, BMI, MAC, hip, chest and waist circumferences (r=0.564, r=0.623, r=0.546, r=0.622, r=0.569, r=0.582), and also with TC, TG, LDL-C, LDL-C/HDL-C ratio, glucose and CRP levels (r=0.347, r=0.428, r=0.367, r=0.379, r=0.297and r=0.316) in all groups, respectively (p<0.001). Adiponectin showed the positive correlation with HDL-C (r= 0.142, p<0.05), and the negative with BMI (r=-0.334), TSF (r=-0.158), chest (r=-0.178) and waist (r=-0.151) in all subjects (p<0.05). It had a significant negative correlation with TC (r=-0.220, p=0.003), LDL-C (r=-0.161, p=0.026), LDL-C/HDL-C ratio (r=-0.138, p=0.047), TC/HDL-C ratio (r=-0.217,p= 0.004) and glucose (r=-0.223, p=0.004) in all groups. Based on adiponectin/BMI ratio≥0.47 as a healthy index, 11 women had this value in all groups. Resistin had a significant correlation with BMI, waist, TSF, hip, age and chest (r=0.448, r=0.429, r=0.308, r=0.417, r= 0.285, r=0.352; p<0.001), and also with TC, TG, LDL-C, LDL-C/HDL-C ratio, TC/HDL-C ratio, CRP and leptin (r=0.244, r=0.296, r=0.268, r=0.236, r=0.248, r=0.392, r=0.286; p<0.05), respectively. Based on resistin<2.89 value, 8 women showed the highest value of resistin. IL-6 showed a positive correlation with BMI, hip and leptin (r=0.164, r=0.236, r=0.214; p<0.05) in all groups, respectively. TNF-α had a positive correlation with BMI, hip, weight, MAC, LDL-C and glucose (r=0.249, r=0.227, r=0.191, r=0.179, r=0.168, r=0.243; p<0.05) in all subjects, , respectively. BMI and hip showed the highest effect on leptin variation, waist and LDL-C/ HDL-C ratio on adiponectin, hip and LDL-C on resistin, BMI and hip on IL-6, BMI and LDL-C on TNF-α variation.

Conclusion: Results showed that with increased BMI, serum levels of leptin, resistin and CRP compared to other biochemical parameters showed a closed correlation with other studied parameters in all subjects. BMI and WHR as the important parameters showed the highest effect on variation of adipocytokines levels in women.

Keywords: Obesity, BMI, Adipocytokines, Lipid profile, Anthropometric indices.

Plasma Adiponectin in response to six weeks of moderate-intensity aerobic training with pomegranate juice (PJ) in women with type 2

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Background: The aim of this study was to evaluate the Plasma Adiponectin in response to six weeks of moderate-intensity aerobic training with pomegranate juice (PJ) in women with type 2.

Methods: Survey postmenopausal diabetic women aged 45 to 60 years in the city of Babylon, who coordinated Diabetes Association presented the city, among them 33 were selected as subjects were randomly divided into four groups: control, PJ, practice and PJ. Experimental groups consisted of 6 weeks of aerobic exercise training program three times a week for at least 45 minutes per meeting. Two days before and after the training period in the fasting state (12 h) blood samples from the brachial vein was performed in a sitting position.

Results: Results showed that aerobic exercise with consumption of pomegranate juice alone and interaction with each significantly increase levels of adiponectin plasma in older women with type 2 diabetes compared to control group.

Conclusion: According to the research findings can be stated the exercise with pomegranate juice beneficial effects fat tissue and increase plasma adiponectin in adult women with type 2 diabetes and thereby reduce risk of cardiovascular disease.

Keywords: Aerobic exercise, pomegranate, Adiponectin, Type 2 diabetes.

Authors Index N

The effectiveness of Lifestyle interventions on weight control of adolescents with abdominal obesity: a randomized controlled trial based on Health Belief Model

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Background: The objective of this study was to determine the effects of lifestyle intervention on the anthropometric measurements by using the Health Belief Model (HBM) among obese adolescents in Iran. Methods: In this parallel randomized controlled educational trial, 90 obese adolescents 12–18 years) were chosen (44 in control and 46 in test group). Education based on Health Belief Model was conducted. The main components of the program were on nutrition and physical activity as two major factors in the weight control of obese people. Participants in both the control and intervention groups completed questionnaires at baseline (T0), end of 3 months of intervention (T1) and 3 months after end of intervention (T2).
Results: The Multivariate test results showed that there were significant effects of interaction of time and group for knowledge scores (F=101.19; p<0.001), Perceived susceptibility (F=5.01; P=0.02), Self-efficacy (F=6.18; P=0.01) and Waist circumference (F=5.643; p=0.004).
Conclusions: Results of this study showed that the 12-weeks educational intervention program using the HBM was effective to increase knowledge, perceived susceptibility and self-efficacy of the participants.
Keywords: Lifestyle interventions, Obese Adolescents, Health Belief Model, Anthropometry measurement, Abdominal obesity

Single-step immobilization of partially purified catalase in order to application in food industries

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Background: H2O2 is a powerful oxidant,and is used as a bleaching or microbiocidal agent in the food and dairy industries and also some lactic acid bacteria in dairy Under microaerobic conditions produces H2O2,which eventually causes growth arrest. However, due to its toxicity to environment and human health,H2O2 needs to be eliminating after industrial process. Catalase is one of those enzymes that catalyze the decomposition of H2O2 in to water and oxygen. Production of microbial catalase can be wildly used in the several parts of industry. Kocuria ASB107 is a radioresistant and non-pathogenic bacterium that was screened and characterized from radioactive spring in Ramsar. This bacterium can produce too much catalase. The aim of this study is to semi-purification of catalase from Kocuria ASB 107 with native polyacrylamide gel electrophoresis and immobilization of it in to introduce a model of immobilization. polyacrylamide gel.
Methods: The bacterial culture was cultivated in TSB medium and then the biomass was collected in the bacteria stationary phase. The cells were lysed after 80min incubation in lysozyme solution at 37°C. The supernatant was isolated by centrifuge and catalase activity of the cell extract was checked by monitoring A240 in the presence of substrate (H2O2). Then the cell lysate was loaded on top of a native polyacrylamide gel (10%). Zymogram was obtained by adding diluted H2O2 on the gel surface. The band of catalase was cut and removed from the gel and to determine the degree of purification,the specific activity of catalase was measured by monitoring A240 in the presence of substrate (H2O2). The remained gel was stained by coomasie blue. Immobilization of catalase in polyacrylamide gel was performed by formaldehyde (5%). After immobilization,catalase activity of immobilized sample and control sample was measured in three times (5th day,7th day,and second month).
Results: in this study, catalase was semi purified and catalase activity was significant difference between immobilized sample and control sample at all tree times (5th day,7th day,and second month).
Conclusion: According the results,a model to immobilization of catalase is suggested that can be optimized for use in the food industry.
Keywords: catalase purification, catalase immobilization

Factors related to the duration of exclusive breast-feeding and breast-feeding amongst women in Qazvin,Iran

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Background: To evaluate predictors of exclusive and total breast-feeding during the first year of life among Iranian infants from Qazvin.
Methods: In this cross-sectional survey,In 2012,991 infants with their parents invited to participate in this study from 10 health centers and 11 health stations in Qazvin. Data from a total of 779 at 6 months and 551 at 12 months for children aged 6–30 months and their parents were analyzed.
Results: Our data showed 98% of infants were breast-fed and 91.2% were exclusively breastfed at one month of age. Maternal education was negatively associated with exclusive breast-feeding at 1 and 2 months of age. A significant positive trend was observed between the number of children and exclusive breast feeding. At 3,4,5 and 6 months of age the odds of exclusive breast-feeding were significantly lower for low birth weight compared with normal weight infants. Maternal and paternal education,maternal job and sex of baby were significantly associated with breast-feeding at 6 months. Maternal education turned out to be the most stable variable as it was significantly associated with breast-feeding at all ages.
Conclusion: Our data shows that infants in Qazvin,Iran,have desirable situation in terms of exclusive breast feeding and breast-feeding. Maternal and paternal education,maternal job and sex of baby are predictors for duration of breast feeding.
Keywords: exclusive breast-feeding,duration,determinants

Determination the effects of boron supplement on systemic symptoms associated with primary dysmenorrhea, need to analgesic and disruption in daily activity

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Background: Primary dysmenorrhea is one of the most common problems of women,that treatment is non steroidal anti inflammatory drugs. Based on the anti-inflammatory effects of boron supplement this study was to determine the effects of boron supplement on systemic symptoms associated with primary dysmenorrhea,need to analgesic and disruption in daily activity.
Methods: A triple blind clinical trial was conducted on 113 students. Samples after matching the intensity of dysmenorrhea were randomly divided into two groups . For boron group (n = 58) was administered one capsules containing 10 mg of boron for a period of 2 days prior to the third day of bleeding and placebo group (n = 55) threated with similar capsules containing lactose with the same instruction. Systemic symptoms were compared and follow-up with verbal multidimensional questionnaires. Data obtained were analyzed by using Friedman test,Mann-Whitney,Wilcoxon and Fisher.
Results: In both groups,the systemic symptoms of dysmenorrhea,need for analgesics,disruption in daily activities decreased after the intervention than before the intervention,except in cases of diarrhea this decrease was statistically significant in after intervention between the two groups ($p<0.05$). Conclusion: According to the results,boron supplement were effective in reducing systemic symptoms associated with dysmenorrhea,work dysfunction and need for analgesic. Further studies are recommended with boron supplement to find more applications in obstetrics and gynecology. Keywords: Systemic symptoms of of dysmenorrhea, boron supplement analgesic.
Keywords: dysmenorrhea systemic symptoms, boron supplement, analgesic

Effect of olive oil with low calorie diet on blood lipids in hyperlipidemic patients

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Background: Serum lipid abnormality is a risk factor for cardiovascular disease. The aim of this research was to study the effect of olive oil with low-calorie diet on blood lipids in hyperlipidemic patients.
Methods: The study was done on fifty eight hyperlipidemic patients of both sexes and age range of 25-65 years. The patients received low-calorie diet based on 1400 kcal energy per day for 4 weeks,containing 32% fat,18% protein and 50% carbohydrate. The intervention group received low-calorie diet including 30 g/d olive oil. Results: Weight,body mass index,waist and hip circumferences were significantly reduced ($P<0.05$) after 4 weeks in both groups. Treatment with olive oil was associated with a significant reduction ($P<0.05$) in low density lipoprotein.
Conclusions: According to the results,we can state that olive oil with low calorie diet,as a part of healthy diet,had beneficial effect on decreasing serum LDL,and may reduced the cardiovascular risk factor in hyperlepidemic patients.
Keywords: Olive oil, low calorie diet, hyperlipidemia

The knowledge, attitude and practice of health care staff about lactation nutrition in Ajabshir and Bonab

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Background: Nutritional knowledge is one way to achieve proper and balanced nutrition in whole life. Since lactating women are vulnerable groups of community,nutrition in this period plays significant role in maternal and infant health. As mothers get most of their information from health centers and the knowledge of the staff in health centers on nutrition during lactation is necessary for proper education,in this study,nutritional knowledge of health care staff was investigated in Ajabshir and Bonab city.
Methods: In this study,sixty staff randomly selected from health care centers in Ajabshir and Bonab cities. In order to assess the knowledge on nutrition during lactation,staff completed a questionnaire containing 10 questions. For evaluation,the questionnaire was adjusted based on 20 scores and subjects was divided into three groups with poor,average and good knowledge based on the scores on the questionnaire. SPSS software program was applied for data analyzing.
Results: The results showed that in Ajabshir city,57% of staff had good knowledge on nutrition during lactation,33% had moderate knowledge and awareness of 10% was poor. In Bonab city,43% of staff had good knowledge on nutrition during lactation,37% had moderate knowledge and awareness of 20% was poor.
Conclusion: According to the results,most of the health care staff had proper knowledge on nutrition during lactation. Given the importance of nutrition in lactation and the need for proper education to mothers,and since a significant percentage of the staff did not have adequate knowledge of nutrition during lactation,training courses for health care workers is essential in this regard.
Keywords: Knowledge, Lactation, health care staff, West Azarbaijan

Evaluation of breast milk total antioxidant capacity (TAC) levels in third and fourth months of lactation

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Background: In addition to numerous clinically significant aspects of breastfeeding,it seems breast milk contains antioxidant molecules that can help prevent oxidative stress situations. The aim of this study was to determine breast milk total antioxidant capacity (TAC) levels in third months of lactation.
Methods: In this study,50 lactating mothers who exclusively breastfed their infants for 90 days were recruited from health centers. Information on food intake was collected by using a 24- hour recall method for 3 days and the body mass index (BMI) was calculated. Breast milk samples (15 mL) were collected into sterile glass bottles by self-expression before the baby was nursed in the morning in thirds and fourth months of lactation and stored at - 70°C until analysis. Breast milk TAC level was measured using a Randox total antioxidant status kit.

The comparison between the two periods was made by ANCOVA test. p value of < 0.05 was considered statistically significant.
Results: The mean antioxidant concentration of breast milk in third and fourth months of lactation was 0.315 ± 0.14 and 0.253 ±0.13 mmol/l respectively. After adjusting for maternal BMI,energy,macronutrients,and vitamin A,E,and C,zinc,and selenium intake,a significant reduction was observed in breast milk TAC levels between the two months (P= 0.02).
Conclusions: Breast milk TAC level was significantly lower than reported values from Japan and Nigeria. This discrepancy in TAC values between studies may be due to maternal diet and supplementation with vitamins during pregnancy and lactation,time of year during which the milk samples were collected,ethnic group and the geographical area to which the mother belongs,and analyzing methods. Also,derived from our results,TAC of breast milk tends to level off with the passage of time which can be a natural result of decline in antioxidant storage of the mothers. However further studies are needed to make concise conclusions.
Keywords: Breast milk,TAC,lactation

Effect of synbiotic supplementation on breast milk IgA level in overweight and obese women,and diarrhea incidence in infants

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Background: Human milk is rich in protective proteins which play a part in the prevention of microbial infection in suckling infants. IgA (Immunoglobulin A) is foremost of these in terms of its concentration in human milk,and in the breadth and sophistication of its protective effects. The aim of this study was to determine the effects of synbiotic supplementation on breast milk IgA level in over weight and obese women,and diarrhea incidence in infants.
Methods: In this randomized,double-blind,placebo-controlled trial,55 lactating mothers with BMI≥25 were randomly divided into two groups to receive daily supplement of synbiotic (n=25) or a placebo (n=30) for 30 days. Breast milk samples (15 mL) were collected into sterile glass bottles by self-expression before the baby was nursed in the morning and stored at - 70°C until analysis. Breast milk IgA levels were detected by nephelometry according to the manufacturer's instructions before and after the intervention. The mother s report of ≥ 3 loose or watery stool in a 24-hour period was considered diarrheal illness. On the interview days,mothers provided information on the incidence of diarrhea in the 2 weeks preceding the survey start and end. Paired t-test and independent t test were used to analyze within group and between group comparisons. P value of < 0.05 was considered statistically significant.
Results: The mean breast milk IgA level in synbiotic and placebo groups were 0.43 ± 0.1 and 0.45± 0.13 g/l respectively. There was no significant difference in the baseline measures between the supplemented and the placebo group. The IgA of breast milk increased significantly from 0.43 ± 0.1 to 0.49 ± 0.12 g/l in the supplemented group (p = 0.01),whereas it decreased from 0.45± 0.13 to 0.43± 0.13g/l in the placebo group (p = 0.33). Also,the comparison of changes in the breast milk IgA level showed a significant difference (p = 0.03) between the two groups during the study. In addition,diarrhea incidence decreased significantly (P = 0.03) from 22% to 3.7% in the supplemented group while no significant changes (increased from 21% to 25%) were observed in the placebo group after the experimental period.
Conclusions: The results showed that administration of synbiotics was preventing breast milk IgA decreases with time and diarrhea incidence in infants. However,further studies using different species of probiotic bacteria and longer duration of supplementation are necessary to make concise conclusions.
Keywords: Breast milk, IgA, diarrhea, synbiotic supplementation, overweight and obese

Effect of maternal age on breast milk TGF-α1 level

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Background: Human milk is rich in protective proteins which play a part in the prevention of microbial infection in suckling infants. Transforming growth factor β (TGF-β) is considered a key immunoregulatory factor in promoting IgA production and induction of oral tolerance. During the early postnatal period,when endogenous TGF-β production in the intestine is sparse,maternal milk constitutes an important exogenous source. So,this study aimed to determine the effects of maternal age on breast milk TGF-β1 levels in lactating mothers.
Methods: In this study,80 lactating mothers who exclusively breastfed their infants for 90 days were recruited from health centers. Mothers were divided into two age groups: ≥30 and < 0.05 was considered statistically significant.
Results: The mean TGF-β1 concentration of the breast milk in all subjects was 11.7± 1.2 pg/ml. The breast milk TGF-β1 level was 11.7 ± 1.2 pg/ml and 11.8 ± 1.3 pg/ml in the age group of ≥30 and <30 years respectively. After adjusting for maternal BMI,no significant difference was observed in breast milk TGF-β1 levels between the two studied groups (P= 0.6). Conclusion: There is a little information regarding the relationship of maternal age and breast milk immune composition. In this study,maternal age had no effect on breast milk TGF-β1 content. This study was a pilot study so further large scale studies with more sample size are needed to clarify underlying mechanisms.
Keywords: Breast milk,TGF-β1,maternal age

Evaluating of comparison of needful pregnant and lactating woman nutritional support program performance co alavi foundation institute in 1390 and 1391 –city of Ahwaz West

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Background: Comparison study of needful pregnant and lactating women nutritional support program per-

formance co Alavi Foundation Institute in 1390 and 1391- city of Ahvaz west Noroozi Nejad D1 Motahar M2 Akbari M3 1. Unit of Public Health Nutrition,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran 2. Unit of Public Health Nutrition,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran 3. Unit of Oral Hygiene,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran Introduction and Objectives: Proper nutrition during pregnancy is due to provide the mother nutritional needs and the fetus growth has utmost importance. The attention to nutrition during lactation persistency helps to successful lactation resumption and conserve reserves of the mother s body. the aim of this study is evaluating of comparison of needful pregnant and lactating woman nutritional support program performance co alavi foundation institute in 1390 and 1391 –city of Ahwaz West.

Methods: This is an interventional study. In this study a total of 240 pregnant women and 206 lactescent woman respectively in the years 1390 and 1391 were covered and in per two months to the end of the sixth month of lactation (maximum period of one year) received food baskets.

Results: 97/12% of pregnant women covered in 1390,and 93/85% in 1391 have ideal weight enhancement and based on the results 95/95% of covered newborns in year 1390 and 98/91% percent of them in the year 1391 have weight up to 2500 g at birth. 100% of the mothers participated in the training in years 1390 and 1391.

Conclusion: one of the effective methods and interventions during pregnancy and lactating period is access to ideal nutrition with teaching about nutrition special in cases that because of poverty mother access is less.

Keywords: weight enhancement during pregnancy,Alavi Foundation,birth weight,nutritional support

Assessment of the dietary patterns of breakfast meals and snacks, as well as anthropometric indices and their relation to blood pressure and biochemical data in Ahwaz west health center staff

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Background: The pattern of eating breakfast,between the promise Ahvaz west health center staff and incidence of cardiovascular risk factor Noroozi Nejad D1 Motahar M2 Akbari M3 1. Unit of Public Health Nutrition,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran 2. Unit of Public Health Nutrition,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran 3. Unit of,Ahvaz West Health Center,Ahvaz Jundishapur University of Medical Sciences,Ahvaz,Iran Background: nowadays world wild attributable burden of cardiovascular risk factors,particulary in the eastern Mediterranean countries,including Iran are increasing. In our country risk factors such as high blood pressure,overweight and obesity,poor nutrition,lack of physical activity and high cholesterol have great roles. This study analyzes the dietary patterns of breakfast meals and snacks,as well as anthropometric indices and their relation to blood pressure and biochemical data in Ahwaz west health center staff.

Methods: This study is a cross-sectional study. about 40 people of Ahvaz health center staff were selected by random. Data on food consumption of breakfast and between meals were collected by self-made questionnaire weighting were performed by a digital scale and height measurement were done by plastic feet .Venous blood samples were taken for measurement of biochemical data. Data were analyzed by the software.

Results: 84% of staff ate breakfast in the work place .The most frequently consumed at breakfast and snacks are bread and cereal foods,for breakfast 5.31times a week and for snacks 2.65 times a week .The average amount of drinking tea at breakfast and between meals in workplace is 2.89 glasses per day (about 690 cc).72% of employees have overweight and obesity. more than half of employees have high blood pressure .The average amount of TC,TG,FBS in blood sample of employee in order was 186/66,171/33,84/33 mg/dl.

Conclusions: The result of this study indicate that the pattern of nutrition in health care employee is poor .Poor mention to this will cause people to have collapsed diseases in addition to bear the costs of treatment that make them unefficient in workplace .Therefore this problem requires analyses and design intervention programs in workplaces.

Keywords: Breakfast, snacks, non communicable diseases

Association between three obesity gene polymorphisms with response to low calorie diet in obese subjects

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Background: Obesity is one of the most common metabolic disorders in the world. Environmental and genetic factors involve in obesity incidence. Evidence indicated that there are association between some obesity-related single-nucleotide polymorphisms (SNPs) and response to energy restriction. The aim of the present study was to determine roles of three common obesity gene polymorphisms and their association with response of obese subjects to low calorie diet.

Methods: Two reviewers, independently extracted data and examined titles, abstracts and references of each article to eliminate duplication data. All abstracts or full text articles, with no language restriction were searched in PubMed, google scholar and science direct databases from 2000 till September 2014. Keywords included PPAR-gamma2 gene, Adiponectin gene, FTO gene, losing weight, diet, obesity and polymorphism in combination and alone. Review, meta-analysis studies, abstract of articles that represented in congresses or non-human studies were excluded.

Results: Adiponectin gene plays a key role in obesity and insulin resistance. SNP+45 and SNP +276 were the most polymorphisms of adiponectin gene which evaluated among obese subjects. Some studies indicated a relationship between adiponectin polymorphism and losing weight. Five SNP of FTO related to obesity were evaluated in the previous studies. They indicated that FTO gene polymorphism is associated with higher weight and body mass index. Also it may participate in regulation of energy expenditure, control of appetite and food choice. But there are limited studies with controversy results about effects of FTO polymorphism in response to weight loss diet. PPAR gamma 2 gene participates in adipogenesis, fat distribution and lipid homeostasis. Some studies indicated that subjects with

Pro Ala12 polymorphism gained more weight during the long time and loss weight more difficult than others. But more studies are needed to clear its certain effects.
Conclusion: Adiponectin, FTO and PPAR-gamma2 genes can participate in obesity incidence and obesity treatment. Considering interaction these obesity genes with nutritional and other environmental factors can be helpful for personalized nutrition and obesity treatment.
Keywords: Adiponectin, FTO and PPAR-gamma2, Obesity, Low- calorie diet

Evaluation of fruit and milk consumption pattern as a snack in urban and rural households in East Azerbaijan Province

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Background: The quality and quantity of snacks is one of the major factors affecting health. Consumption of healthy snacks rich in minerals and vitamins reduce the incidence of obesity and cardiovascular problems. So, this study aimed to evaluate the consumption of fruit and milk as a snack in urban and rural areas of East Azerbaijan province.
Methods: In this survey, the population was the households in urban and rural areas of east Azerbaijan province. Cluster sampling with equal sizes was used and a total of 57 clusters with 8 subjects were studied in urban (38 cluster) and rural (19 cluster) areas. The data in this study collected using a structured questionnaire and interviews were done in the household. Statistical analysis was performed using SPSS version 13.0.
Results: In this study 81.9% of households (82.9% in urban and 80.1% in rural) had a daily fruit consumption as a snack. Weekly consumption of fruit was reported in 15.8% of households (15.3% in and 16.7% in rural),rarely fruit consumption was in 1.6% of households (1.1% in the urban and 2.6% in rural) and no fruit consumption was reported in 0.7% of households (0.7 percent in urban and 0.6% in rural). Also, 44% of households (48% in urban and 36.9% in rural) had a daily milk consumption as a snack. Weekly consumption of milk was reported in 22.7% of households (24.4% in and 19.7% in rural), rarely milk consumption was in 12.3% of households (10.5% in the urban and 15.3% in rural) and no milk consumption was reported in 21.1% of households (17.1 percent in urban and 28% in rural areas).
Conclusion: Based on these results, the majority of households are received fruit as snacks on a daily basis; however, In the case of milk, consumption as a snack was not desirable and therefore suitable educational programs on this subject seems necessary.
Keywords: Fruit, milk, snack, East Azerbaijan

Effects of dried Licorice extract concurrent with weight loss diet on atherogenic indices in Overweight and Obese Subjects: A Randomized Controlled Clinical Trial

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Background: Cardiovascular diseases (CVD) are important public health concerns in both developed and developing countries. A major risk factor for developing CVD is dyslipidemia. In the last decades, an increase in dyslipidemia has been observed following rising prevalence of overweight and obesity. The aim of the present study was to determine effects of dried licorice extract with low-calorie diet on atherogenic indices in overweight and obese subjects.
Methods: In this double blind randomized controlled clinical trial, 64 overweight and obese subjects were recruited and randomly divided into intervention (n=32) and control (n=32) group. Both the groups received 1.5 g/day dried licorice extract or placebo, respectively, with weight loss diet for 8 consecutive weeks. Lipid profile was measured at the baseline and at the end of the study. Atherogenic indices including total cholesterol to high-density lipoprotein cholesterol ratio (TC/HDL-c), low density lipoprotein- cholesterol to HDL-c (LDL-c/HDL-c) and Log Trigyceride/HDL-c (Log TG/HDL-c) were calculated. Comparison inter and intra groups were performed by pair t-test and ANCOVA tests, respectively. SPSS vertion 16.0 was used. P< 0.01).
Results: Also, comparing of Logs of TG/HDL-c between the two groups did not reveal any significant differences at the beginning of the trial, but at the end of the study it was significant (p=0.03).
Conclusion: It seems that supplementation with licorice extract concurrently with low calorie diet can efficiently decrease atherogenic indices in overweight and obese subjects.
Keywords: Licorice, Weight loss diet, Atherogenic, Obesity

Comparison of Knowledge, Attitude and Practice of Urban and Rural Households toward fast foods consuming in West Azarbijan

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Background: Fast food products are often rumored to cause a variety of health problems. The high levels of sugar and fat in fast food can lead to an increased risk of obesity and liver damage is a significant risk associated with consuming. Regularly consuming fast food that is high in sodium and cholesterol can cause damage to the cardiovascular system. This study has been designed in order to compare knowledge, attitude and practices of the urban and rural households regarding fast foods in West Azarbijan.
Methods: The sampling method for select of household was the single stage cluster sampling with equal size clusters. The necessary data were gathered with a structured questionnaire and via the interviews between the questioners and the eligible people in each household.
Results: total of 455 households (272 urban and 183 rural) were selected as overall sample size. The highest knowledge level of over consumption fast foods was about overweight and obesity.(42.4% urban and 27.3% rural). The knowledge level about damage to the cardiovascular was the secondary frequency. 91.9% of urban households and 80.9% of rural households had favorable attitudes about the superiority of traditional foods to fast food. Overall, 4.6% of households in a week consumed sausages, 4.6% daily Pizza, 9% Sandwich in a week, and 13.9% of households Once a week consumed the food at outside the home.

Conclusion: Consumption of the fast foods has increased in our society and If this trend continues, and do not changing in lifestyle can cause to sever unhealthy outcomes.
Keywords: Knowledge, Attitude, Practice, Urban, Rural, Fast Food

Effect of Educational program on improving the Nutritional Knowledge of High schools Female Students about prevention iron deficiency and anemia in Bushehr city

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Background: Dangerous consequences of iron deficiency including mortality rate of mothers during delivery,enhancing morbidity rate,decreasing IQ and learning process,disturbances in growth process and finally decreasing congenital and physical ability. The purpose of this study was to examine the Affect Of Educational program on improving the Nutritional Knowledge of High schools Female Students about prevention iron deficiency and anemia in bushehr city.
Methods: This study is crossectional and descriptive- analytical. The total of 193 people of Female High schools Students were selected at simple random sampling method in 2008-2009. Awareness of the respondents was collected before and after the educational program about nutrition and Iron deficiency and anemia by questionnaire. Data were analyzed by SPSS software and statistical test of paired sample t – test. P-value> o.o5 defined as significant level.
Results: there was significant difference between the mean of score of students before and after the education (P-value> o.o5). It shows educational programs were effectiveness. There was significant relationship between the Students Nutritional Knowledge and family members,age,menstruation age,mother father educations (P-value> o.o5). Percent of Awareness of the respondents before education about Consumption of which foods caused decreased iron absorption when we take it with food? Was 32.6 and consumption of which foods caused increased iron absorption when we take it with food? Was 19.7. Percent of Awareness were increased 94.3 and 74.6 after education.
Conclusion: Necessary solutions are proposed to such as: health Education about nutrition program, identifying nutritional false believes, planning for improving believes, cooperation health volunteer students, use of educational new methods, preparing tizer, in media and press.
Keywords: Female, Nutrition education, Iron deficiency, anemia

The heating process during pasteurization and not in sterilization decreases iodine concentration of milk

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Background: This study for the first time aimed to compare the effect of heating during pasteurization and sterilization processes on iodine concentration of milk for provision of adequately dietary iodine.
Methods: Two experiments were carried out on multiparous Holstein Friesian lactating cows. In experiment 1,16 Holstein dairy cows were assigned into two groups. Treatments were basal diet nutritionally adequate in I,0.534 mg/kg DM,fed alone or supplemented with potassium iodide at 7.5 mg/kg DM of diet (Treatment 2). Milk sampled every day and pasteurized by HTST method. In experiment 2,30 Holstein dairy cows were fed by diet containing 10 mg KI/ kg DM of diet. Milk samples were obtained 4,2 days before,and days of 2,4,6,and 8 after inclusion of KI into TMR diet of dairy cows. Milk samples were sterilized by UHT technology.
Results: Average decrease of iodine after pasteurization was 75.2±22.7 µg/l (52.7±15.2%) for control and 128.8 ±41.9 µg/l (33.8± 13.2%) for KI treatment (P<0.05). Heating process during sterilization increased milk iodine content compared to raw milk (P<0.05). Average of iodine concentration in raw and sterilized milk was 309.4 ± 100.5 µg/l and 327.10 ± 100.7 µg/l,respectively. Conclusion: The present study indicated the concentration of iodine in milk has not been decreased during heating process in sterilization. It seems that sterilized milk could be a good dietary iodine alternative vehicle for prevention of iodine deficiency.
Keywords: iodine, cow milk,pasteurization,sterilization

The relationship between dietary patterns and mental health of patients referred to a nutrition clinic

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Background: Relation between dietary patterns associated with diseases such as diabetes,cardiovascular illness,cancer,etc. are well known. On the other hand,having proper nutrition as one of the most important aspects of physical and mental health is known to be very effective. Studying the relationship between dietary patterns and the various aspects of mental health in different populations is very important. This study aimed to investigate the association between dietary patterns and mental health in patients referred to a nutrition clinic.
Methods: The study included 101 patients admitted to a nutrition clinic. GHQ-28 questionnaire fo measuring the mental health,and a food frequency questionnaire (FFQ) for dietary pattern were used. For data Analysis Using SPSS 17 and Spearman and Pearson correlation,T-TEST,ANOVA were performed. Results In this study,76 females and 25 males between 18 and 55 years participated,35.6% were married,and 64.4% single.
Results: show that the consumption of fruits and vegetables in women has a significant relation with anxiety (p = 0/046 & -0 / 172 r =),depression (p = 0/007 & -0 / 0219 r =),physical symptoms (p = 0 / 049 & r = -0 / 169) and total scores of mental health (p = 0/029 & r = -0 / 0189),but this relation no significant in the group of men (P> 0/05) . Also,a significant relation was not found between the consumption of other food groups and mental health(P> 0/05).
Conclusion: Findings show that,there is a significant relation between the dietary pattern and mental health. Also findings show that eating three servings of fruit and vegetables daily can reduce anxiety and depression effectively and also can improve the mental health especially in women. This last result is similar to the findings of other researchers in Iran.
Keywords: Mental health,Dietary pattern

Effects of Dark Chocolate Consumption on Lipid Profile in Patients with Metabolic Syndrome: A Randomized Clinical Tria

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Background: The patients with metabolic syndrome will be predisposed for type 2 diabetes and cardiovascular disease. Regarding importance of nutritional factors in management of metabolic syndrome,this study was designed to find the effects of Dark chocolate consumption on serum lipids in patients with metabolic syndrome

Methods: In this parallel randomized clinical trial,114 patients with metabolic syndrome who met inclusion criteria were recruited. Patients were randomly assigned to consume 20g or 40g Dark chocolate per day or the control group which had nothing over a 8 weeks period. Total cholesterol,high-density lipoprotein cholesterol (HDLc),triacylglycerol (TG),Low density lipoprptein cholesterol (LDLc) and fasting blood sugar (FBS) were measured at baseline and after 8 weeks. Data was analyzed with ANOVA in SPSS 16.0 and p0.05).

Results: no significant differences was also seen in mean changes of these measurements between groups (p >0.05).

Conclusion: consumption of 20-40gr dark for 8 weeks have neutralized lipidemic effects in metabolic syndrome patients.

Keywords:Metabolic syndrome,Cocoa,Dark chocolate,Lipid profile

Study of fluid consumption among Iranian children

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Background:Body hydration is essential for adequate physical and mental function. In spite of the general agreement that an appropriate level of fluid intake is importance for health and even survival at whole life stages, the actual intake of fluid or total water is not often reported in such studies of food or nutrient intakes. So the aim of this study was to determine for the firs time, average fluid intake and fluid types in different sex, age and socioeconomic status in Tehran school aged children.

Methods: Fluids consumption in 789 students aged 8-17 years were measured by a Seven-day fluid-specific diary questionnaires during May 2013. Participants included 368 boys (47%) and 421girls (53%) aged 8 to 17 years old from different socio-economic status (low, middle and high).

Results: The average total intake of fluid was 1302.7± 500.6 ml/day. Table 1 shows the comparison of average intake of our samples with international recommendations. Boys consumed more fluid than girls (1400 ± 511 vs. 1217± 476 ml/d) (p<0.01). There was not significantly difference between of total fluid intake among different socioeconomic classes. Water represented about one-half of daily beverage intake in both genders. Dairy drinks contributed to about 19% of the total fluid intake in children (~ 240 ml/d) followed by hot drinks and carbonated soft drinks (14% and 8% of total intake).Children of low socio-economic status consumed more hot drinks than two other classes (p< 0.001).Carbonated soft drinks intake was higher among boys(p<0.001).By increasing age, consumption of carbonated drinks increased from 98.4± 102.6 for 8-13 years children to 117.8± 118.7 ml/d for 14-17 years (p<0.01). While dairy drinks decreased from 262.4±178.4 ml/d for younger age group to 207±185.5 ml/d for older children (p<0.001). Table1-Comparison of the fluid intake(ml/d) of the children in Tehran with international recommendations Age group 8-13 years 14-17 years WHO Our study EFSA* WHO Our study EFSA Boys 2400 1351 2100 3300 1475 2500 Girls 2100 1227 1900 2300 1203 2000 *EFSA(European Food Safety Authority)

Conclusion: Based on this study Iranian children consume less fluid than international recommendations. The apparent low levels of water consumption across the population and considering possible associations of water consumption with cognition in children, concerns about the improving drinking behavior in this population raises. The authors acknowledge support of Damavand water mineral company for this research.

Keywords: Fluid consumption, beverages, children,Iran

Calory intake from beverages in Iranian children

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Background:Little is known about the contributors of calory from fluid in Iraian children eating patterns. We examined beverage consumption and energy intake from beverages in Tehran school aged children.

Methods: This study was conducted in the capital of Iran,Tehran. A total of 789 children (in two age groups: 8-13 yr,14-17 yr) were recruited from 18 schools in northern,central and southern parts of Tehran metropolitan area to represent high,intermediate,and low socioeconomic status (SES),respectively. The instrument for data collection consisted of a "7-day fluid record". Data entry was carried out within MS Access and analysis was performed using SPSS 19.

Results: Total energy intake from the beverage consumptions per day was 118.0±80.7 Kcal. Distribution of calory intake by sex,age,SES and BMI is shown in table 1.Dairy drinks were classified as healthy drinks so energy intake from those drinks was not calculated. The energy intake in boys was significantly higher than girls (p<0.01). The highest energy intake was 141.7±89.5 kcal which was arising from the carbonated soft drinks followed by 34.7 ±30.2 kcal from sugar added to hot drinks. The energy intake from carbonated beverages and hot drinks in boys was also significantly higher than that in girls (P<0.001) and in older children more than younger age group (p<0.01).About 10% of population drank more than 220 ml carbonated drinks per day while 45% consumed less than 50 ml per day. Calory from sugar added to hot drinks in low SES was significantly higher than two other areas (p<0.001). There was no significant difference between calory intake in BMI categories. Table 1-Total calory intake from fluids by sex,age,SES and BMI N Mean SD sex Boys 368 141.7 89.5 Girls 421 97.3 65.6 Age (years) 8-13 455 115.2 78.5 14-17 334 121.8 83.6 SES High 241 117.7 83.2 Middle 263 111.1 77.7 Low 285 124.5 81.0 BMI(kg/m2) Underweight 17 83.1 50.7 Normal 451 118.7 81.9 Overweight 186 122.9 81.1

Obese 116 110.0 81.3
Conclusion: Our study indicated that the energy intake from carbonated beverages and added sugar in hot beverages,increased with age in both male and female children,suggesting trend towards sugar-rich foods and away from healthier fluid choices with advancing age. This study was supported by Damavand Mineral Waters Company.
Keywords: Fluid calory,carbonated soft drinks,children,Iran

Antioxidant therapy against oxidative stress and androgen rise in ethylene glycol (EG) induced nephrolithiasis inWistar rats

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Background: Administration of natural antioxidants has been used to protect against nephrolithiasis.
Methods: Urolithiasis was induced by ethylene glycol in Wistar rats.In ٤ week, Group ١ (control) was fed a standard commercial diet. Group ٢ received the same diet with ٠,٧٥٪ of ethylene glycol (EG). Group ٣ received EG plus the diet and water added with antioxidant nutrients and lime juice as the dietary source of citrate (EG+AX). Group ٤ same as group ٣ with no EG in water. In ٨ week, Group ٥ was fed the standard diet with EG in water for the first ٢٨ days, followed with no EG. Group ٦ received the diet with EG for the first ٢٨ days, followed by discontinuation of EG and addition of antioxidant nutrients. Group ٧ were provided the diet with antioxidant nutrients for ٨ week. Group ٨ received the diet with antioxidant nutrients for ٤ week, followed by antioxidant nutrients with EG for the next ٤ week. Blood and kidneys were removed.
Results: The size and the mean number of crystal deposits in EG treated groups was significantly higher than the EG treated groups, added with antioxidant nutrients and lime juice.In 4 week, the mean concentration of malondialdehyde (MDA) in Group 2 was higher than the Group 3, and significantly lower in Group 4; and in Group 7 after 8 week, as well.After 8 week, supplementation developed less mean number of deposits in Group 6 as compared to Group 5; and in Group 8, the crystal deposits was substantially less than either Group 2 or Group 5 (EG-treated rats).Elevated concentration of androgens (as promoters of the formation of renal calculi) as a result of EG consumption decreased following antioxidant supplementations.
Conclusion: Results showed a beneficial effect of antioxidant and provided superior renal protection on treating and preventing stone deposition in the rat kidney.
Keywords: Ethylene glycol, Calcium oxalate urolithiasis, Oxidative stress, MDA, Androgens, Wistar rats

Assessing serum concentration of zinc among females aged 18-30 under cover of a relief foundation

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Background: Zinc deficiency seems to be common in developing countries, especially in low-income families. Socioeconomically disadvantaged people are more susceptible to consume a nutritionally inadequate diet. Current study investigated the serum concentration of zinc and its correlation with different parameters among in-need female population under cover of a relief foundation in Iran.
Methods: In a cross-sectional study, 1026 single females aged 18-30, from all around of Iran were enrolled. Sixteen camps were organized and 60 females from two provinces of Iran were participated in each camp. Demographic and anthropometric data were registered and venous blood samples were collected. Analysis of variance and pearson correlation coefficient were used for statistical analysis and interpretation of results. *P*-value of less than 0.05 was considered significant.
Results: Mean serum zinc among 1026 participants was 78.3±13.7 µg/dl. Significant difference was detected between mean serum zinc among different BMI groups (ANOVA, p=0.03), while it was not significant in different education levels and age intervals (ANOVA, p=0.61 and 0.95 respectively). Participants from two western provinces of Iran (Khoozestan and Lorestan) had significantly higher zinc level. There was a positive relationship between serum iron and zinc (pearson correlation coefficient, r=0.1, p=0.001).
Conclusion: Current findings reveal the important role of socioeconomic and geographic situations and their effect on nutritional status in populations. Other researches focusing on food accessibility, eating behaviors, knowledge level and other reasons that expose poor populations to insufficient nutritional intake are recommended.
Keywords: Zinc, Socioeconomic, Young females, Education, BMI, Disadvantaged

Survey of reduction in the amount of turmeric contamination to aerobic mesophilic microorganisems and mould by boiling in acidity situation in Kermanshah city

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Background: Turmeric usually get grow in soil or agricultural grounds whenever these plants be dried on environmental mechanism and process and be preserved on usual atmosphere so are enough susceptible to be contaminated by the form of and microorganisms in atmosphere .
Methods: In this study 70 samples of turmeric collected from food supplier centers in all around the city .The samples be tested for revealing the amount of basic aerobic mesophilic microorganisms and mould and surveying the effect of baking on acidity situation in reduction of the amount of aerobic mesophilic microorganisms and mould .

Results:The result of this study shows that from the whole of the samples, the quantity of aerobic mesophilic microorganisms and mould were (93/2.10^5 cfu/g) and(24.10^{3}cfu/g) respectively.And after boiling on acidity situation of tomato paste (for 5 minutes) the amount of reduction aerobic mesophilic microorganisms and mould contamination were (25.10^{5}cfu/g) and (6.17.10^{3}cfu/g) respectively.
Conclusion: This survey revealed that all the imported spices must be irradiation in exporter countries based on international standards .Some countries use contaminated turmeric in their formulation daily. If these factories could use tomato paste in their formulation for reduction the amount of mentioned contamination and less damage to organoleptic properties and chemical propertise like flavour they can boil the turmeric for 5 minutes under acidity situation and use these turmerics in their products under controlled situation .This study just had been conducted about vogetative organism form.
Keyword: Turmeric, mesophilic microorganism, mould,contamination, irradiation ,Boiling

Evaluation the effects of L-Carnitine on weight in rats with diet induced obesity

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Background: The increased prevalence of obesity and existing trend data implies that obesity has become a public health crisis that severely impairs the health and quality of life. This event motivates pharmaceutical industry to produce anti-obesity drugs. Efficacy and mechanism of actions of many anti-obesity drugs are remained unclear. The aim of this experimental study was to investigate the anti-obesity effects of L-Carnitine in diet induced obesity in rats.
Methods: Thirty two male wistar rats weighing 150-200 g were randomly divided into 3 groups: 1) Chow diet (n=8) 2) Low fat diet (n=8) and 3) High fat diet (HFD) (n=16). After 8 weeks,the HFD group was subdivided into 2 categories: saline group or 200 mg/kg L-Carnitine (n=8) which was administered by oral gavage. Animals had free access to food and water. Body weights were measured and recorded weekly. SPSS Version 16 was used for statistical analysis.
Results: At the end of 8th week,a significant difference in weight was observed between HFD group and the other groups. In comparison with HFD group,L- Carnitine added to HFD,inhibited body weight gains by 5% (p=0.023) at the end of 12th week.
Conclusions: Findings of this experimental study showed that L-Carnitine could help to decelerate weight gain and control diet induced obesity in rats.
Keywords: Obesity,L-Carnitine,Weight gain

Investigation of probiotic bacteria Lactobacillus casei visibility in enriched BAF cheese with Spirulina platensis

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Background: Spirulina platensis has been used for many years as human food because of its nutritional value such as high protein content (50-60%),vitamins,essential amino acids,minerals and essential fatty acids. The purpose of the present study was to investigate viability of probiotic bacteria Lactobacillus casei in enriched BAF cheese with Spirulina platensis.
Method: Experimental manufacture of probiotic BAF cheese was performed in Pegah Fars Company. Probiotic BAF cheese was enriched with three concentrations of Spirulina (0.5,1.0 and 1.5%) and 2% Cuminum cyminum,as a taste modulator of Spirulina and probiotics were counted during 60 days.
Results: Probiotic count of 0.5,1.0 and 1.5% S. platensis powder was 4.1×109,5.05×109 and 6.75×109,respectively.
Conclusion: Since in most products the best sufficient count of probiotics at the end of the shelf-life is 107, so the results of this research show great viability of probiotics. As well,this enriched cheese is very useful in terms of nutritional value.
Keywords: Spirulina,probiotic,cheese,cumin

Evaluation effect of work shift on body weight of male workers referred to industrial medicine center

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Background: Excess body weight and related health problems can have significant impact on worker productivity. Objectives : This study investigated the effect of work shift on body weight in male workers referred to industrial medicine center of Razi hospital.
Methods: In this cross- sectional research,5248 male workers referred to industrial medicine center of Razi hospital in 2010 year were studied. Weight and height were meseared with precision of 100 g and 1 cm,Respectively,then body mass index (BMI) was computed. Statistical analysis of data was performed using the SPSS # 18 software and descriptive tests and ANOVA followed by Scheffe with a significance level of P 25 kg/m2) in a variety of work shifts were : 59.7% in day shift,67.2% in rotate shift and 55.2% in aghmari (14 days work and 14 days rest).
Results: In this study the mean of age was 32.87 ± 6.9 years. The prevalence of overweight and obesity (BMI> 25 kg/m2) in a variety of work shifts were : 59.7% in day shift,67.2% in rotate shift and 55.2% in aghmari (14 days work and 14 days rest). ANOVA test showed significant difference between groups considering BMI (p <0.05) and rotete shift workers had higher BMI than other groups.
Conclusions: Rotate shift work may have bad effect on pattern of eating regular and food digestion with chan in work and sleep time and in Long-term may lead to obesity and comorbidities.
Keywords: work shift, obesity, industrial medicine

Malnutrition Among Iranian Children: Birth Weight, Number of Children at Home and Birth Order

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Background: This cross-sectional study was conducted to investigate the prevalence and predictors of malnu-

trition indicators such as wasting,stunting,obesity and underweight by birth weight,number of children at home and birth order.
Methods: six suburbs in Qazvin province,Iran. The present study examined 1351 urban and rural children under 6 years old (692 boys and 659girls). Data on age,weight and height were taken and birth weight,number of children in family,birth order,parental career and educational state and family caretaker were collected by a questionnaire that parents filled in.
Results: The overall prevalence of wasting,stunting,obesity and underweight in this population was 10.3%,17.5%,5.8% and 4.8% respectively.
Conclusion:There wasn't any relationship between those three factors and wasting; although stunting was less prevalent in children within2500-4000gr birth weight group (p<0.007,p
Keywords: Cross-sectional study; wasting; stunting; obesity; underweight; Iran

Determination of nutritional and food consumption patterns in households in the Kermanshah city after removing of the governmental subsidy
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Background: Changes in policies of some countries in food supply for households may affect their nutritional status. This study aimed to determine the nutritional and food consumption patterns in households in the Kermanshah city; 18 month after the governmental subsidy was removed.
Methods: This study was performed 18 months after the removal of subsidy scheme for milk and bread in 2012. The study was conducted on 250 households randomly from six zone of Kermanshah. Data was collected using demographic and FFQ questionnaires. Linear regression, Spearman correlation, Pearson chi-square, t-test and Choprof factor applied for statistical data analysi.
Results: The consumption of all food groups such as bread and cereal group (P 0.05) and negatively associated observed with consumption of bread and cereals.
Conclusion: Removing subsidies will affect more on poor families. Before any action to remove food subsidies, government to provide alternative food supply low income families.
Keywords : Subsidies, eating patterns, food groups, dairy

Association betweenpoor quality of sleep and low nutritional statusesamong older adult
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Background: Sleep quality is affected by multiple factors such as environmental, health status, and pharmacological factors in older adults. Very a Few researches assess nutritional status and quality of sleep among elderly. This study was conducted to aim response to this question that whether the quality of sleep could be affectedbynutritional status among older adult or not.
Methods: Two hundred three older adult residents of KCF, who consent to participation and were not a known case of malignancy and end staging diseases participated in this study after signing of consent forms. Demographic data were gathered using a valid questionnaire. Nutritional statuses were assessed using mini nutritional assessment (MNA), and the quality of sleep evaluated by Pittsburgh quality of sleep index (PQSI) by a trained researcher. Anthropometric measurement such as height, weight, calf circumference, mid arm circumference, waist circumference, and hip circumference were measured according standard methods. Relationship between PQSI and MNA Scores was evaluated by utilizing logistic regression analysis.
Results: Mean age of the participants was 76.47 (8.58) years. 66 (32.5% of the participants has a poor sleep quality and 66 (32.5%) of them were at risk of malnutrition or malnourished. Odds ratio of association between nutritional statuses which were measured by MNA was 1.74 with CI 95% 0.94-3.22 in univariate logistic regression model. After adjustment for BMI, age, sex and waist and hip circumference, odds ratio was calculated of 2.5 with CI 95% 1.22 – 5.14.
Conclusion: It seems that older adults, who are at risk of malnutrition or are malnourished, about 2.5 timesmore are at risk of poor quality of sleep than those who have good nutrition status.
Keywords: Older Adults, Sleep quality, Nutritional status

Examine the role of women in household nutrition and ways to improve it
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Background: Health is the most important indicator guarantee. Scientific research in different countries, proved to the fact that nutrition has very important role in preserving health, disease prevention and length of human life. Women are the most vulnerable groups in society to the problems of nutrition and considering their health affects the health of the entire family. Knowledge and attitude women's nutrition is very important and constructive role the family plays in shaping the dietary pattern. Women are the key to nutrition health of family.this study aims to improve the nutritional needs of families by improving the role of women has been written.
Methods: This study is descriptive-comparative with an extensive search of reputable websites, journals and books related to this field were analyzed and basic strategies for improving household nutrition of women's role in it was presented.
Results: Woman as a person involved in feeding the family if necessary to learn education about nutrition and health, family budget to buy the right things, a significant portion of these problems will be solved..In order to improve the nutritional status of the population, it is important to try to increase mother's awareness and attitudes toward nutrition. Ever-increasing rise in non-communicable diseases that can destroy many human and financial resources with nutritional education and lifestyle changes can be prevented. Basic prac-

tical knowledge of nutrition of the woman that have the household portfolio adjustment could help her choose the right foods. The neglect of women in education, nutrition and health causes him to lose his future resources.

Discussion and conclusions:

One of the main criteria is to improve the education of women. Women from two different perspectives about food and nutrition should be considered. First she's feeding is the importance of proper nutrition in different period resulting from biological differences, including puberty, pregnancy, lactation and menopause is to be understood. Her literacy and nutrition knowledge that health and disease patterns of society avarice.

Keywords: household nutrition, improve household nutrition, the role of women in nutrition, nutrition and women.

Association between dietary diversity and serum total antioxidant capacity in women attending municipality sports clubs in West of Tehran

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Background: Dietary diversity is one of the indicators of dietary intake status, but so far, its association with serum total antioxidant capacity has not been investigated. Therefore, the aim of this study was to investigate the relationship between dietary diversity with serum total antioxidant capacity in women attending the sport clubs of municipality in west of Tehran.

Methods: This cross-sectional survey was conducted in 397 randomly selected healthy women from 14 sport clubs dependent to mayoralty in North West, South West and West of Tehran. Socio-demographic data including weigh, height, age, marital status, educational level, occupation, physical activity and socioeconomic status were recorded. We used the 24-hour recall questionnaire to estimate food intake in one day of the week. Dietary diversity score (DDS) was calculated according to FAO's guideline 2013. In this guideline, dietary intake of each person was classified in 9 food groups including 1-cereals and roots of white, 2-herbs and roots rich in vitamin A and fruits rich in vitamin A, 3- leaf vegetables and dark green, 4-green fruits and other 5- organ meat, 6-meat, fish and seafood, 7- chicken eggs, 8- beans, nuts and oil seeds and 9-Milk and milk products. For each person, by minimum consumption of at least half serving of one food from each mentioned food groups, one point and otherwise zero point was considered for DDS for each food group. So every food groups contain 1 score from total 9 score. serum concentration of total antioxidant capacity (TAC) were measured in 89 subjects randomly selected from all participants of this study. In statistical analysis, ANOVA test was used to compare the means of TAC across the quartiles of DDS. Multivariate analyses of variance (ANCOVA) were used to determine the means and SEs of considered variable after adjustment for confounders.

Results: The serum level of TAC showed increase with increasing the DDS across the quartiles after adjusting for age, energy intake and physical activity ($P<0.01$).

Conclusion: we observed that the serum level of TAC were significantly increased with increasing the quartiles of DDS. These results suggest that dietary diversity is directly associated with better blood antioxidant status.

Keywords: Dietary Diversity, total antioxidant capacity healthy women

Association between dietary diversity with general and central obesity in women attending municipality sports clubs in West of Tehran

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Background: Dietary diversity is one of the indicators of dietary intake status. The aim of this study was to investigate the relationship between dietary diversity with general and central obesity in women attending municipality sports clubs in West of Tehran.

Material and methods: This cross-sectional survey was conducted in 397 randomly selected healthy women from 14 sport clubs dependent to mayoralty in Western area of Tehran. Socio-demographic data including age, marital status, educational level, occupation, physical activity and socioeconomic status were recorded. Weight, height and waist circumference (WC), were measured according to standard protocols and BMI was calculated . We used the 24-hour recall questionnaire to estimate food intake in one day of the week. Dietary diversity score (DDS) was calculated according to FAO's guideline 2013. In this guideline, dietary intake of each person was classified in 9 food groups including 1-cereals and roots of white, 2-herbs and roots rich in vitamin A and fruits rich in vitamin A, 3- leaf vegetables and dark green, 4-green fruits and other 5- organ meat, 6-meat, fish and seafood, 7- chicken eggs, 8- beans, nuts and oil seeds and 9-Milk and milk products. For each person, by minimum consumption of at least half serving of one food from each mentioned food groups, one point and otherwise zero point was considered for DDS for each food group.

Multivariate analyses of variance (ANCOVA) were used to determine the means and SEs of waist circumference and BMI after adjustment for confounders.

Results: With increasing the DDS across the quartiles, the prevalence of general obesity (BMI $\geq$ 30 kg/m^2) and central obesity (waist circumference $\geq$ 80 cm) decreased ($P<0.001$). The means of weight, body mass index (BMI) and waist circumference were significantly decreased with increasing the DDS across the quartiles, after adjusting for age, energy intake and physical activity ($P<0.001$).

Conclusion: With increasing the DDS across the quartiles, we observed that the prevalence of general and central obesity, weight, BMI and waist circumference was significantly decreased. These results suggest that dietary diversity is inversely associated with general and central obesity.

Keywords: Dietary Diversity, General obesity, Central obesity

Authors Index O

Docosahexaenoic Acid in Breast Milk Reflects Maternal Fish Intake in Iranian Mothers

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Background: Several studies have examined the maternal intake of fish, seafood and n-3 long- chain polyunsaturated fatty acids (LCPUFA) during pregnancy and lactation in relation to the impact on infant's health outcome. The aim of this study to estimate essential fatty acid (FA) and long-chain polyunsaturated fatty acid (LCPUFA) concentrations in early breast milk (BM) in relation to habitual fish intake.
Methods: BM was collected within 72-hours after delivery from consecutively included mothers, 60 in Guilan (coastal) and 60 in Kermanshah (inland) provinces. Mothers were interviewed to complete a food frequency questionnaire. The FA composition was measured with gas chromatography.
Results: Mothers in the coastal area had higher intake of fish/seafood. Consumption of saturated fat was higher in Kermanshah and olive intake was higher in Guilan. High fish/seafood intake was associated with higher docosahexaenoic acid (DHA) and lower arachi-donic acid (AA)/DHA ratio in BM. There were no differences in linoleic and α-linolenic acid concentrations in BM between the provinces. N-3 FA and DHA concentration were significantly higher in Guilan than Kermanshah, but total n-6 FAs and AA did not differ and were high in both provinces. The ratios of total n-6/n-3 and AA/DHA in BM of mothers from Guilan were significantly lower than those in Kermanshah.
Conclusion: The LCPUFA status in BM in two Iranian provinces was generally good and DHA was higher and the AA/DHA was significantly lower in mothers with high fish intake.
Keywords: Essential Fatty Acids, Docosahexaenoic Acid, Arachidonic Acid, Linoleic Acid, Alpha-Linolenic Acid

Authors Index P

Assessment the type of oil used for cooking and frying in urban and rural households in East Azerbaijan Province

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Background: One of the main causes of malnutrition is lack of nutritional knowledge which results in inappropriate practice and causes the problems such as obesity and risk of non-communicable diseases. Oil consumption especially solid oil consumed in large amounts is one of the important factors contributed to obesity. This study was designed to investigate the type of oil used for cooking and frying in urban and rural households in East Azerbaijan Province.
Methods: In this survey the population was the households in urban and rural areas of east Azerbaijan province. Cluster sampling with equal sizes was used and A total of 57 clusters with 8 subjects were studied in urban (38 cluster) and rural (19 cluster) areas. The data in this study collected using a structured questionnaire and interviews were done in the household.
Results: The oils used for cooking in households,35.6 percent (in urban samples 37.5% and rural samples 32.5%) consumed solid vegetable oil,46.3 percent (in urban samples 48.4% and rural samples 42.7%) consumed liquid vegetable oil,7.6 percent (in urban samples 5.8% and rural samples 10.8%) consumed animal oil,2.8 percent (in urban samples 2.2% and rural samples 3.8%) consumed olive oil. The oils used for frying in households,22.3 percent (in urban samples 24.3% and rural samples 18.9%) consumed solid vegetable oil,22.3 percent (in urban samples 27.5% and rural samples 13.2%) consumed liquid vegetable oil,2.8 percent (in urban samples 0.7% and rural samples 6.3%) consumed animal oil and 2.1 percent (in urban samples 1.1% and rural samples 3.8%) consumed olive oil.
Conclusion: The results of this study showed that consumption of solid vegetable oil was high in households. So, educational programs are necessary to replace solid vegetable oil with healthier oils.
Keywords: Oil, Frying Oil, East Azerbaijan

Impact of short-term controlled over-and underfeeding on the body weight, body composition and resting energy expenditure

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Background: To investigated (i) the impact of controlled over (OF)- and underfeeding (UF) on body composition measured by magnetic resonance imaging (MRI),(ii) the associations between those changes and resting energy expenditure (REE),(iii) the changes in specific metabolic rate (Ki values) of organs.
Methods: Eight men (mean BMI 22.7 kg/m2) participated in sequential cycles of 7d OF followed by a 7d UF. Body composition was measured by QMR together with MRI. REE measured by indirect calorimetry (REEm) was compared with REE predicted from body-composition analysis (REEp) by using Ki values of organs.
Results: Weight loss was associated with decreases in FFM and FM by 91.0 and 7.0%, respectively. 77.0% of weight gain was due to FFM. Size of skeletal muscle increased with OF and decreased during UF. REE decreased during UF by -108.7 kcal/d (d3) and -208.7 kcal/d (d7) with no effect of OF. No difference was observed in Ki values during OF but UF had an effect.
Conclusion: OF and UF resulted in changes in FFM rather than FM with no effect on Ki values of organs during OF. However UF reduced the in Ki values of organs.
Keywords: weight loss, weight gain, resting energy expenditure

Does Omega-3 Supplementation have Beneficial Effects on Homocysteine, Lipid Profile and Insulin Action in Type 2 Diabetic Patients? A Randomized Clinical Trial

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Background: Type 2 diabetes (T2D) is considered "the epidemic of 21th century" affecting approximately 347 million people worldwide. It's rapidly increasing global prevalence is a primary cause of concern. Homocysteine (Hcy) is a sulfur containing amino acid [COOHCH (CH2CH2SH) NH3]. Mild homocysteinemia is an independent risk factor for atherosclerosis, atherothrombosis and may even increase the risk of cardiovascular disease (CVD) in people with T2D. There is a low prevalence of diabetes in Greenland and Alaskan Eskimos, populations as known for a very high intake of N-3 polyunsaturated fatty acids (n-3 PUFAs). High intake of n-3 PUFAs have potential antiatherosclerotic effects and also reduce deaths from CVD. In recent years, several studies have been implemented about n-3 fatty acids, but none of them have been able to completely show its effects on diabetes patients. This study has been conducted to determine the effects of n-3 PUFAs supplementation on Hcy level, lipid profile and insulin resistance in patients with T2D.
Methods: This study is a double-blind controlled trial involving 70 patients with T2D selected from Yazd Diabetes Research Center in 2013. Patients were randomly assigned to receive either 2 g/day omega-3 soft gels (OG) or 2 g/day placebo (PG) for 6 weeks. At the beginning and end of the study, Hcy concentration, fasting plasma glucose, fasting plasma insulin, total cholesterol, triglycerides (TG), LDL-c, HDL-c, HDL-c/LDL-c ratio, insulin resistance (HOMA-IR), insulin sensitivity and beta-cell function was measured and compared.
Results: Sixty five participants completed the study. N-3 PUFAs supplementation caused significant increase in Hcy level compared in OG with PG, but there was no significant difference in mean change between groups. Mean of total cholesterol, TG, LDLc, HDLc concentration and HDLc/LDLc. According to these findings, No significant differences was seen in mean changes of TG, total cholesterol, LDLc, HDLc concentration and HDLc/LDLc between groups. There was no significant difference in TG and total cholesterol before and after the intervention in groups, but LDLc and HDLc/LDLc ratio were significantly increased and HDLc was significantly decreased in OG. Insulin and IR had significant increase and IS had significant decrease in both groups, but β-cell function was significantly increased in OG.

Conclusion: Our study showed that no beneficial effects of 2 g/day omega-3 supplement for 6 weeks on biomarkers of Hcy, glucose, insulin and lipid profile in patients with T2D.
Keywords: Type 2 diabetes, Homocysteine, Omega-3, lipid profiles, HOMA-IR

Assessment of Anethum Graveolens supplementation on the insulin sensitivity and lipid abnormality in type 2 diabetic patients

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Background: The use of herbs as an alternative medicine due to the few side effects compare with common used medicine,has been prevailed for treatment and prevention of diseases,recently. Type II diabetes because of changes in life style is a prevalence disorder,7/7% of Iranian population suffer from diabetes and its complications. This study was aimed to investigate the effects of Anethum Graveolens L. supplementation on insulin sensitivity, fasting blood sugar (FBS) and lipid profile markers in type 2 diabetic patients.
Methods: This randomized, double-blind, placebo-controlled clinical trial was performed on 60 diabetic patients in Tabriz, Iran between January to March in 2012. Intervention group received 3.3 g/day powder of Anethum for 8 weeks. Serum levels of FBS, Triglyceride (TG), Total cholesterol (TC), low-density lipoprotein-cholesterol (LDL-C) and high-density lipoprotein cholesterol (HDL-C) were assessed at the beginning and at the end of the study. Serum insulin level was determined by ELISA method and homeostasis model assessment-insulin resistance (HOMA-IR) calculated as fasting concentrations of blood glucose (mg/dL) × fasting insulin (μU/ml) / 405.
Results: Serum insulin level, TC and LDL-C were significantly decreased in the intervention group at the end of study (p=0.003, p=0.016, p=0.009, respectively). Changes in the serum level of HDL-C, TG and HOMA-IR were not significant. Surprisingly, FBS was increased in the intervention group but it was not significantly (p=0.142).
Conclusion: Supplementation of diabetic patients with Anethum had beneficial effects on some biochemical markers. Further scientific efforts are suggested to confirm these results.
Keywords: Anethum Graveolens, Insulin Resistance, Diabetes Type 2

Effects of alpha-lipoic acid supplementation on disease activity and inflammation in rheumatoid arthritis patients: a randomized placebo-controlled trial

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Background : Alpha-lipoic acid (ALA) has been considered as a potent antioxidant with anti-inflammatory functions in some oxidative stress-associated inflammatory diseases. However,few studies have evaluated its effects in rheumatoid arthritis (RA). Therefore,in the present study effects of ALA on disease activity and inflammation in women with RA was evaluated.
Methods: This was a randomized,double-blinded,placebo-controlled clinical trial. 70 RA patients aged 20–50 years were randomly assigned to receive either ALA or placebo (1200 mg/day for 8 weeks). Before and after the study,fasting blood samples were taken from patients to analyze serum hs-CRP and TNF-α. Moreover,to evaluate the disease severity based on disease activity score in 28 joints (DAS-28),swollen and tender joints were examined by rheumatologist before and after the intervention period. Also,dietary intake and physical activity level were assessed respectively using three-day dietary record and international physical activity questionnaire at baseline and the end of the study**.**
Results:65 patients completed the study. Statistically significant differences in serum levels of hs-CRP,TNF-α and DAS-28 were not observed within and between the ALA and placebo groups (P>0.05). Also,dietary intakes and physical activity levels as confounding factors showed no significant inter- and intra-group changes (P> 0.05).
Conclusion: In the present study disease activity and inflammation were not significantly affected by 8 weeks of ALA supplementation. Further clinical trials with longer duration on patients with more active forms of RA are needed**.**
Keywords: alpha-lipoic acid,rheumatoid arthritis, inflammation, disease activity

Relationship between sub-maximal oxygen uptake,detailed body composition and resting energy expenditure in overweight subjects

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Background: We investigated (i) the impact of detailed body composition on aerobic fitness to address whether besides FFM and FM,their regional components have independent effects on VO2submax and (ii) how VO2submax and body composition add to the variance in REE.
Methods: 71 healthy adults (80% female,20% male,BMI 28.2-43.8 kg/m2) were investigated. Body composition was measured by the 4 compartment model together with whole body magnetic resonance imaging (MRI) to assess high and low metabolic rate organs and regional fat depots. VO2submax was estimated at 75% of predicted maximum heart rate.
Results: There was a strong association between VO2submax and FFM,and all organ masses except for heart. Skeletal muscle mass accounted for 34.8 % of the variance in VO2submax. In addition,subcutaneous adipose tissue (SAT) of extremities explained additional 14.4%. VO2submax correlated with REE. FFM and FM explained 71.3% of the variance in REE. Including the components of FFM and FM,the explained variance in REE increased by about 5.8%; skeletal muscle mass explained 70.0% of the variance in REE and kidney and liver masses explained additional 7.1%. Taking into account body composition,VO2submax did not add to the variance in REE.
Conclusion: FFM is a determinant of both,REE and VO2submax. Modeling either REE or VO2submax from individual components of FFM,about 77.1% (muscle,liver and kidneys mass) or 34.8% (muscle mass) of their variances could be explained. FM added to the variance in REE,whereas SAT at extremities added to the variance in VO2submax only.

Prevalence and patterns of antibiotic-resistant coagulase-positive Staphylococcus aureus strains isolated from traditional ice cream city of Urmia

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Abstract: Traditional ice creams due to poor sanitization conditions and the use of unpasteurized materials in the production are source of food borne pathogens. Staphylococcus aureus is an important bacterial pathogen in humans, and it causes different disease such as skin infections and food intoxication. In the present study, 100 samples of traditional ice creams were collected aseptically and randomly from different areas of Urmia city in the summer of 2014. At first, the samples diluted in sterile saline and then cultured on Baird-Parker agar. Shiny black colonies with clear zone around them were counted as S. aureus colonies. To confirm the mannitol fermentation and coagulase tests were done. Then antimicrobial susceptibility of coagulase-positive S. aureus isolates using the disk diffusion method and with the antibiotics penicillin, ampicillin, clindamycin, chloramphenicol, trimethoprim-sulfamethoxazole, ciprofloxacin, erythromycin, tetracycline, and gentamicin was done. Of the 100 samples tested, 16 samples were coagulase-positive S. aureus was isolated. The mean number of positive samples was 2.9±1.9×103 CFU/g. Antibiogram results showed that all isolates are sensitive to the ampicillin and penicillin and are resistant to ciprofloxacin. From the results can be concluded that the microbial quality of consumed traditional ice cream of Urmia city is not acceptable and hygienic surveillance on the production and distribution of this type of ice cream is recommended.

Keywords: Staphylococcus aureus coagulase-positive, antimicrobial susceptibility, traditional ice cream, Urmia city (Iran)

Effects of Omega-3 Supplementation on Blood Pressure in Patients with Type 2 Diabetes: A Double-Blind,Placebo-Controlled Clinical Trial

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Background: Type 2 diabetes mellitus (DM-2) is a chronic and progressive metabolic disorder known as a serious threatening condition in the individual and society. Type 2 diabetes mellitus is known as the major cause of cardiovascular diseases (CVD). Contradictory evidences about the effect of omega-3 fatty acids on CVD risk factors,particularly hypertension. The aim of this study was to determine the effect of omega-3fatty acids supplementation on blood pressure in DM-2 patients. Materials and **Methods:** This is a double-blind,placebo-controlled clinical trial on patients referred to Yazd Diabetes Research Center. Seventy DM-2 patients were randomly assigned to receive either 2 g/day omega-3 soft gels (OG) or 2 g/day placebo (PG) for 6 weeks. At the beginning and end of the study,blood pressure was measured and compaired.
Results: Fifty nine percepts of patients in OG and 41% in PG had hypertension. Initially,there was no significant difference in the mean of age,body mass index (BMI),systolic blood pressure (SBP),diastolic blood pressure (DBP) and duration of diabetes between two groups. At the end of the study,the mean of SBP,DBP and differences between groups were not significant.
Conclusion: Consumption of 2 g/day omega-3 supplement for6 weeks has no significant effect on systolic and diastolic blood pressure in DM-2 patients.

Effect of supplementation of L - arginine on the lipid profile, fasting blood sugar and blood pressure in healthy subjects with the approach prevention of cardiovascular disease: A double-blind randomized clinical trial

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Background:L - Arginine is a semi-essential amino acid that can affect some blood indices. The purpose of this study was to evaluate the effect of supplementation of L - arginine on plasma lipids, blood sugar and blood pressure in healthy subjects.
Methods: This study was a randomized double-blind controlled clinical trial. Participants, 56 male athletes with an average age of 20.85±4.29 years were selected in Isfahan University of Medical Science clubs in the winter of 2014. Athletes received l- arginine supplementation with a dose of 2 g daily for 45 days in the intervention group and the same amount of placebo (maltodextrin) in the control group received. At the beginning and end of the study Serum levels of blood lipids, blood glucose and blood pressure were measured and the data were analyzed by using SPSS software version 19.
Results: At the end of this study, levels of fasting blood sugar, lipid profile in subjects that receiving the L – arginine supplementation significantly improved compared to the control group (P value<0.05). However, no significant changes were observed in systolic and diastolic blood pressure (P value> 0.05).
Conclusion: This study showed that a daily intake of 2 g Dietary Supplements of l- arginine for 45 days in healthy subjects can improved levels of lipid profiles and fasting blood sugar and can be used as a health-promoting supplements in healthy people.
Keywords: L – arginine, healthy subjects, lipid profile, fasting blood sugar, blood pressure.

Associationof Serum 25-HydroxyvitaminDWith Markers of Metabolic Syndrome in Adult Women in Ramsar, Iran

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Background: Epidemiological studies showed that vitamin D deficiency is associated with components of metabolic syndrome. Objectives: Theaim ofthe present study was to determine the association between serum25 (OH) D concentrationand components of metabolic syndrome in Iranian adult women.
Methods: Thisstudywascomprised of156womenaged ≥30yearswith atleastthreeofthe fivecriteriaofmetabolic

syndromes.Serum 25-hydroxyvitaminD (25(OH)D)levelsand componentsofthe metabolicsyndromewere determined.Metabolic syndromewasdefinedaccordingto NCEP/ATPIIIcriteria.Thesubjectswere classifiedinto threegroupsaccordingto theirserum concentrationof 25(OH)D.
Results: Mean of serum concentration of 25-hydroxy vitamin D was 20.5±10.8ng/mL with %54.5, 23.1% and 22.4% of subjects were deficient, insufficient and sufficient in vitamin D respectively. After adjustment for age, BMI, physical activity, and ANCOVA, fasting blood sugar concentration was shown to be inversely associated with serum 25(OH)D(P=0.004). On the other hand HDL-C showed significant correlation across different groups of vitamin D status (P=0.014). Waist Circumference had favorable changes, without any statistically significant correlation. Also no significant association was observed between otherc omponent so fmetabolic syndromeand 25(OH)D in differentgroups.
Conclusion: The components of metabolic syndrome are influenced by serum25 (OH) D concentrations. The finding of this investigation revealed hat FBS and HDL-C concentrations related to serum 25(OH) D. Therefore, further longitudinal studies and randomized clinical trials are necessary to determine the possible role of vitamin D inprevention of diabetes and cardiovascular disease.
Keywords: FBS, women, 25(OH) D, Metabolic syndrome

Association of Junk Food Consumption with High Blood Pressure and Obesity in Iranian Children and Adolescents: the CASPIAN-IV Study

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Background: This study aims to evaluate the association of junk food consumption with hypertension and obesity in a national sample of Iranian children and adolescents.
Methods: This nationwide study was conducted in 2011-2012 among 14,880 students, aged 6-18 years, selected by cluster sampling from 30 provinces. Weight, height, waist circumference (WC), hip circumference (HC), waist -to-hip ratio (WHR), waist-to- height ratio (WHtR), as well as systolic and diastolic blood pressure (BP) were measured. Junk food is divided into 4 categories including salty snacks, sweets, sweetened beverages, and fast food. Subjects reported how many times they had consumed each item (daily, weekly, and seldom).
Results: The intake of sweets was significantly associated with anthropometric indices and BP levels. Moreover, a significant association existed between fast food consumption, BP levels and anthropometric indices (except for WHtR and WHR). Sweet beverages consumption was significantly associated with anthropometric indices; however the consumption of salty snacks was only significantly associated with height, HC and WHR. The risk of general obesity (OR: 0.75, 95%CI: 0.65-0.87)and abdominal obesity (OR: 0.81, 95%CI: 0.72-0.92) among participants who seldom consumed sweets was less than those who consumed daily. Also, the risk of general obesity (OR: 0.85, 95%CI: 0.74-0.97) among students that seldom consumed sweetened beverages was less than subjects who consumed them on a daily basis.
Conclusion: We found that junk food consumption increased the risk of both general and abdominal obesity; therefore consumption of junk food should be reduced via restricting TV advertisements and increasing taxes on junk foods.
Keywords: Junk Food, High Blood Pressure, Obesity, Anthropometric measures

Relationship between quality of life and body mass index among college students living in dormitories of Shahid Beheshti University of Medical Sciences

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Background: Obesity is considered as an important health problem in many developed and developing countries. Several studies have reported the association between obesity and decreased quality of life, in both genders. Increasing prevalence of obesity and overweight were associated with more physical and psychological problems. The aim of this study was to investigate the relationship between quality of life and body mass index (BMI) among college students living in dormitories of Shahid Beheshti University of Medical Sciences, Tehran.
Methods: The study included 182 students in dormitories of Shahid Beheshti University of Medical Sciences who have been voluntarily participated in the study. Eleven participants were excluded due to a specific disease, and the study was conducted with 171 subjects. Data were collected by SF-36.v2 questionnaire and anthropometric measurements were taken by the nutritional experts at the hostel. SPSS software version 21 was used for data analysis. Quantitative data were compared between groups using "Independent t-test" and "One-Way ANOVA" test was used for multiple groups and the "Chi-Square" test was used to compare qualitative data. A value of $p< 0.05$ was accepted as statistically significant.
Results: The mean of "physical function" is significantly associated with weight status based on BMI (P=0.012) so that women and men with normal weight compared with overweight or underweight people had higher quality of life scores. The total quality of life score was higher in male than female but the difference was not significant (P=0.519). With increasing level of maternal education the mean of students BMI was increased (P=0.001). The lowest mean of BMI was reported in students whose mothers

are housewives compared with students whose mothers are employed (P=0.001). Medical students in comparison with other fields, had the highest MCS (Mental Component Score) (P=0.030).
Conclusions: Results suggest that the prevalence of overweight and obesity is inversely associated with "physical function", also the social conditions of people like gender, mothers occupation, mothers education level and field of study can affect weight status.
Keywords: body mass index; over weight; quality of life;

Anemia among labour children in Kermanshah
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Introduction: Starting to work from an early age may have adverse consequences on health. Working children are at risk of communicable and non-communicable diseases due to their occupational hazards. This study aimed to determine the prevalence of anaemia of labour children.
Methods: This cross-sectional study performed on 83 working children and 91 non-working children in Kermanshah. Anthropometric parameters were measured using standard tools. 2 ml fasting blood sample obtained from the participants for measurement of biomarkers such as CBC, ferritin, HIV antigen and HVB. Statistical analysis performed using t-Test between two groups.
Results: Ferritin deficiency in working children was more than triple compare to the non-working children (17.5% v.s. 5.7% and P =0.04). Most of the working children showed low haemoglobin level and high prevalence of IDA (P = 0.5). Prevalence of iron deficiency in working children was more than double in the non-working children (28% vs 11.3%, P = 0.01). More than 20% of working children had Lower MCV than normal level. MCHC in 3.7%, and PLT (Platelets) in 1.2% of working children was less than normal level. There was a significant relationship between the economic status of the families and the starting age to work among the working children (P=0.03).
Conclusions: Due to high prevalence of anaemia in working children than others, the adverse effects of working in childhood on the health status need more attention. Supporting low-income households is recommended to improve health and well growing as well as preventing children life treating hazardous jobs from an early age.
Keywords: Children, anaemia, ferritin, haemoglobin, labour children

Malnutrition in labor children in Kermanshah
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Background: Working from early age may have adverse consequences on health. Working children due to their occupational hazards are at risk of communicable and non-communicable diseases such as malnutrition,anemia and growth retardation. This study aimed to determine the nutritional status and prevalence of anemia in working and non-working children.
Methods: This case-control study was carried out as cross-sectional,on 90 working children and 90 non-working children in Kermanshah. The data was collected using demographic and food frequency questionnaires (FFQ). Anthropometric parameters were measured using standard tools. Statistical analysis performed using t-Test between two groups.
Results: Consumption of all food groups except the miscellaneous group in working children was significantly lower than not- working children(p
Keywords: Labor children,nutritional status,stunting,BMI

Nutritional Knowledge Among Ahvaz Oil Company Employees: A Cross-sectional Study
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Background and Objectives: Lack of correct knowledge about nutrition cause incorrect dietary behaviors which consequently cause obesity and their realted health complications. Therefore we amid to investigate the nutritional knowledge of oil company employees in Ahvaz.
Method and Material: In this cross-sectional study, 508 male employees with mean age of 48.6±9.32 years were recruited from different categories jobs in Petroleum Company. We evaluated their nutritional knowledge with 30-items questionnaire using lekert scoring. Data was analyzed with SPSS software.
Result: we find that 25% of subject had weak knowledge about nutrition and food choices; however 35/6% and 35/3 % had acceptable and moderate knowledge respectively. Only 4% of employees have good knowledge about nutrition.
Conclusion: Our results showed that most of oil company employees had poor nutrition knowledge which predisposed them to non-communicable disease such as diabetes and decrease their work performances. Therefore, it is suggested that nutritional training program such as workshop, pamphlet were programmed for them to elevate their knowledge.
Keywords: nutrition, knowledge, Oil company employees

Effect of copper loading and depletion on iron and copper transporters in human hepatoma cell line,Huh-7
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Background: Copper is an essential trace metal in the body needed for many physiological functions. The intimate relationship between copper and iron metabolism has been known for a long time. Experimental evidence suggests that copper and iron compete for uptake by divalent metal transporter1 (DMT1) in intestinal cell line model,Caco-2. However,similar effect in other cells is not well studied. The aim of this study was to investigate the effects of copper on the protein and mRNA expression of iron transporters (DMT1 and Ferroportin) and copper transporters (hCTR1 and ATP7b) in human heptoma cell line model (Huh-7).
Methods: Huh-7 hepatoma cells were treated with 50 µM copper chloride,or the copper chelator Triethylenetetramine dihydrochloride (TETA,0.5mM) for 24 hours. Changes in whole cell levels of transporter proteins were measured by western blotting and changes in mRNA expression assessed using Real Time PCR. Western blotting data were semi-quantified using ImageJ software for were analysed by one-way ANOVA and Tukey's post hoc test (significant at p<0.05).

Results: Following exposure to copper for 24h there was a significant decrease in DMT1 protein expression (-45%; p< 0.005) compared with control. TETA treatment resulted in a significant increase in DMT1 protein (143%,p<0.05). There was no effect of copper on DMT1 mRNA expression. Ferroportin expression (protein & mRNA) was unaltered by either copper loading or deficiency. Copper deficiency also increased the protein expression of hCTR1 (%151. P<0.05),while the mRNA was unaffected. ATP7b mRNA expression reduced by both copper loading (-%52,p<0.05) and iron deficiency (-%50,p<0.05).
Conclusion: The result of this work provides further evidence that copper status is an important factor in regulating iron homeostasis in human hepatoma cells and supports a close link between iron and copper metabolism
Keywords: Copper,Iron,Metabolism interaction,Huh-7

Growth and Weight Gain during the First Year of Life In Relation To Breast Milk Fatty Acid Concentrations

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Background: During pregnancy and lactation, the intake of n-3 polyunsaturated fatty acids from fish and seafood may improve maternal health as well as the infant health outcome.
We previously showed that mothers with high intake of fish and seafood had a higher docosahexaenoic acid (DHA; C22:6n-3) concentration and lower arachidonic acid (AA)/DHA in breast milk (*Food and Nutrition Sciences, 2012, 3, 441-446*). The aim of this study was to investigate the distribution of growth indicators in 6-12 months studied infants according to breast milk (BM) long chain polyunsaturated fatty acid (LCPUFA).
Method: One hundred-twenty two infants and 120 mothers in our previous study were followed up from 2008 to 2009. Infants' growth indicators (weight, length and head circumference) until 6 and 12 months of age in two provinces, Kermanshah and Guilan, of Iran were measured by health workers in urban and rural health centers through mothers' interview using a questionnaire (in Persian), containing anthropometric indicators for both, infants at 6 and 12 months of age, and their mothers. Data analysis was performed with Excel and SPSS software 18.0 for Windows. Standard t-test was used to compare the mean differences of infants' and mothers' anthropometrics. Pearson correlation was used to compare infants' anthropometrics and total DHA in BM at the birth.
Results: There were no differences between weight, length and head circumference at 6 months of age in both provinces. The infants' weight and length were significantly higher in Guilan than those in Kermanshah at 12 months of age (p=0.025 and p=0.003). There were no significant correlation between weight and height at 12 months and the higher DHA and total n-3 fatty acids and lower AA/DHA ratio in breast milk (at birth).
The BMI in mothers in Guilan was significantly higher than that in Kermanshah (p=0.037).
The percentage of underweight, healthy BMI, overweight and obesity were 7%, 60%, 29% and 4% in Kermanshah and they were 6.4%, 44.6%, 34% and 15% in Guilan, respectively.
Conclusion: Infants' growth indicators at one-year of age could be influenced by the breast milk long chain LCPUFA at birth. The LCPUFA status in BM in two Iranian provinces was generally good and was higher in mothers with high fish intake.
Keywords: Infants' growth, breast milk and long chain polyunsaturated fatty acid

Relationship between dietary calcium intake, body mass index and waist- to -height ratio among male university hostel students of Ahvaz University of medical sciences

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Background: The incidence of obesity worldwide has risen in the past century. The pattern of body fat distribution is a more important determinant than general obesity. Abdominal obesity has been shown to be associated with increased risk of overall mortality in many populations. In the present study we investigated the relationship between dietary calcium intake, body mass index (BMI) and Waist- to -Height ratio (WHtR) among maleuniversity hostel students of Ahvaz University of Medical Sciences.
Methods: This cross sectional study was conducted on 1012 healthy maleuniversity hostel students of Ahvaz University of Medical Sciences.Daily Calcium intake was estimated by means of a food frequency questionnaire for one year and three 24-hour dietary recalls. Height, weight and waist circumference were measured and BMI and WHtR was calculated.Dietarydata were analyzed by the N4 software.Data were analyzed with SPSS statistical software version 17, by Kolmogorov Smirnov,Pearson coefficient and ANOVA tests.
Results: Average age of students was 23.2±5.02 years. Daily calcium intake was538.36± 240.53mg. Average BMI and WHtRof studentswere 29.60±4.15 kg/m^2 and0.48±0.07,respectively.Subjects with BMI<25 kg/m^2 had significantly higher calcium intake per day than other groups (645± 284.1 vs. 544.25±257.1 mg/day for normal vs. overweight groups (p=0.01), 645± 284.1 vs. 425.69±173.01 mg/day for normal vs. obese groups (p=0.001)). Subjects with higher calcium intake per day

had significantly lowerWHtR (p=0.01).
Conclusion: According to the results of this study, dietary calcium intake is inversely associated with the BMI and WHtR.
Keywords: dietary calcium, body mass index, Waist - to - Height ratio

Association of vitamin D status with glycemic and inflammatory markers in non-obese T2DM patients

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Background: Low serum 25-hydroxy vitamin D (25(OH) D) has been shown to correlate with increased risk of type 2 diabetes mellitus (T2DM). The objective of this study was to investigate the link between serum 25(OH)D with glycemic and inflammatory markers in non-obese T2DM patients.
Methods: Eighty four non-obese T2DM patients were participated in this cross-sectional study. Demographic, anthropometric and dietary information were obtained from all participants. Serum concentration of glucose, HbA1C, insulin, 25(OH)D and inflammatory markers including tumor necrosis factor-alpha (TNF-α) and high sensitive C-reactive protein (hs-CRP) were measured. Homeostatic model of insulin resistance (HOMA-IR) were also evaluated.
Results: The mean serum concentration of 25(OH)D was 11.01±5.55 ng/ml. According to the serum vitamin D, sever deficiency, deficiency and insufficiency were present in 60.71%, 35.71% and 3.57% of participants, respectively. The results showed that those in the lowest tertile of serum 25(OH)D had significantly upper TNF-α than those in the highest tertile (P=0.026). Although the association of serum 25(OH)D with FBS and TNF-α was statistically significant (P=0.049 and P=0.044, respectively), however other glycemic markers and hsCRP did not have any significant relationship with 25(OH)D.
Conclusion: According to the high prevalence of vitamin D deficiency in diabetic patients and the inverse association of serum 25(OH)D with FBS and TNF-α in this study, therefore, vitamin D status may be a determining factor of systemic inflammation in patients with T2DM. Further studies with larger sample size are suggested in this regard.
Keywords: Diabetes, Inflammatory factors, Obesity, Vitamin D

Association of Junk Food Consumption with High Blood Pressure and Obesity in Iranian Children and Adolescents: the CASPIAN-IV

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Background: In recent decades, childhood obesity has become a worldwide concern. Obesity is a known risk factor for cardiovascular disease (including hypertension and coronary disease), type-2 diabetes, and certain types of cancer. Increased sedentary activity, lack of regular physical activity, and poor eating habits, e.g., high intake of sweetened beverages, fast foods, and sweets, may lead to obesity and high blood pressure. Low intake of nutrients and increased consumption of high-energy foods is known as junk food. This study aims to evaluate the association of junk food consumption with hypertension and obesity in a national sample of Iranian children and adolescents.
Methods: This nationwide study was conducted in 2011-2012 among 14,880 students, aged 6-18 years, selected by cluster sampling from 30 provinces. Weight, height, waist circumference (WC), hip circumference (HC), waist -to-hip ratio (WHR), waist-to- height ratio (WHtR), as well as systolic and diastolic blood pressure (BP) were measured. Junk food is divided into 4 categories including salty snacks, sweets, sweetened beverages, and fast food. Subjects reported how many times they had consumed each item (daily, weekly, and seldom).
Results: The intake of sweets was significantly associated with anthropometric indices and BP levels. Moreover, a significant association existed between fast food consumption, BP levels and anthropometric indices (except for WHtR and WHR). Sweet beverages consumption was significantly associated with anthropometric indices; however the consumption of salty snacks was only significantly associated with height, HC and WHR. The risk of general obesity (OR: 0.75, 95%CI: 0.65-0.87) and abdominal obesity (OR: 0.81, 95%CI: 0.72-0.92) among participants who seldom consumed sweets was less than those who consumed daily. Also, the risk of general obesity (OR: 0.85, 95%CI: 0.74-0.97) among students that seldom consumed sweetened beverages was less than subjects who consumed them on a daily basis.
Conclusion: We found that junk food consumption increased the risk of both general and abdominal obesity; therefore consumption of junk food should be reduced via restricting TV advertisements and increasing taxes on junk foods.
Keywords: Junk Food, High Blood Pressure, Obesity, Anthropometric Measures

Authors Index R

The effect of weight reduction on antioxidant enzymes and their association with dietary intake of vitamins A,C and E

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Background: Our goal was to assess the effects of weight loss on antioxidant enzymes of red blood cells and it's relation with vitamins A,E and C intake in 30 obese women.
Methods: General information,anthropometric measurements, 3-day food recall,and fasting blood samples were collected from 30 obese women at the beginning of the study and after 3 months intervention. Weight loss was set at about 10% of their weight before the intervention.
Results: Glutathione reductase and catalase activities showed a significant increase ($P < 0.01$) after weight reduction, but no significant changes were seen in the superoxide dismutase and glutathione peroxidase activities. There was a positive linear correlation between daily vitamin C intake with superoxide dismutase enzyme after intervention ($P = 0.004, r = 0.507$). There was a negative linear correlation between vitamin E intake and glutathione peroxidase activity before intervention ($P = 0.005$, $r=-0.5$). A negative correlation was found between daily vitamin A intake and glutathione reductase enzyme before and after intervention ($r=-0.385$, $r=-0.397, P< 0.05$) respectively. No significant correlation was observed between vitamins A,C,E amounts and catalase activity.
Conclusion: Ten percent weight reduction can have a significant role in increasing antioxidant enzymes activities,especially glutathione reductase,and catalase enzymes in obese women. However,it is important to take into consideration a balanced amount of certain nutrients while administering a diet with limited energy.
Keywords: Obesity; enzymic antioxidants; weight reduction

Crocin reduce serum CRP in rats with diabetes mellitus type I

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Background: CRP is a protein found in the blood,it is produced in the liver and the level rises in response to inflammation. It is an acute phase protein and its physiological role is to bind to phosphocholine expressed on the surface of dead or dying cells and some types of bacteria in order to activate the compliment system complex. The objective of this study was to study of the effects of Crocin administration on CRP level in rats with T1DM.
Methods: Diabetes was induced by i.p. injection of STZ, and Crocin was administered i.p. at doses of 12.5,25, 50 mg/kg.
Results: The results of this study revealed that in rats with T1DM insulin was significantly decreased whereas glucose and CRP levels increased ($p<0.05$). Administration of Crocin reduced CRP concentration in serum in dose dependent manner ($P<0.05$). Also there was significant correlation between serum CRP and glucose concentration ($r= 0.83, P<0.01$).
Conclusion: This research showed that the rats with T1DM have elevated basal levels of CRP. Crocin is the chemical constituent isolated from the Saffron and is found to be effective as anti-inflammatory agents and administration of Crocin decreased CRP concentration in serum probably due to anti-hyperglycemic and antioxidant properties.
Keywords: Crocin, diabetes mellitus,CRP,rat

The effect of artichok leaf extract on alanine aminotransferase (ALT) and aspartate aminotransferase (AST) in the patients with Non Alcoholic Steatohepatitis (NASH)

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Background: Based on recent basic and clinical investigations, the extract of artichoke (cynara scolymus) leaf has been revealed to be use as hepatoprotective, and cholesterol reducing purposes. We aimed to assess the therapeutic effects of artichoke on biochemical and liver biomarkers in patients with Non Alcoholic Steatohepatitis (NASH).
Methods: In a randomized controlled trial, 60 consecutive patients suffered NASH were randomly assigned to receive synara scolymus extract (as 6 tablets per day consisted of 2700 mg extract of the herb) as the intervention group or placebo as the control group for two months.
Results: Comparing changes in study markers following interventions showed the improvement in body weight, body mass index, liver enzymes, and also levels of triglyceride and cholesterol were significantly more in group treated with synara scolymus when compared to placebo group. To compare the role of synara scolymus use with placebo on changes in study parameters, multivariate linear regression models were employed indicating higher improvement in liver enzymes and also lipid profiles of triglyceride and total cholesterol following administration of synara scolymus in comparison with placebo use.
Conclusion: This study shed lights on the potential hepatoprotective activity and hypolipidemic effect of synara scolymus in management of NASH.
Keywords: Non Alcoholic Steatohepatitis, synara scolymus, lipid, liver, enzyme

Evaluation the effects of six weeks of moderate-intensity aerobic exercise with pomegranate juice (PJ) on plasma fibrinogen in adult women selection of type-2 diabetes

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Background: The aim of this study was to evaluate the effects of six weeks of moderate-intensity aerobic exercise with pomegranate juice (PJ) on plasma fibrinogen in adult women selection of type-2 diabetes.
Methods: Survey postmenopausal diabetic women aged 45 to 60 years in the city of Babylon, who coordinated Diabetes Association presented the city, among them 34 were selected as subjects were randomly divided into four groups: control, PJ, practice and PJ. Experimental groups consisted of 6 weeks of aerobic exercise

training program three times a week for at least 45 minutes per meeting. Two days before and after the training period in the fasting state (12 h) blood samples from the brachial vein was performed in a sitting position.
Results: Results showed that aerobic exercise with consumption of pomegranate juice significantly decreased levels of fibrinogen plasma in older women with type 2 diabetes compared to control group.
Conclusion: According to the research findings aerobic exercise and pomegranate juice decrease plasma fibrinogen but interaction effect is greater than each alone. It is recommended that this type of training with pomegranate juice used to control the progression of the disease.
Keywords: type-2 diabetes, pomegranate juice, fibrinogen, aerobic

Assessing the risk associated of tartarazin intake through a descriptive study to determine the degree of Tartrazine by considering the role of these two sweets in Isfahan province
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Background: Various reports in the country concerning the adulteration of using Tartrazine instead of saffron in traditional candies (Poolaki and Nabat) highlights the urgent need to conduct a risk assessment study to evaluate the risk of Tartrazine intake through using these two candies .As a result, the current study aimed at assessing the risk associated of tartarazin intake through a descriptive study to determine the degree of Tartrazine by considering the role of these two sweets in Isfahan province and the presence and concentration of pollution in prepared samples.
Method: In this study 500 questionnaires were distributed to families through schools in the center of the province and a few towns, and some data about the position of demography and the consumption rate of candy and poolaki were collected. To measure the color concentration of 60 samples of nabat and poolakies were tested according to standard method 740 using thin layer chromatography following spectrophotometric method. The results were analyzed statistically by SPSS.
Results: Pollution in Tartrazine was observed only in three samples of poolaki (12%) and nabat samples did not have this color. The concentration of color in positive samples was estimated as 1 µg/kg. Regarding the average weight of participants (67kg) maximum daily intake of Tartrazine for every person was 0.07 µg/kgbw/d. Therefore the related risk is negligible comparing an acceptable daily intake value established by JECFA.
Conclusion: Low occurrence of deception in using Tartrazine in whole tested samples is probably due to permanent control of such a deception by supervising organizations particularly vice chancellor of Food and Drug in Isfahan. The results showed low probability of Tartrazine human health risk through these two traditional candies and proposed that no new legal action to manage the risk at the current situation is required. However, higher prevalence of pollution in poolaki samples in addition to its greater daily consumption than nabat shows that poolaki seems to has a greater role in transferring this synthetic color in Iranian diet.
Keywords: Tartrazine, exposure assessment, Isfahan

Determination the concentrations of mercury and vanadium in JB fish with 15 days interval period of fishing in Musa estuary
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Background: Musa estuary is located in the northern coastal area of Persian Gulf and has a semi-enclosed ecosystem surrounded by several industries. All wastewater from Industrial and residential cities is entered into this estuary. Heavy metals are as important ingredients in oil pollutants and industrial wastewater. Fish in human diet is considered to be an efficient exposure agent of environmental pollutants for humans. The aim of this study was to determine the concentrations of mercury and vanadium in JB fish with 15 days interval period of fishing in Musa estuary.
Methods: 67 Johnius Belangerii (C) fish were randomly selected from different points in Musa estuary during 5 intervals of 15 days in summer 2013. Biometric measurements have been conducted and the concentrations of mercury and vanadium were measured in muscle tissue of fish using direct method analyzer (DMA) and Graphite furnace atomic absorption spectrophotometer respectively.
Results: The mean concentration of vanadium and mercury in muscle tissue of JB fish was 2.921 ± 0.873 and 3.154 ± 1.981 mg/kgw.w. Significant relationships were observed between vanadium concentration and fish weight with P = 0.02 and fish height with P = 0.046.
Conclusion: The concentration of mercury in Johnius Belangerii (C) fish was higher than the allowable standards of EPA,WHO and FDA. Therefore,it is suggested to consume Johnius Belangerii fish from Musa estuary cautiously regarding with dietary guidelines.
Keywords: Mercury,Vanadium,Johnius Belangerii (C) Persian Gulf,Musa estuary .

The effect of psyllium on serum lipid profile in patients with hyperlipidemia
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Background: The use of herbal remedies in reducing serum lipids has been widely demonstrated. The use of psyllium in the treatment of high blood cholesterol,has provided controversial results. The goal of this study was to investigate the effect of psyllium on lipid and parameters in hypercholestremia. **Methods:** In a double-blind randomized controlled trial,72 patients with triglyceride levels between 160 to 200 mg-dl and LDL cholesterol between 130 and 190 was selected. In the test group,5 grams of psyllium and in the control group 5 g of cellulose powder were prescribed daily. After 60 days,the levels of serum lipids were measured.
Results: There were no differences between groups in triglyceride levels,whereas serum LDL-cholesterol levels decreased in both groups significantly (161 mg/dl to 145 mg/dl,p= 0.002 in test group) and (156 mg/dl to 132 mg /dl p= 0.0001in the control group) respectively . While HDL cholesterol decreased only in the control group (48mg/dl to 33 mg/dl,p=0.0001).
Conclusions: Psyllium can reduce serum LDL-cholesterol without affecting HDL cholesterol.
Keywords: hyperglycemia, psyllium

Effect of Kombucha prepared from green tea on blood glucose and lipid profile in diabetic rats

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Background: Diabetes is chronic and progressive disease in which lipid disorder is one of the common disorders which in turn cause the formation of its short-and long-term effects. This study was aimed to examine effect of Kombucha prepared from green tea on blood glucose and lipid profile in diabetic rats. **Methods:** In the present study, 30 alloxan-induced diabetic wistar rats randomly divided in to three groups: 1) control group, 2) diabetic group receiving green tea and 3) diabetic group receiving Kombucha prepared from green tea.Experimental diabetes in rats was induced by intraperitoneal injection of Aloxan (130 mg/kg). The animals of groupsgreen tea and Kombucha received respectively green tea and Kombucha (made from green tea) and group1 received water 5 ml/kg by oral gavage daily for four weeks. Then glucose and lipid profile were measured.
Results: Compared to control group, Serum glucose levels in groups green tea and kombucha were significantly reduced (respectively p=0.002 and p=0.0001). Compared with green tea, Kambocha decreased glucose significantly (p=0.050). Increasing concentrations of HDL in kombucha group in comparison with green tea group was significant (p=0.02) and reduction of total cholesterol and LDL concentration in groups kombucha and green tea in comparison with control group was significant. Meanwhile, decreased average total cholesterol and LDL concentration in kombucha group in comparison with grean tea group was also significan (respectively (p= 0.0001 and p =0. 0001)).
Conclusion: Use of Kombucha caused a decrease in serum glucose, LDL, total cholesterol and an increase in HDL cholesterolthat this effects are probably because of fermentation process products.
Keywords: Diabetes, Green tea, Kombucha, Lipid profile

The effect of low glycemic index diet on body weight status and blood pressure in overweight adolescent girls: a randomized clinical trial

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Background: Although several studies have assessed the influence of the glycemic index on body weight and blood pressure among adults,limited evidence exists for the pediatric age population. In the current study,we compared the effects of low glycemic index (LGI) diet to the healthy nutritional recommendation (HNR)-based diet on obesity and blood pressure among adolescent girls in pubertal ages.
Methods: For this parallel randomized clinical trial 50 healthy overweight/obese girls in pubertal ages were randomly allocated to LGI or HNR based diet for 10 weeks. Inclusion criteria was being 50 were curtailed in LGI group. The HNRs recommended to members of HNR emphasized on limiting unhealthy foods and fats as well as drinking sufficient water, consuming fruits and vegetable, low fat dairy and whole grains. Equal macronutrient distributed diets were prescribed to both groups. Blood pressure,weight and waist circumference were measured in standard format at baseline and after intervention.
Results: Of the 50 participants,41 subjects (include 82%) completed the study. The GI of the diet in the LGI group was 42.67± 0.067. A within-group analysis illustrated that in comparison to the baseline values,the body weight and body mass index (not waist circumference and blood pressure) decreased significantly after the intervention in both groups (P = 0.0001). The percent changes of the body weight status,waist circumference and blood pressure were compared between the two groups and the findings did not show any difference between the LGI diet consumers and those in the HNR group.
Conclusions: Prescribed diets in both groups were balanced in terms of energy and macronutrient compositions. These diets were administered according to each individual's requirement. Therefore,this balance is responsible for weight reduction in each group. This result confirmed that the role of dietary balance in weight status is more important than that of dietary glycemic index. In overall,In comparison to the HNR,LGI diet could not change the weight and blood pressure following a 10-week intervention. Further longitudinal studies with a long-term follow up should be conducted in this regard.
Keywords: glycemic index, obesity, blood pressure, adolescents, girl

The effect of an energy restricted low glycemic index diet on blood lipids,apolipoproteins and lipoprotein (a) among adolescent girls with excess weight: a randomized clinical trial

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Background: According to the results of Framingham study,dyslipidemia is a CVD risk factor. Some studies focused on effect of dietary glycemic index on blood lipids in adults however,few evidence exist among adolescents. The objective of current study was to evaluate the effect of low glycemic index (LGI) diet on lipid profile among overweight and obese adolescents.
Methods: For this parallel randomized clinical trial 50 healthy overweight/obese girls in pubertal ages were randomly allocated to LGI or healthy nutritional recommendations (HNR) based diet for 10 weeks. Inclusion criteria was being 50 were curtailed in LGI group. The HNRs

recommended to members of HNR emphasized on limiting unhealthy foods and fats as well as drinking sufficient water,consuming fruits and vegetable,low fat dairy and whole grains. Equal macronutrient distributed diets were prescribed to both groups. Biochemical measurements included triglyceride (TG),total cholesterol (TC),high density lipoprotein (HDL),low density lipoprotein (LDL),apolipoprotein A (ApoA) and apolipoprotein B (ApoB) and lipoprotein (a) (Lpa) were conducted before and after 10 weeks of intervention.
Results: Forty-one students completed the study. The dietary GI in the intervention group was significantly lower than non-intervention group (42.67±.067 vs. 46.94±1.17; P=0.003). There were no differences in mean of TG,TC,HDL,LDL,ApoA,ApoB and Lpa at baseline and after intervention between two groups. Analyses according to the percent changes could not show significant differences between two groups.
Conclusions: Observed results may due to that the difference in GI between the LGI group and the HNR group may be not physiologically valuable. Indeed,the subjects in the HNR group did not consume an HGI diet. As shown in the Iranian native GI table,Iranian staple foods such as white rice and most kinds of white bread are not categorized as HGI foods. These staple foods were responsible for attenuating the physiological difference in GI values between groups. Furthermore, the adolescents' blood lipids were in the normal range at baseline. These outcomes may have been different if the subjects' lipid homeostases were disturbed. In conclusion, the results of our study showed that an LGI diet had no significant effect on blood lipids compared to an HNR-based diet and that the impact of these two diets on lipid profiles was equal in this trial.
Keywords: glycemic index, blood lipids, adolescents, girl

Fast food consumption, quality of diet, and obesity among Isfahanian adolescent girls

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Background: Besides the high prevalence of obesity among adults,the prevalence of childhood obesity is also growing in an alarming rate. Few data are available linking fast food intake to diet quality in developing countries. This study was conducted to determine the association between fast food consumption and diet quality as well as obesity among Isfahanian girls.
Methods: This cross-sectional study was done among 140 Iranian adolescents selected by the use of systematic cluster random sampling. Dietary intakes were assessed using a validated food frequency questionnaire. Fast foods were defined as following items: "convenience food" or prepared foods such as hamburger, sausage, cheese burger, other burgers, hot dogs, rusk fish, rusk poultry, French fries, and pizza. Diet quality was defined based on energy density and nutrient adequacy ratios calculated by dividing daily individual intake to dietary recommended intake for each nutrient. Anthropometric variables and physical activity were also measured.
Results: Individuals in the highest quartile of fast food intake had significantly lower NARs for vitamin B1 (P = 0.008),phosphorus (P = 0.0250),selenium (P < 0.001) and vitamin B2 (P = 0.012) compared with those in the lowest quartile. Those in top quartile of fast food intake consumed more energy-dense diets than those in the bottom quartile (P = 0.022). High intakes of fast foods were significantly associated with overweight (top quartile: 40% versus bottom quartile: 0%,P = 0.0001) and obesity (11.4% versus 2.9%,P = 0.0001).
Conclusions: Probably,more fast food consumption is associated with more energy intake from non-fast-food and fast food sources. For instance,a significant direct association between fast food intake and sugar sweetened beverages has been reported. Moreover,Iranian fast foods are rich sources of saturated and trans-fatty acids which may results in obesity. Foods with low dietary quality e.g.,white bread,mayonnaise and sugar sweetened beverages are also consumed along with fast food. In conclusion,Fast food consumption is associated with poor diet quality and high prevalence of overweight and obesity among Isfahanian adolescents. Prospective data are required to confirm these findings.
Keywords: Fast food, diet quality, Adolescent, girl

A study on the occurrence of aflatoxin M1 in raw and pasteurized milk produced in Rafsanjan, Iran

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Background: This study was undertaken to determine the occurrence of aflatoxin M1 (AFM1) in 40 raw milk and 47 pasteurized milk samples collected during summer and winter.
Methods: Enzyme-linked immunosorbent assay (ELISA) method was used for analysis of the samples.
Results: Aflatoxin M1 was found in 97.5% of the raw milk ranging from 6.52 to 68.17 ng/l and 95.7% of the pasteurized milk,ranging from 0.8 to 58.13 ng/l. Toxin levels in 10% of the raw milk and 2.1% of the pasteurized milk samples exceeded the Iranian national standard limit i.e. 50 ng/l. Considering seasonal variability,mean concentration of AFM1 in the samples collected in winter was significantly (P < 0.03) higher than those collected in summer.
Conclusions: Therefore, high occurrence of AFM1 in milk samples could be a potential hazard for public health
Keywords: Aflatoxin M1; Raw milk; Pasteurized milk; ELISA; Iran

Whether ins/del polymorphism modifies the association between dietary intake and plasma lipid profile in diabetic patients

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Background: Dyslipidemia is common lipid disorder in patients with type 2 diabetes. This disorder is resulting from the interaction of many genetic and environmental factors. Apo B insertion/deletion polymorphism is one of genetic factors. Diet is a main environmental factor interacting with this gene to modulate the likelihood of dyslipidemia risk. The aim of this study was to determine whether this polymorphism modifies the association between dietary intake and plasma lipid profile in diabetic patients.
Methods: In this cross-sectional study,700 diabetic patients were selected randomly from health centers and Iranian Diabetes Association in Tehran. Fasting serum

triglycerides (TG),total cholesterol (TC),HDL-C and LDL-C were measured. Dietary intake was assessed using a semi-quantitative food frequency questionnaire. The polymorphism was determined after PCR amplification.
Results: We confirmed a dominant effect of the apo B ins/del polymorphism (ins/ins vs. ins/del+del/del). Results showed that only LDL-C was significantly higher in carriers del allele than subjects with the Ins/Ins genotype (p=0.016). We found a highly significant interaction between apo B ins/del polymorphism and MUFA and cholesterol intakes in determining TG concentration in crud model (p=0.039 and p=0.032,respectively) that remained statistically significant after adjustment for covariates in multivariate regression model,nincluding physical activity,antilipid medication and BMI (p=0.041 and p=0.029,respectively).
Conclusions: Thus,the del allele carriers showed higher TG concentration only when MUFA≥12% of total energy and cholesterol intake.
Keywords: Apo B, interaction, Lipid, diabetes

The simultaneous effects of deprived sleep and coffee caffeine intake on plasma cortisol levels among Iranian healthy adult men: a randomized controlled crossover trial

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Background: Sleep deprivation and caffeinated coffee on its own have been reported to adversely affect the plasma cortisol levels. This study aimed to determine the effects of coffee caffeine consumption on plasma cortisol level when simultaneously coupled with deprived sleep.
Methods: The study conducted in two phases. In the screening phase forty-two moderate coffee consumers (≤ 3 cups/day),healthy male good sleepers a Pittsburgh Sleep Quality Index (PSQI)≤5 aged 20-40 y were recruited using PSQI questionnaires, interview, anthropometric measurements, and 24-h recalls. After one night adaptation in research unit, subjects were randomly assigned in three groups to participate in the experimental phase which was a randomized controlled crossover trial including three treatments in two-week washout periods. Each treatment comprised of three nights of deprived sleep (4 hrs. in bed) plus three 150 cc/cup of boiled water (treatment 1), decaffeinated coffee (treatment 2,99.99% caffeine-free) and/or caffeinated coffee (treatment 3,65 mg caffeine/cup). The levels of plasma cortisol were measured at baseline and end of the treatments using electrochemiluminescence method.
Results: The analysis of variances showed no statistical differences between plasma cortisol concentrations of deprived sleep subjects who received one of the treatments. Pairwise comparison test indicated that when coupled with sleep deprivation, caffeinated coffee led to no significant changes in plasma cortisol levels as compared to decaffeinated coffee. Discussion: Given the individually effects of coffee caffeine consumption on circulating cortisol levels, some probable interactions following simultaneous administrating of sleep deprivation and caffeinated coffee appeared to attenuate coffee caffeine-induced impacts on increased plasma cortisol.
Conclusion: Findings of this study showed that caffeinated/decaffeinated coffee in healthy habitual coffee consumers manipulates cortisol levels within a range, which is safe for individuals who normally have short sleep durations. Keywords: Sleep deprivation, coffee, caffeine, plasma cortisol.
Keywords: Sleep deprivation, coffee, caffeine, plasma cortisol

The relationship between bone mineral density, serum bone sensitive markers and calcium intake in adult population in Bushehr

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Background: Low bone density is one of the risk factors of osteoporotic fractures. There are increasing evidences which show protective properties of micro and macronutrients against age related bone disorders. Objectives: The aim of this study is to evaluate the relationship between dietary calcium and serum bone sensitive markers and bone mineral density in adult population.
Methods: 1028 patients (66% female and 33% male) were randomly selected from 13 clusters in Bushehr port. Food frequency questionnaire and bone mineral density at 1 to 4th vertebrae,femur (Ward,triangle and neck) and distal radius was evaluated by validated questionnaire and dual X-ray absorptiometry respectively. C- telopeptide of type I collagen and osteocalcin were measured by ELISA method.
Results: In this study, a significant association between consumption of dietary calcium intake and bone mineral density in femoral neck, Ward and trochanter was observed. No significant relationship between calcium intake and bone density at spine and distal radius was found. Analysis of regression showed an inverse relationship between dietary calcium intake and osteocalcin, while the relationship between calcium and CTX was not significant.
Conclusion: Dietary calcium intake may have a protective role against osteoporosis in adults independent of bone accumulation in young. This conclusion is based on findings of reducing bone turnover were observed in subjects with higher calcium magnified.
Keywords: Dietary calcium, C-terminal telopeptide of type 1 collagen, bone density

Spicy foods consumption and risk of gastroesophageal reflux disease among Iranian population

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Background: Dietary recommendation for habitual spicy foods intake in gastroesophageal reflux disease (GERD) is still under debate. Considerable prevalence of GERD among Iranian population compared with other Asian countries as well as the popularity of spicy foods in typical Iranian diet generates lots of enthusiasm to investigate this association. We aimed to examine the as-

sociation of spicy foods consumption with prevalence of GERD among Iranian adults.

Methods: This cross-sectional study was conducted among 4633 Iranian general adults (2046 men and 2587 women). Average daily intake of spicy foods was estimated using a dietary behavior questionnaire by asking the following question: "How frequently do you use spicy foods (pepper, curry, ginger, cinnamon and turmeric) during a week?" and 5 frequency response categories were available to respond: "never", "1-3 times", "4-6 times", "7-9 times" and "more than 10 times" per week. GERD was defined as the presence of heartburn at sometimes, often or always.

Results: After controlling for potential cofounders like dietary behaviors and BMI, men consuming ≥10 times/ week of spicy foods were 2.63 (95% CI: 1.28-5.36) times more likely to have GERD compared with those who never consumed. Among men, those with the highest consumption of spicy foods were 203% (3.03; 1.44-6.39) more likely to experience heartburn frequently compared with those with the lowest intake. No overall significant associations were seen between consumption of spicy foods with GERD, frequency and severity of heartburn among women. When the analysis was restricted to those with GERD, no significant associations were found between consumption of spicy foods and frequency of heartburn either in men or women. However, individuals with high consumption of spicy foods were less likely to have severe heartburn (P=0.002).

Conclusion: The present findings indicated that high consumption of spicy foods were associated with a greater risk of GERD in men, but not in women**.**

Keywords: spicy foods, pepper, gastroesophageal-reflux-disease, heartburn

A dish-based semi-quantitative food frequency questionnaire for assessment of dietary intakes in epidemiologic studies in Iran: design and development

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Background: Earlier forms of food frequency questionnaire (FFQ) used in Iran have extensive lists of foods, traditional categories and food-based design, mostly with the interviewer-administered approach. The aim of the current paper is to describe the development of a dish-based, machine-readable, semi-quantitative food frequency questionnaire (DFQ).

Methods: Within the framework of the Study on the Epidemiology of Psychological, Alimentary Health and Nutrition project, we created a novel FFQ using Harvard FFQ as a model.

Results: The following steps were taken to develop the questionnaire: Construction of a list of commonly consumed Iranian foods, definition of portion sizes, design of response options for consumption frequency of each food item and finally a pilot test of the preliminary DFQ. From a comprehensive list of foods and mixed dishes, we included those that were nutrient-rich, consumed reasonably often or contributed to between-person variations. We focused on mixed dishes, rather than their ingredients, along with foods. To shorten the list, the related food items or mixed dishes were categorized together in one food group. These exclusions resulted in a list of 106 foods or dishes in the questionnaire. The portion sizes used in the FFQ were obtained from our earlier studies that used dietary recalls and food records. The frequency response options for the food list varied from 6-9 choices from "never or less than once a month" to "12 or more times per day".

Conclusions: The DFQ could be a reasonable dietary assessment tool for future epidemiological studies in the country. Validation studies are required to assess the validity and reliability of this newly developed questionnaire.

Keywords: Dietary assessment; Iran; food-frequency-questionnaire

Comparative effects of carbohydrate versus fat restriction on serum levels of adipocytokines, markers of inflammation, and endothelial function among women with the metabolic syndrome: a randomized cross-over clinical trial

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Background: Despite the efficacy of low-carbohydrate diets in the management of metabolic syndrome (MetS), it remains unknown if these favorable effects are mediated through changes in inflammation and endothelial dysfunction. We aimed to assess the effects of moderate substitution of dietary fats for carbohydrates on serum levels of adipocytokines, inflammatory indices, and biomarkers of endothelial function among women with the MetS.

Methods: In a randomized cross-over clinical trial, 30 overweight or obese (BMI >25) women with the MetS were randomly allocated to follow either a high-carbohydrate (HC) (60-65% carbohydrates, 20-25% fats) diet or a moderately restricted carbohydrate (MRC) (43-47% carbohydrate, 36-40% fats) diet, each for 6 weeks. After a 2-week washout period, individuals were switched to the alternate diet for an additional 6 weeks. In a fasted state, markers of inflammation [high-sensitivity C-reactive protein (hs-CRP), high-sensitivity interleukin-6 (hs-IL-6), high-sensitivity tumor necrosis factor-α (hs-TNF-α), and serum amyloid A (SAA)], endothelial function [E-selectin, serum intercellular adhesion molecule 1 (sICAM-1), and serum vascular cell adhesion molecule 1 (sVCAM-1)], and adipocytokines (leptin and adiponectin) were measured in both study arms at baseline and after 6 weeks.

Results: Consumption of an HC diet was associated with increased levels of SAA (3.27 ± 1.22 μg/ml) and decreased levels of adiponectin (-1.68 ± 2.30 ng/ml), while consumption of an MRC diet did not result in such unfavorable effects. Serum concentrations of leptin were reduced by the HC diet ($p = 0.02$), while they were not affected by the MRC diet. Changes in serum leptin levels were not significant between the two diets ($p = 0.09$). Serum concentrations of hs-CRP, hs-TNF-α, and IL-6 were not influenced by either diet. No significant differences between the two diets were found in terms of their effect on sICAM-1 and sVCAM-1 concentrations. Adherence to both diets resulted in a 9 ng/ml decrease in serum E-selectin levels ($p < 0.05$ for both).

Conclusions: Partial replacement of dietary carbohydrates by unsaturated fats prevents the increased levels of markers of systemic inflammation among women with the MetS.

Keywords:carbohydrate, metabolic-syndrome, inflam-

mation, adipocytokines, endothelial

Moderate replacement of carbohydrates by dietary fats affects features of metabolic syndrome: a randomized crossover clinical trial

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Background: Earlier studies on the management of metabolic syndrome (MetS) have mostly focused on very low carbohydrate diets, whereas long-term adherence to such diets is difficult for apparently healthy people. The aim of this study was to examine the effects of moderate replacement of carbohydrates by dietary fats on insulin resistance and features of MetS among women.

Methods: This randomized crossover clinical trial was performed with 30overweight or obese (body mass index [BMI] > 25 kg/m(2)) women with MetS. After a 2-wk run-in period, participants were randomly assigned to consume either a calorie-restricted high-carbohydrate (HC) diet (60%-65% of energy from carbohydrates and 20%-25% from fats) or a calorie-restricted moderately restricted carbohydrate (MRC) diet (43%-47% of total calories as carbohydrate and 36%-40% as dietary fats) for 6 wk. Protein contents of both diets were 15% to 17% of total energy. A 2-wk washout period was applied following which participants were crossed over to the alternate treatment arm for an additional 6wk. Anthropometric, blood pressure, and biochemical measurements were performed before and after each phase of intervention.

Results: Mean age and BMI of study participants was 42.4 y and 33 kg/m2, respectively. A trend toward greater reduction in waist (-3.9 versus -2.6cm; P = 0.07) and hip circumferences (-2.7 versus -1.5cm; P = 0.07) as well as serum triglyceride (TG) levels (-31.3 versus 0.13 mg/dL; P = 0.07) was observed after consumption of an MRC diet compared with an HC diet. The TG to high-density lipoprotein cholesterol (HDL-C) ratio had a tendency to improve with the MRC diet rather than the HC diet (-0.9 versus -0.1; P = 0.06). Consumption of the MRC diet resulted in a greater reduction of systolic blood pressure (-8.93 versus -2.97 mm Hg; P = 0.06) and diastolic blood pressure (-12.7 versus -1.77 mm Hg; P = 0.001) compared with the HC diet. The prevalence of MetS was significantly decreased following the consumption of the MRC diet (P = 0.03). The two diets were not significantly different in terms of their effect on fasting plasma glucose, serum HDL-C, low-density lipoprotein cholesterol, and total cholesterol, insulin levels, and Homeostasis Model Assessment-Insulin Resistance.

Conclusion: Moderate replacement of carbohydrates by dietary fats was not associated with statistically different changes in fasting plasma glucose, insulin, or atherogenic dyslipidemia among individuals with the metabolic syndrome; however, it resulted in decreased diastolic blood pressure and lower prevalence of the metabolic syndrome.

Keywords: Carbohydrate-restricted diet; Macronutrients; Metabolic-syndrome; Obesity

The effect of omega-3 fatty acids on lipid profile an hs-C reactive protein in cigarette smokers

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Background: The aim of this study was to determine the impact of omega-3 fatty acids on lipid metabolism and low grade inflammation in cigarette smokers. Patients and

Methods: In a double-blind,placebo-controlled trial,59 male cigarette subjects were randomly assigned to consume 3 g omega-3 fatty acids or corn oil/day for 8 weeks while continuing to consume their usual diet. High sensitivity C reactive protein (hs-CRP) was determined by ELISA. Fifty-one subjects completed the study.

Results: Neither omega-3 fatty acids nor corn oil supplementation had a significant effect on triglyceride,HDL-cholesterol or total cholesterol concentration.. After adjustment for baseline values,fasting LDL-cholesterol concentration increased 16.7% with omega-3 fatty acids supplementation ($p<0.05$) in comparison with the change in the corn oil group. The intervention caused no significant changes in serum hs-CRP concentrations.

Conclusion: In conclusion a daily intake of omega-3 fatty acids increases LDL-cholesterol by 8% in cigarette smokers and had not effects on serum triglyceride and hs-CRP concentration

Evaluation of nutritional status by three different methods in early stage of CKD in children

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Background:Protein energy malnutrition (PEM) is common complication of chronic kidney disease (CKD) and is a predictor of morbidity and mortality. In children growth retardation can also occur and this condition can affect the quality of their life. Detecting PEM in early stage of CKD can prevent severe malnutrition and its complications. Due in part to a variety of metabolic and biochemical abnormalities there is no single method to evaluate nutritional status in CKD patients. The aim of this study was to compere subjective global assessment (SGA),biochemical factors and bioelectric impedance analysis (BIA),in early detection of PEM in CKD children.

Methods: In this case-control study nutritional status of 30 children (6 to 20 years) with CKD (22 boys and 8 girls) were evaluated with three different methods and compared with 30 healthy sex and age matched control participants. SGA assessment was used in CKD group only while some biochemical parameters and BIA were performed in all participants. Based on SGA score none of CKD patients had severe malnutrition and most of them were in well-nourished situation.

Results: Mean albumin and insulin like growth factor 1 (IGF-1) level,were significantly lower in CKD children. By using BIA,patients with CKD showed significantly lower DLW (p=0.048),ECW (p=0.045),BCM (p=0.021),BMR (p=0.033) and BMI (p=0.029). Furthermore compared to control group total body water slightly and extra cellular water significantly were higher in CKD subjects. in summary our study showed that in spite of absence of severe malnutrition,CKD children exhibit alteration in their body composition from the early stage of renal insuffi-

ciency. These alterations mainly indicate the presence of over hydration in the absence of any detectable edema**.**
Conclusion: Therefore this study suggests that BIA can be an attractive clinical tool to detect malnutrition from the early stage of CKD**.**
Keywords: protein energy malnutrition,chronic kidney disease,children.

The effect of Citrullus colocynthis on lipid profile and liver enzymes in patients with hyperlipidemia
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Background: Citrullus colocynthis is one of the medical herbs that traditionally have been used as an antidiabetic medication in tropical and subtropical countries. The aim of this study was to investigate the hypolipidemic effect of Citrullus colocynthis beyond the hypoglycemic impact on human**.**
Methods: One hundred dislipidemic patients were randomly divided into two groups namely treated (n = 50) group and placebo (n = 50) group. The subjects were treated daily by powdered seeds of Citrullus colocynthis (300 mg) and placebo for 6 weeks. The serums,TG,Chol,LDL-C,HDL-C,SGOT and SGPT were measured with enzymatic methods at the beginning and the end of the project**.**
Results: The significance of differences within these groups was calculated by Paired T-test and by analysis of covariance between them. There were significant differences within and between treated and placebo groups during our treatment in TG and in Cholesterol after intervention ($p < 0.05$).
Coclusion:A daily intake of 300 mg day(-1) of powdered seeds of Citrullus colocynthis can lower the triglyceride and cholesterol concentration significantly in nondiabetic hyperlipidemic patients**.**
Keywords: Citrullus colocynthis,Lipids,SGOT,SGPT

Association among Dietary Lipids and Serum Visfatin and Adiponectin concentration in women
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Background: Cardiovascular diseases (CVD) are the leading cause of death in humans,particularly in postmenopausal women. Inflammation has been shown to play a basic role in the development of CVD. In light of the involvement of adipocytokines and dietary lipids in the induction of inflammation in CVD,Objective: this study was conducted to investigate the potential relationship between dietary lipids and two well-known adipocytokines,visfatin and adiponectin.
Methods: A total of 374 postmenopausal women were randomly selected from 13 geographical clusters in Bushehr port. Serum visfatin and adiponectin were determined with an enzyme-linked immunosorbant assay technique and current dietary intake was recorded with a food frequency questionnaire and a 3-day recall. Each food and beverage was analyzed for macro- and micronutrient content. Bivariate correlation analysis showed a correlation between serum visfatin level and dietary SFA,n-6 PUFA and cholesterol intake.
Results: In multiple regression analyses,serum visfatin levels showed a significant positive correlation with dietary SFA ($\beta=0.06$,$p=0.01$),PUFA ($\beta=0.02$,$p=0.02$) and cholesterol ($\beta=0.005$,$p=0.002$) after controlling for age,diabetes,total energy intake and BMI. There was no significant relationship between dietary MUFA intake and serum visfatin level. No significant correlations were found between age- and BMI-adjusted adiponectin and dietary SFA,MUFA or n-6 PUFA intake ($p>0.05$). **Conclusion**: We found a positive relationship between dietary SFA,PUFA and cholesterol with serum visfatin level in postmenopausal women,and conclude that the postmenopause-induced inflammatory responses may be modulated at least in part by dietary modification.
Keywords: Adiponectin,menopause,polyunsaturated fatty acids,saturated fatty acids,visfatin.

Relationship between plasma Omentin and glycemic markers in women with PCOS
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Background: Polycystic ovary syndrome (PCOS) is an endocrine disorder in women. Omentin-1 and vaspin are secretary adipokines that are produced by the visceral adipose tissue. These levels change in obese women with PCOS. Objective: The aim of this study is to investigate whether omentin and vaspin levels change in non-obese PCOS subjects. **Methods:** This study is a cross-sectional case control study in which 39 women with PCOS were picked out for this study. The inclusion criteria were based on the Rotterdam 2003 diagnostic criteria. The control group consisted of 39 women with normal pelvic sonographic reports having regular menstruation and showing no signs of infertility. The fasting plasma glucose (FPG),triglyceride (TG),Chol,and high-density lipoprotein cholesterol (HDL-C),insulin,testosterone,omentin and vaspin were measured by the enzymatic methods. The differences within these groups were calculated by the un-paired t-test and the Mann–Whitney test.
Results: The results from this study show a significant increase in the amount of insulin,testosterone,hom eostasis model assessments for insulin resistance,TG and lower HDL in the patient group. No significant differences were seen in omentin,vaspin,FPG,Cho,low-density lipoprotein,very low-density lipoprotein cholesterol,blood urea nitrogen,Cr and homeostasis model assessments for B cell function levels between groups.
Conclusion: Results show that PCOS is not a determinant of decreased omentin and vaspin plasma levels and those high androgen level and insulin resistances are warning signs of PCOS.
Keywords: Homeostasis model assessment,insulin resistance,omentin-1,polycystic ovary syndrome,vaspin

The effect of EPA alone or in combination with Vitamin C on oxidative markers in Diabetic Patients
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Background: The aim of this study is to investigate the effect of eicosapentaenoic acid combined with vitamin C in comparison with the pure form of eicosapentaenoic acid on the serum concentration of malondialdehyde,erythrocyte activity of superoxide dismutase,glutathione peroxidase,and the serum level

of total antioxidant capacity in patients with type 2 diabetes.
Methods: Eighty one male diabetic patients,aged 33-63 years,were randomly assigned to one of 4 groups. The subjects consumed 500 mg/d pure eicosapentaenoic acid,200 mg/d vitamin C,500 mg eicosapentaenoic acid and 200 mg/d vitamin C or placebo depending on their groups. In fasting blood samples,superoxide dismutase and glutathione peroxidase activities were determined via the enzymatic method (Randox kit) and the serum total antioxidant capacity,malondialdehyde and vitamin C concentrations were estimated by colorimetric methods.
Results: Administration of pure eicosapentaenoic acid in diabetic patients increased superoxide dismutase by 4%,glutathione peroxidase 53%,total antioxidant capacity 36% and decreased malondialdehyde significantly by 25%. Prescription of eicosapentaenoic acid combined with vitamin C demonstrated a significant increment for superoxide dismutase activity by 3% and for glutathione peroxidase activity by 52% during the study,but no significant change was seen for total antioxidant capacity and malondialdehyde,respectively. There was a significant decrease in FBS and HbA1c following prescription of eicosapentaenoic acid with/without vitamin C along the study,although these changes were not significant between the study groups. **Conclusion:** It is concluded that prescription of eicosapentaenoic acid in the pure form reduces oxidative stress in type 2 diabetic patients; albeit,it does not alleviate hyperglycemia. Combination of vitamin C and eicosapentaenoic acid does not improve antioxidant property of eicosapentaenoic acid.
Keywords: Diabetes; Eicosapentaenoic acid; Glutathione peroxidase; Superoxide dismutase; Total antioxidant capacity; Malondialdehyde.

Effect of L-carnitine on plasma apolipoproteins in patients with type II diabetes mellitus

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Background:We designed this study to investigate the effects of oral L-carnitine administration on fasting plasma glucose (FPG),glycosylated hemoglobin (HbA1c) and lipid parameters in patients with diabetes mellitus type II.
Methods: The effect of L-carnitine on FPG and lipid parameters was investigated in 22 male and 13 female type II diabetic patients; the mean age±s.d. was 51.3±73.7 y. The patients were randomly allocated to two groups (L-carnitine and placebo group) and 1 g of L-carnitine or of placebo was given orally three times a day for a period of 12 weeks.
Results: FPG in the L-carnitine group decreased significantly from 143±735 to 130±733 mg/dl (P=0.03),and we observed a significant increase of triglycerides (TG) from 196±761 to 233±712 mg/dl (P=0.05),of Apo A1 from 94±20 to 103±23 mg/dl (P=0.02),and of Apo B100 from 98±18 to 108±22 mg/dl (P=0.02) after 12 weeks of treatment. There was no significant change in LDL-C,HDL-C,HbA1C,LP(a) or total cholesterol.
Conclusion: L-Carnitine significantly lowers FPG but increases fasting triglyceride,Apo A1 and Apo B100 in type II diabetic patients.
Keywords: L-carnitine; diabetes; apolipoprotein

Dietary Protein Intakes and Risk of Ulcerative Colitis

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Background: The incidence of ulcerative colitis (UC) is rising in populations with western-style diet, rich in fat and protein, and low in fruits and vegetables. In the present study, we aimed to evaluate the association between dietary protein intakes and the risk of developing incident UC.
Materials & Methods: Sixty two new cases of UC and 124 healthy controls were studied. Information on usual diet was measured by country-specific food frequency questionnaire (FFQ). Group comparisons by each factor were done using $\chi 2$ analysis, significance level was set at $\alpha = 0.05$. Logistic regression analysis adjusting for potential confounding variables was carried out.
Results: Univariate analysis suggested positive associations between processed meat, red meat and organ meat with risk of ulcerative colitis. Comparing highest versus lowest categories of consumption, multivariate conditional logistic regression analysis accounting for potential confounding variables indicated that patients who consumed a higher amount of processed meat were at a higher risk for developing UC (P value for trend = 0.02). Similarly, patients who consumed higher amounts of red meat were at a higher risk for UC (P value for trend = 0.01). The highest tertile of intake of organ meat was associated with an increased risk of ulcerative colitis with a statistically significant trend across tertiles (P value for trend = 0.01) when adjusted.
Conclusions: In this case-control study we observed that higher consumptions of processed meat, red meat and organ meat were associated with increased risk for UC.

Dietary Fatty Acids Intake Is Related to the Risk of Ulcerative Colitis: a Case-Control Study

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Background: The role of dietary fatty acids in UC pathogenesis has been shown in animal models; however, human studies are rare. The aim of this study was to conduct a case-control study to evaluate the association between dietary fatty acids intake and the risk of developing incident ulcerative colitis.
Materials & Methods: Overall, 62 new cases of UC and 124 healthy age and sex matched controls were studied. Information on usual diet was measured by a validated country-specific food frequency questionnaire (FFQ). Logistic regression analysis adjusting for potential confounding variables was carried out to compare dietary fatty acids intakes between cases and controls.
Results: We found positive associations between dietary intake of total fat (P value for trend = 0.00), oleic acid (P value for trend = 0.00), saturated fatty acid (SFA) (P value for trend = 0.02), total polyunsaturated fatty acid (PUFA) (P value for trend = 0.04), trans fat(P value for trend = 0.00), monounsaturated fatty acids (MUFA) (P value for trend = 0.00), linoleic acid (LA) (P value for trend = 0.01) with risk of ulcerative colitis. No statistically significant associations were detected between the risk of disease and dietary intake of n-3 PUFAs and cholesterol.
Conclusion: our data have shown that higher consumptions of total fats, oleic acid, saturated fat, total PUFA, trans fat, MUFA, and linoleic acid are associated with

higher risk of developing incident UC. More studies with larger sample size and prospective design are recommended.

Determination the effects of probiotic supplementation on lipid profile in patients with non-alcoholic fatty liver disease referred to Baqiyatallah Gastroenterology and Liver Disease special clinic

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Background: Considering the high prevalence of non-alcoholic fatty liver disease throughout the world and its association with hyperlipidemia, this study was performed to determine the effects of probiotic supplementation on lipid profile in patients with non-alcoholic fatty liver disease referred to Baqiyatallah Gastroenterology and Liver Disease special clinic.
Materials and Methods: In this randomized, double-blind, controlled clinical trial, 50 patients with non-alcoholic fatty liver disease were randomized to receive either Lactocare probiotic capsules, 1g per day or placebo for 8 weeks. Finally 42 patients (21 patients in each group) had finished the study. Dietary intake, anthropometric indices, physical activity, and serum lipid levels were measured at the baseline and at the end of the study. Data were statistically analyzed with SPSS 16 software using Student's t test and paired t test.
Results: At the end of 8 weeks, the mean serum levels of total cholesterol, triglycerides, LDL-C, Risk Factor (RF=TC/HDL-C) and Atherogenic Index (AI=log (TG/HDL-C)) were significantly different between the treatment group and placebo (p=0.008, p=0.001, p=0.03, p=0.037 and p=0.037, respectively), while the mean serum levels of HDL-C was not significant between two groups) p=0.19). In probiotic group the mean level of total cholesterol was significantly decreased in 8 weeks intervention (p=0.02).
Conclusion: Since the daily consumption of probiotic supplementation in patients with NAFLD for 8 weeks, improved the lipid profile (except HDL-C) compared to placebo. Therefore probiotics are recommended to use to improve lipid profile of patients with nonalcoholic fatty liver disease.
Keywords: non-alcoholic fatty liver disease, probiotic,lipid profile

Effect of zinc supplementation on insulin resistance and metabolic indices in non diabetic pregnant women with impaired glucose tolerance

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Background: Hyperglycemia and gestational diabetes mellitus are complications of pregnancy. Both mothers and newborns are typically at increased risk for complications. This study sought to detrmine effect of zinc supplementation on serum glucose levels,insulin resistance,metabolic indices,energy and macronutrients intakes in pregnant women with impaired glucose tolerance.
Materials &Methods: In this clinical trial 44 pregnant women with impaired glucose tolerance were randomly divided into zinc (n=22) and placebo (n=22) groups and recived 30mg/day zinc gluconate and (n=22),and placebo for eight consecutive weeks respectively. Dietary food intake was estimated from 3-days diet records. Serum levels of zinc,fasting blood sugar,and insulin were measured using conventional methods. Also homeostatic model assessment of insulin resistance (HOMA-IR),was calculated. Serum Leptin,Visfatin and Zinc- α2-glycoprotein (ZAG) were determined using human ELISA kit.
Results: Serum levels of fasting blood sugar,insulin and homeostatic model assessment of insulin resistance slightly decreased in zinc group,but these changes were not statistically significant. Serum zinc levels (p=0.012),energy (p=0.037),protein (p=0.019) and fat (p=0.017) intakes increased statistically significant in the zinc group after intervention but not in the placebo group. Zinc supplementation reduced significantly Leptin concentration (p=0.035) in zinc group. Furthermore,no significant differences were found in Visfatin and ZAG levels with this supplementation.
Conclusion: It is concluded that oral supplementation with zinc could be effective increasing serum zinc levels and energy intake with no effects on fasting blood sugar,Homeostatic model assessment of insulin resistance and insulin levels. However,larger trials are needed to confirm these preliminary findings.
Keywords: Zinc,Energy,Leptin,Visfatin,Zinc- α2- glycoprotein

Nutritional Management of Maternal Obesity and its Adverse Effect on Pregnancy Outcome: A Review

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Background: Obesity is a major public health concern, theimpact of which on pregnancy continues to grow in the world. Maternal obesity has become one of the most commonly occurring risk factors in obstetric practice. Obesity in pregnancy is usually defined as a Body Mass Index (BMI) of 30 kg/m2 or more at the first antenatal consultation. Evidence is now mounting that pregnancy obesity is associated with increased risk of adverse pregnancy outcome such as gestational diabetes mellitus (GDM), gestational hypertension, preeclampsia, fetal macrosomia and the need for cesarean delivery. Due in part to these unpleasant side effects, investigating the dietary approaches, as the safest strategy to manage obesity, seems to be crucial. The aim of the present study was to review the importance of focusing more and more on managing weight gain before going and during pregnancy to control most of the mentioned problems.
Methods: In this regard, we reviewed the most recent scientific researches on how much weight should the obese women gain and how they can best manage their

weight during the pregnancy.
Results: The results of our study indicate that weight loss may harm the health of the unborn child so is not recommended during pregnancy but following a healthy balanced diet containing all food groups with paying special attention to consume fiber-rich foods (such as whole grains) as well as eating at least five portions of a variety of fruits and vegetables in place of foods higher in fat and calories and also cutting down in meals and snacks containing high fat and sugar can help pregnant women to control their weight gain during pregnancy.
Conclusion: In conclusion, controlling weight gain before going on pregnancy
Keywords: Nutrition, Maternal Obesity, Pregnancy Outcome

Vitamin D status and its relationship glycemic among adolescent girls in Boukan Iran
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Background: Vitamin D deficiency is an unrecognized epidemic and an important public health problem in both developed and developing countries. Recent studies suggest that vitamin D insufficiency is not only a problem of older generations anymore but also an important health concern among younger generations. Vitamin D has multiple extraskeletal beneficial effects. Vitamin D plays a role in glucose homeostasis. The objective of our study was to determine the prevalence of vitamin D deficiency and its relationship with glycemic in Iranian adolescent girls attending high school in Boukan a city of Western Azerbaijan in northwest Iran.
Methods: In this cross-sectional study a sample of 216 girls 14 to 18 years old was selected from among high school students in Boukan city during winter in 2012 by a multistage random sampling technique. Questionnaires about general characteristics and dietary intake and physical activity were completed by interviewing with the subjects. Anthropometric measurements were performed. Fasting blood samples were collected for determining of serum of 25-hydroxyvitamin D levels and fasting blood glucose. Data were analyzed by using SPSS software and descriptive statistics tests and partial correlation test.
Results: The Mean of serum 25-hydroxyvitamin D was 7.26 (SD 2.81) ng/ml and 100% of subjects had vitamin D insufficiency. Elevated FBS was detected in 13/9 % of subjects. In multivariable regression analysis after adjustment for BMI,energy intake and physical activity level,serum 25-hydroxyvitamin D was inversely associated with fasting blood glucose (β= - 0.143 p= 0.04).
Conclusion: The Results of this study indicate that vitamin D deficiency is a major health problem among studied adolescents. Given the reverse association between vitamin D status and blood glucose levels; appropriate approaches are needed to improve vitamin D status and lowering the prevalence of obesity among adolescents. Such conditions may prevent prevalence of chronic disease in adolescents lives over the coming years.
Keywords: Adolescent girl, Blood glucose, Vitamin D

Comparison of Methods Used to Estimate the Daily Dietary Intake of Nutrients: Strengths versus Weaknesses
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Background: The daily dietary intake of various nutrients can be assessed using different approaches; the profits and disadvantages of which, however, is not comprehensively compared. Thus, the purpose of the present study was to compare the strengths and weakness of various survey methods which are divided into direct methods including duplicate portion sampling (DPS) and indirect approaches including individual food surveys such as food frequency questionnaire (FFQ), 24-hour dietary recall, diet record coupled with the use of food composition tables (FCTs).
Methods: This review consists of international literature on the methods of daily dietary intake assessment**.**
Results: The results revealed that dietary uptake cannot be accurately established through the use of individual surveys including FFQ, 24-hour dietary recall and diet record in combination with FCTs and such approaches usually overestimate the intake of some nutrients. Keeping this in mind, in many less-developed countries such as Iran, since scarce information is available about the nutrient content of various foods, daily dietary intake of nutrients are generally assessed using foreign FCTs, in which regional differences and also the influence of local technological and cooking processes on the nutrient content of meals are not taken into account. On the other hand, the direct approach including DPS method, in which representative diets of individuals are collected over a period of 1 to 7 days and then analyzed, can provide more reliable estimations. Duplicate portions of prepared meals can also be analyzed using FCTs for the sake of rapidity and low cost; Instrumental analysis of duplicate diet samples, however, reflects the influence of dietary habits of meal preparation on the metal content of foodstuffs and so provides the most accurate information on the daily intake levels.
Conclusion: Selection of the method used to investigate the daily dietary intake of nutrients relies on various situations in which the study is conducted in. However, DPS method along with instrumental analysis, if possible, usually supplies the most accurate results.
Keywords: dietary intake, assessment method, individual food survey, DPS.

Daily Dietary Intakes of Lead and Cadmium by Shiraz Population: Estimation via Duplicate Portion Sampling
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Background: Since exposure to non-essential metals of high public concern, including lead (Pb) and cadmium

(Cd), result in increasing the risks of toxicity, their dietary exposure needs to be regularly monitored. In Iran, as many other developing countries, the available studies represent the metal content of specific food products; however, the data on the toxic metal content of whole diets are scarce. The aim of the current study was to investigate the level of exposure to Pb and Cd through duplicate portion sampling (DPS) method, as a reliable direct approach, combined with instrumental analysis.
Methods: The duplicate diet samples of 21different breakfasts, lunches and dinners, prepared for patients with no specific nutritional needs, were collected from the kitchen at Namazi hospital, Shiraz, Iran, weighed and transferred to food chemistry laboratory at refrigerated temperature for 7 consecutive days. Concentration of Pb and Cd of 2 replicates of a sample was measured voltammetrically using a polarograph. The average daily and weekly intake of the elements were then calculated and the latter was compared with the provisional tolerable weekly intake (PTWI) recommended by FAO/WHO (1993). Data were analyzed using SPSS 16.0.
Results: The average daily intake of Pb and Cd were calculated to be 671.03±251.98 (377.90-1010.00) and 36.62 ± 17.02 (18.30-59.13) µg, respectively. Considering the health risks of the toxic metals, the weekly intake of Pb and Cd was estimated to be 313% and 61% of PTWIs set by FAO/WHO for a subject of 60 kg body weight, respectively.
Conclusion: The estimated intake of Pb, but not Cd, could be a cause of concern for Shiraz population. Thus, conducting regular periodic studies to assess the concentration of these toxic elements in the human diet and identifying sources of contaminants in foodstuffs as well, are recommended.
Keywords: cadmium, lead, dietary intake, DPS.

Prevalence of Nickel and Cobalt in some Vegetable Growing Areas of Shiraz City

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Background: Soil and agricultural products pollution by heavy metals because of industry's development has created many concerns and the leafy plants have more ability to absorb higher concentrations of heavy metals than other agricultural products. The purpose of this study was to determine the amount of nickel and cobalt heavy metals in planted vegetable of Shiraz city in 2012.
Method: In this study identified the area that vegetable growing and from these areas collected86 sample of the vegetable of spinach, coriander, dill and watercress then measured of nickel and cobalt metals by Plarugraph. Then analyze these data using SPSS software, and eventually compare with standard.
Result: The mean concentrations of heavy metal in dill vegetable showed significant levels ($p<0.05$) and the results showed that the highest concentrations of nickel is in spinach with a mean (04/3 ± 12/4) and between the region, the highest level of nickel is in regions 2(57/2 ± 49/3) reserved.
Conclusions: Comparison of results with the standards indicated that both metals of nickel and cobalt concentrations are far below the standards provided by WHO and CODEX and all samples are within the range.
Keywords: Vegetables, Heavy metals, Shiraz

The Relationship between Anthropometric Indicators and Nutritional Behaviors of Students in the City of Falavarjan, in 2014

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Background: Dietary behaviors and nutritional status in childhood and adolescence plays an important role in the health of adults. The purpose of this study was to determine the association between anthropometric indicators of nutritional behaviors in students in the city of Falavarjan
Methods: This cross-sectional study was performed on191 students (95 males and 96 females). Initially using standard tools and methods, weight in kilograms, height and waist circumference in centimeters were measured and recorded in special forms by the expert nutritionists. To calculate BMI, body weight divided by the square of height. Waist circumference also divided by height for measuring abdominal obesity. The Nutritional status of children was determined using WHO age-adjusted BMI charts. Data were analyzed using SPSS 16 and statistics t-test, chi-square.
Results: 12.6% of students were underweight, 24% were at risk of being overweight or obese. Abdominal obesity was 19.3 %. 20% of students ate breakfast occasionally and 2% did not eat breakfast at all. 18.4% were sleeping immediately after eating lunch or dinner, 13.0% of students in the study ate fast, and 28.3% ate as they were satisfied with the food. 41.0% did not have a certain time to eat, 35.0% liked eating fatty foods, and only 43.0% ate milk daily. 43.1% ate food while watching TV or movies. There were significant differences between daily eating dairy foods, fatty foods and abdominal obesity and also between eating at a specific time, eating when satisfied and BMI. Significant difference ($P<0.05$) was seen between eating while watching TV, obesity and BMI. .
Conclusion: Inappropriate eating behaviors in the study population were prevalent. The prevalence of being overweight and obesity were more than being underweight. Identify ingand modifying nutritional behaviors and lifestyle in students can be helpful to perform targeted interventions.
Keywords: Eating behavior, Obesity, Abdominal obesity, Students

The Prevalence of Total Body Obesity and Abdominal Obesity in Two Rural School Students in Falavarjan In 2014

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Background: Due to changes in lifestyle, limitation in

children activities, the growing consumption of junk foods, obesity and abdominal obesity have become more common, which can cause many diseases including diabetes, hypertension, and increased healthcare costs in the country in the future. The purpose of this study was to determine the prevalence of overweight and obesity in the students of two rural schools in Falavarjan.
Methods: This cross-sectional study was performed on191 students (95 males and 96 females). Initially using standard tools and methods, weight in kilograms, height and waist circumference in centimeters were measured and recorded in special forms. To calculate BMI, body weight divided by the square of height. Waist circumference also divided by height for measuring abdominal obesity. Nutritional status of children was determined using WHO age-adjusted BMI charts. Data were analyzed using SPSS 16 and statistics t-test, chi-square.
Results: 24% of students had BMI above the 85th percentile (25.3% boys and 23% girls). Abdominal obesity was also 19.3% of all students, of whom 26.3% were males and 12.5% females. There was no significant difference between gender and total body obesity and abdominal obesity (P> 0.05).
Conclusion: These results suggest that the prevalence of obesity and abdominal obesity in children is more than the standards. Nutritional behaviors and Lifestyle modification in students, increasing the awareness of the parents and teachers on the underlying causes of obesity and abdominal obesity in the students is essential.
Keywords: BMI, Obesity, Abdominal obesity, Students

Epigenetics: a new bridge between nutrition and health

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Background: Epigenetics is a collection of mechanisms that define the phenotype of a cell without affecting the genotype. Deferent factors influence epigenetics control including internal factors and environmental factors that among environmental factors, nutritional factors play an important role. To investigate the effects of nutritional factors in the epigenetic control a systematic review was conducted.
Methods: Electronic searching in Ovid, Pubmed and Sciencedirect search database using keywords epigenetics, nutrition, methylation and histone modification during 2000-2014 with limit to full text articles in English were included.
Results: Epigenetics modification including DNA methylation, histon modification and non-coding RNA. About DNA methylation, methyl donor such as folate, methionine, choline, betaine, vitamin B-12 with change the activity of folate-methylation cycle can influence epigenetic marking. In female sheep, restriction of folate, vit B-12 and methionine from the periconceptional diet altered methylation status and lead to obesity in adult offspring. Periconceptional maternal folic acid supplementation observed 4.5% higher methylation of the IGF2 in 120 children aged 17 months and *IGF-2* methylation in children showed inverse independent association with birth weight. Bioactive food components such as tea polyphenols, genistein from soybean, or isothiocyanates from plant foods reduced DNA hypermethylation status in critical genes associated with cancer, such as p16 or retinoic acid receptor beta (RARβ) and inhibit the development of cance. About histon modification, in melanoma cells and colonocytes, sulforaphane and diallyl sulfide influence expression of a subset of genes by histon modification, respectively. Genistein, curcumin and epigallocatechin-3-gallat by influencing on histone acetyltransferases and resveratrol, sulforaphan, selenium and allyl mercaptan by influencing on histone deacetylases lead to histon modifications. About noncoding RNA, bioactive food components such as genistein, epigallocatechin-3-gallat and curcumin inhibit of cancer by repress of oncogenic miRNA and activate of tumor supressor miRNA.
Conclusion: Some nutrients and bioactive food components can influence gene expression by epigenetics marks and increase or decrease disease risks.
Keywords: epigenetics, nutrition, methylation and histon modifications

Folate Controversy, reduce NTD or cancer risk

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Background: Folate is a water soluble vitamin which according a role in the replication and cell cycle genes, has attracted researchers attention that nowadays it is called folate controversy. Policy enrichment foods with folic acid to reduce the incidence of neural tube defects and its simultaneous with increase in the incidence of cancer, especially breast cancer in the target group of women who receive folic acid supplements or foods fortified with folic acid have led to the emergence folate controversy. The aim of this review study was to investigate the role of folate in breast cancer.
Methods: This review study was based on a search of PUBMED and ISI database with the keywords folic acid and Cancer and select cohort studies between 1991 and 2013, that examined the basis of the 8 studies.
Results: The results of the study suggest that a high intake of folic acid from supplements or fortified foods is associated with an increased risk of cancer that in these studies there was no difference between folic acid intake from supplements with folic acid in fortified foods. also women who have had a longer time to get to the higher levels of folic acid were affected to breast cancer more. Another study according to the World Health Organization who had been done , indicated a U-shaped relationship between folic acid intake and breast cancer.
Conclusion: Although Folic acid supplementation and fortification of foods with folic acid significantly reduced the incidence of NTD but with regard to the role that folate plays in cell division in incidence of cancer may also be effective. Based on available evidenceFolate intake in relation to cancer is a U-shaped curve that receive less than 151mcg of folic acid daily and more than 1mg increase risk of cancer significantly . Based on these studies receive less than 151 mcg can cause genetic mutation and receive more than 1mg has role in increased cell replication.
Keywords: Folic acid - Cancer

Authors Index S

Associated carbohydrate diet and hypertriglyceridemic waist phenotype in female teacher Lenjan city

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Background: Despite the high intake carbohydrates in Iranians diet and also higher prevalence of hypertriglyceridemic waist (HW) phenotype in Iranian women,there have not been any studies that examined the relationship between carbohydrate intake and risk of hypertriglyceridemic waist phenotype in this area. The aim of the present study was to determine the association between dietary carbohydrate intake and the prevalence of hypertriglyceridemic waist phenotype.
Methods: This cross-sectional study was conducted on 442 Iranian female teachers in the age range of 20–60 years old. Anthropometric parameters,blood pressure,biochemical parameters and physical activity were measured for all participants. Validated dish based semi-quantitative food frequency questionnaire (DFQ) was used to determine usual dietary intakes. Quintiles of carbohydrates intake were determined. HW phenotype was defined as serum triglyceride concentrations ≥150mg/dl and concurrent waist circumference≥88 cm.
Results: The prevalence of hypertriglyceridemic waist phenotype was 19% in this group of female teachers. There was no significant change in different triglyceridemic waist phenotypes across quintiles of carbohydrates intake. There was a significantly increasing trend for HW phenotype across quintiles of carbohydrates intake (P-trend =0.01).
Conclusion: Carbohydrate intake had significant association with hypertriglyceridemic waist phenotype among a group of Iranian adult women. More longitudinal studies are needed
Keywords: carbohydrate diet, waist phenotype

Comparison between preexercise meals intake effect with different glycemic load on exercise performance in female athletes

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Background: Athletes usually search for strategies to optimize their performance. The importance of adequate dietary carbohydrate for optimal endurance performance has long been recognized,but the type and amount of carbohydrate might also impact on physical performance. Manipulation of carbohydrate (CHO) resources glycemic load in order to optimizing athletic performance provides new research areas in nutritional-sport. Purpose of this study is to examine the effects of two isocaloric meals with different glycemic load (GL) on exercise performance.
Methods: Thirty six non-professional athletic women with ages between 19 and 24 were assigned in a double blinded randomized clinical trial with two period cross-over design. Participants in each group received a high or low GL meal as a breakfast, and 7-day wash out period is determined. After ingestion of a meal,and a 5-minute warm-up period, participants run to exhaustion, in a 20 meters shuttle run pacer. Time to exhaustion (TTE) was recorded as a measure of exercise performance. In an attempt to ensure that subjects run to exhaustion, rating of perceived exertion (RPE) was measured, using a Borg scale, too. To evaluate the effect of considered treatments, ANOVA test for a 2×2 cross-over design conducted using (R free statistical software version).
Results: The ingestion of a low or high GL pre-exercise meal did not lead to the different TEE and RPE at 3 hours before exercise in female athletic students.
Conclusion: Consumption of a low GL meal compared with a high GL meal at 3-hr before a shuttle run pacer,was not associated with statistically significant changes in TEE and RPE levels
Keywords: glycemic load, glycemic index,pre-exercise meal, exercise performance

Effects of non-soy legume consumption on C reactive protein: a systematic review and meta-analysis

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Background: Due to conflicting results of presented studies, the aim of this systematic review and meta-analysis of randomized clinical trials was to examine the effect of non-soy legume intake on inflammatory markers and C-reactive protein.
Methods: We searched Pubmed, ISI Web of Knowledge, SCOPUS and Google Scholar for relevant studies up to July 2013,using medical subject headings [MeSH] and other related keywords. A total of 9 randomized clinical trials were systematically reviewed to examine the effect of non-soy legume consumption on inflammatory markers. Eight studies involving 464 participants were included in our meta-analysis.
Results: The results of our meta-analysis showed that non-soy legume consumption had a trend towards a significant effect on decreasing CRP and high sensitivity (hs)-CRP concentrations (Mean Difference (MD) = -0.21; 95% CI: -0.44,0.02; P = 0.068). There was no overall effect of non-soy legume consumption on CRP/hs-CRP levels in the parallel or crossover study designs. Our subgroup analysis of CRP type and study design, showed that non-soy legume intake had a significant effect on CRP levels in parallel studies (MD= -1.01; 95% CI: -1.78,-0.23; P =0.011) and a significant effect on hs-CRP levels (MD= -0.53; 95%CI: -0.95,-0.11; P =0.014) and in the crossover sub group (MD= -0.68; 95%CI: -1.28,-0.08; P =0.026).
Conclusion: This review of randomized clinical trials showed that non-soy legume consumption may contribute to reductions in CRP/hs-CRP concentrations. However, further controlled clinical trials are needed to investigate the effect of non-soy legume intake on other inflammatory markers.
Keywords: Non-soy legume intake, inflammation,C-reactive protein, randomized clinical trial, meta-analysis

Effects of legume enriched diet on cardiometabolic risk factors among individuals at risk for diabetes: a cross-over study

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Background: First-degree relatives of patients with diabetes are at high risk for chronic diseases including type 2 diabetes and obesity. Our purpose was to determine the effects of consuming 4 servings of legumes per week on lipid profiles, glycemic indices and blood pressure of participants with family history of diabetes over 6 weeks of intervention.
Methods: A total number of 26 first degree relatives of patients with diabetes (14 women and 12 men) were participated in this randomized cross-over clinical trial study. Participants were randomly assigned to legume enriched diet or habitual diet for 6 weeks. Paired t-test and repeated measures analysis of variance were used to compare data of two experimental diets.
Results: The mean ± SE of legumes intake during the legume phase was 111.12±10.53 g/day that was significantly higher (P<0.001) than the amounts of legumes during habitual diet (50.73±7.10 gr/d). Percent changes for cardiovascular disease risk factors did not change significantly following 6 weeks of legume consumption.
Conclusions: Consumption of 4 servings of legumes per week had no significant effect on anthropometric measurements, glycemic indices and lipid profiles of participants with family history of diabetes, while it could reduce systolic and diastolic blood pressure in a marginally significant level.
Keywords: First degree relatives of patients with diabetes, pulses, cardiovascular disease

Double burden of nutritional disorders in young children in the west of Iran (2010)

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Background: Growth is a process through which a primary cell becomes a mature human . Natural growth is the most important health indicator in childhood and adolescence. Children growth assessed using different characteristics such as height for age, weight for height ratios and Body Mass Index (BMI) . The standard growth charts and diagrams are used to assess the nutritional status and growth of children and adolescents . According to the Health Map of the Islamic Republic of Iran in the fifth program of economic, social and cultural development, increasing the numbers of well-nourished children at school entry is one of the main goals of the health system . The present study aims to assess the prevalence of short stature underweight overweight obesity and stunting-cum-overweight in preschool children based on the height/age and BMI/age.
Methods: This cross-sectional study was conducted on screening results of 2102 preschool children {1092 (52% boy and girls 48% girl) referring the assessment center of West Islamabad (Kermanshah, Iran) at the summer of 2011. The date of birth height weight and gender of all preschool children were entered into the Anthroplus software. Anthroplus has been designed based on the WHO growth standards in 2007. It minimizes the errors caused by age calculation and percentile drawing.
Results: 1300 children (61.8 percent) were from urban areas, and 802 children (38.2%) from rural areas. Their average age height and weight was 76 months 116.7 cm and 21.5 kg, respectively. Overall 2.4% of children had short stature 2.9% were underweight 7.0% were overweight 6.5% were obese and 0. 86% were stunting-cum-overweight. 63.2% of children were well grown in terms of height and BMI and 36.8% were suffering from one kind of nutritional disorders.
Conclusion: The coexistence of all type of nutritional disorder in this study warrants a multifaceted international policy with evidence-based local program to address the double burden of nutritional disorders.
Keywords: Growth chart Children Nutritional Disorders prevalence

Evaluation of competencies of community workers involved in the community nutrition project in Benin in 2014 (West Africa)

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Background: In Benin, more than 30% of children aged 6-59 months suffer from chronic malnutrition. This prevalence reaches 40.4% in rural areas. A community nutrition project is implemented since 2011 in 160 villages in 10 Communes to improve the nutrition status of young children in poor rural areas with high malnutrition rates through innovate delivery mechanisms of nutrition services at community level by reaching out to mothers and grandmothers. The process is underway to establish food and nutrition surveillance committees in each of the villages,multi stakeholder consultative food and nutrition platforms in each of the communes. Various workshops and trainings for the mobilization of grandmothers,the promotion of infant and young child feeding practices,have been held. The objective of the study was to assess the competencies or facilitators,model mothers and grandmothers involved in the community nutrition project in Tatonnonkon,a rural area located in Adja-ouere commune.
Methods: This evaluative study included all 16 community workers: 02 facilitators,02 model grandmothers,12 model mothers involved in the implementation of the project and 129 children followed in the learning and nutritional recovery site (FARN). Questionnaire survey, interview, observation and document exploitation were used for data collection. Scores of knowledge, tasks execution and working conditions were performed and used to assess the skills of community workers. We assessed also recovery status of children followed in the FARN. Proportions or percentages were calculated for each categorical variable to assess skill level.
Results: Among 16 community workers,13 have a low knowledge score,10 model mothers have low task execution score. Work conditions are in satisfactory for 13 community workers. Overall,75% of agents showed low skill scores. Community workers activities helped to cure 79.7% of malnourished children.
Conclusion: Our results highlighted the need to improve the skills of community health workers for better implementation of community nutrition program. Further studies are needed to assess the incidence of children malnutrition in the community to better appreciate the effect of the community nutrition project.
Keywords: Nutrition, children, community workers, evaluation, competencies

Compare performance and graphics software Ntrv-

plas current nutritional screening, failure to thrive
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Currently being conducted to determine the status of children using growth charts in this manner there are errors and exact fit is not determined growth condition. World health organization (WHO), recentlyhas designed software that solves thisproblem. The purpose of this study was to compare the efficacy of two methods for identifying children with growth disorders. In this cross-sectional study of 2132 children were assessed when they visit the Sanjesh site. Data were analyzed using Anthroplus software and growth charts. Anthroplus software identified more children with growth disorders. Only in one index current method more diagnosed (19 case) than software, but in other indices the software diagnosed more children with disorder (54 patients). Since this is a valid software,can be downloaded from the WHO website,and it is easy to use, thus for household electronic filing,its use in the health care system can useful.
Keywords: growth disorders, A nthroplus software,growth charts

Comparison between previous and recent nutritional screening tools for Iranian school children: necessity of revision
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Background: Nutritional screening tools for children in primary health care emphases only on the number out of the health road range. Hieght for age ranking for school children health status screening reduced from four to three domains since 2006. At the recent version there is merging between percentile 3-50 and 50-97, which may decrease acuracy of statistical analisys. This study aimed to compare recent and previouse nutritional status reporting of primary school children.
Methodes: Cross sectional study designed and all primary and secondary school children (boys and girls) in urban and rural were examined in Islam Abad, Western Iran. Nutritional status was calculated using recent and previous reporting methods. Results were compared with normal distribution using Chi square analysis test.
Results: There was significant diferenc with normal distribution within 8 groups of students (P<0.001) using previous method. When current screening method applied, only 6 groups showed significant difference with normal distribution (P<0.03). The previous screening method was effective to detect difrences than the curent method.
Conclusion: Using recent nutritional screening method decreased acuracy of statistical analysis. Applying pecentile 3-97 as a one domain in hight for age at the curent reporting method and merging together of 94% of population is too wide. Reporting nutritional status of school children should be according to applying six domain of WHO is highly recomended.
Keywords: Reporting methods, Nutritional screening, Children, growth channels

Food insecurity and primary school students Intelligence Quotients
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Background: Food insecurity refers to the lack of sufficient and safe availability of the food necessary for a healthy and active life. Intelligence is the general talent of a person for understanding the world and meeting his/her expectations. Many studies have suggested anassociation between a person's nutrition and his/her mental abilities and intelligence quotient.
Methods: The current research was a case-control in which 222 female students aged 9-11 years (111 with low intelligence quotients as the case group and 111 with average intelligence quotients as the control group) were randomly chosen from public girls primary schools in Bandar Anzali, Iran. General and demographic characteristics were gathered,and USDA household food insecurity questionnaires were completed by the students mothers. Wechslers revised intelligence test was used to determine each student's intelligence quotient. The acquired data was analyzed in chi-square 2, student t-test,SPSS (16.0 version),and Stata 11 SE.
Findings: The rate of food insecurity in this study was 51%. Food insecurity was found to have a significant association to the students intelligence quotients (p>0/0001). Food insecurity in case and control group households were 58.6% and 22.5%, respectively, and the average intelligence quotient was 77.97±5.56 for students in the case group and 94.6±5.47 for children in the control group. Furthermore,the association between food insecurity and mothers employment,parents educational levels,household economic level,and number of employed household members were also found to be statistically significant.
conclusion: The association between food insecurity and students intelligence quotients was completely significant (p<0/0001),and the rate of food insecurity in case group households was 2.6 times more than of control group households. Therefore, it is necessary to pay more attention to household food security and its consequences,including childrens low intelligence quotients
Keywords: Food insecurity, Intelligence quotient, Primary school girls, Northern Iran

Development of curcumin nanoparticles as a novel alternative to synthetic colours in food systems
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Background: Synthetic food colours are used in many processed foods,such as colored breakfast cereals,candy,beverages and snacks; that have been linked to a wide variety of health concerns including behavioral problems,hyperactivity,allergic reactions,and even cancers. The use of natural dyes is important in the consumer acceptance of foods and food safety. Curcumin,a hydrophobic yellow-orange polyphenol derived from Curcuma longa,is an important natural colourant,that is used in food preparations. Curcumin possesses diverse pharmacologic effects including anti-inflammatory, antioxidant, antiproliferative and antiangiogenic activities. However, the applications of curcumin are limited due to its low water solubility and sensitivity to alkaline conditions, thermal treatment,light,oxygen and low gastrointestinal absorption,poor bioavailability and rapid metabolism. Thus,an improvement in the stability and solubility of curcumin is necessary. The use of natural polymeric nanoparticles, has become a very interesting approach in nutraceutical delivery. Therefore,the objective of this work was to develop a novel formula-

tion of curcumin nanoparticles comprised of two natural biopolymers,and food grade surfactant,evaluate their potential for the association and colour properties of curcumin.

Methods: Curcumin nanodispersions were prepared using sodium caseinate,gum Arabic,and Tween20,as stabilizer system,through a solvent displacement process. The interactions among these three surface active compounds,in the formation,physicochemical and color characterization of produced nanodispersions were studied by applying a Response Surface Methodology (RSM). Measurements of the particle size and span was carried out using by a particle size analyzer and color properties of nanodispersions were analysed by Hunter Lab.

Results:Analysis of variance confirmed that the models were highly significant ($p<0.001$) for all response variables. Nanocomplexes had minimum size of the particle,with 72 nm,and this value was increased to 134 nm with adding of curcumin. Adding of Tween20 was led to a significantly reduction in size. In the presence of Tween 20,the yield was significantely increased. With decreasing the particle size,the total surface area increased,which led to the increase in a* and b*(colour parameters),as well as the intensity in the colour of the curcumin colloidal particles.

Conclusions: The nanoparticles showed good dispersion and coloring capacity compared to commercial curcumin. Thus, the solvent displacement technique enables to obtain three component nanodispersion curcumin making possible to extend the use of curcumin like a natural coloring agent in aqueous food products,that not only didnot harmful,but also has the nutritional and medicinal properties.

Keywords: Nanodispersion, Curcumin, Food colour, Food safety, Nutritious

Nutritional quality and safety of organic food

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Abstract: Food security, nutritional quality and safety vary widely around the world. Reaching these three goals is one of the major challenges for the near future. Up to now, industrialized production methods have clearly shown severe limitations such as a worldwide contamination of the food chain and water by persistent pesticide residues, and reduced nutrient and flavor contents through low-cost intensive food production and/or processing. This review is based on the AFSSA report issued and recently published studies. The major points are: 1/ organic plant products contain more dry matter and minerals (Fe, Mg); and contain more anti-oxidant micronutrients such as phenols and salicylic acid, 2/ organic animal products contain more polyunsaturated fatty acids, 3/ data on carbohydrate, protein and vitamin levels are insufficiently documented, 4/ 94–100% of organic food does not contain any pesticide residues, 5/ organic vegetables contain far less nitrates, about 50% less; and 6/ organic cereals contain overall similar levels of mycotoxins as conventional ones. Thus, organic agricultural systems have already proved able to produce food with high quality standards. Also, improvements of organic production to achieve sustainable food production for humans in the near future are suggested.

Keywords: Organic agriculture, nutrition, food safety, contaminants, health

Toxicity of acrylamide and mechanisms of its action

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Abstract: Acrylamide (2-propenamide, C3H5NO) is a white odorless crystalline solid that is soluble in most polar solvents such as water, methanol and acetone, but is insoluble in non-poplar solvents such as benzene and n-heptane. Acrylamide is mainly formed unintentionally in the Maillard reaction when the free amino acid asparagine reacts with the reducing sugars, especially glucose and fructose that are present in food. The formation of acrylamide usually takes place during high temperature (>120°C) processing such as frying, baking, roasting, toasting and grilling of certain kinds of foods, particularly starchy foods. Various factors such as food composition, ratio of surface area to volume of the food, cooking methods and conditions including temperature and time, etc. can affect the acrylamide formation. Boiling and steaming foods does not create acrylamide. French fries, potato chips, other fried and baked snack foods, roasted asparagus, canned sweet potatoes and pumpkin, canned black olives, roasted nuts, coffee, roasted grain-based coffee substitutes, prune juice, breakfast cereals, crackers, cookies, bread crusts, and toast all contain varying levels of acrylamide. Since acrylamide is water soluable and diffuses easily, it is readily absorbed through the intestinal tract, the skin, the lungs and the placental barrier. Acrylamide's mechanism of action is greatly enhanced through its wide distribution in body fluids and fairly even distribution throughout body organs. Despite acrylamide's rapid metabolism and excretion following exposure, its high reactivity with proteins could be the reason it is hazardous to workers. The adverse effects of acrylamide on the nervous system in humans following high occupational and accidental exposures are well-documented. Studies have shown that acrylamide is toxic to genes and causes cancers, reproductive and developmental problems in animals. However, currently there is inadequate evidence in humans for the carcinogenicity of acrylamide. The International Agency for Research on Cancer (IARC) under the World Health Organization (WHO) has classified acrylamide as "probably carcinogenic to humans" (Group 2A). In addition, epidemiological studies do not provide any consistent evidence that occupational exposure or dietary exposure to acrylamide is associated with cancer in humans.

Keywords: Acrylamide, toxicity, health effects, food

Comparison of the effects of canola oil and rice bran oil consumption on lipid profile in postmenopausal type 2 diabetic women

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Background:: High serum triglycerides (TG) and low level of high density lipoprotein (HDL-C),are the most common lipid disorders in type 2 diabetic patients which have important role in incidence of CVD. We aimed to compare the effects of canola oil and rice bran oil consumption on blood lipids in type 2 diabetic women.

Methods: Seventy-five postmenopausal women with type 2 diabetes participated in this randomized controlled clinical trial. From 4 weeks before intervention use of lipid-lowering drugs was discontinued under medi-

cal supervision. Participants were randomly allocated to one of the three groups including: a control group (balance diet +30 g/day sunflower oil) and two intervention groups (balance diet +30g/day canola oil or rice bran oil). All participants were provided with the oils and asked to add it on their salad or baked foods. At baseline and after 8 weeks height,weight,total cholesterol (TC),TG,Low density lipoprotein cholesterol (LDL-C) and HDL-C were measured and 3-day food record was taken.Data was analyzed using SPSS # 19.

Results: After 8 weeks intervention,reduction of serum TG,TC and LDL-C levels were significantly higher in rice bran oil group and canola oil group compared to the controls (p<0.001,p=0.001,p=0.006,respectively). Also reduction of TG and LDL-C level were more in rice bran oil group than canola oil group (p=0.007,p=0.012 respectively),while TC level wasn't statistically different between intervention groups (p=0.058). HDL-C changes were not significantly different among the 3 groups.

Conclusion: Substitution of rice bran oil or canola oil for sunflower oil could attenuate lipid disorders in type 2 diabetes women. Besides,rice bran oil could improve lipid profile more efficiently than canola oil.

Keywords: type 2 diabetes,lipid profile,canola oil,rice bran oil

Dietary phytochemical index and osteoporosis risk in postmenopausal Iranian women

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Background: Phytochemicals are natural non-nutritive bioactive compounds which have favorable effects on the prevention of chronic diseases such as osteoporosis. However, quantification of phytochemicals in consumed foods or in human tissue samples is relatively costly and time-consuming. To overcome this limitation, an alternative, but simple method for assessment of total dietary phytochemical intake, labeled as dietary phytochemical index (PI), has recently been proposed. In the present study, we aimed to examine the association of PI score and osteoporosis risk in a sample of postmenopausal Iranian women.

Methods: In this cross-sectional study, lumbar spine and femoral neck bone mineral density of 151 postmenopausal women (mean age 61.2 years) were measured by dual-energy x-ray absorptiometry. Usual dietary intakes during the past year were assessed using a valid and reliable 168-item semi-quantitative food frequency questionnaire through face-to-face interviews. Covariate information was obtained via general and physical activity questionnaires, and also by anthropometric measurements. Using the method proposed by McCarty, the PI score was calculated for each subject as the percentage of the daily energy derived from phytochemical-rich foods (i.e. fruits and natural fruit juices, vegetables and natural vegetables juices, whole grains, legumes, nuts, seeds ,olive ,and olive oil) divided by the total daily energy intake. The risk of having osteoporosis at the lumbar spine or femoral neck in relation to the tertiles of the PI score was then estimated in multivariate logistic regression analysis.

Results: The prevalence of osteoporosis at the lumbar spine and femoral neck were 30.5% and 15.9%, respectively. After adjusting for potential confounders, postmenopausal women in the highest tertile of the PI score were less likely to have osteoporosis at the lumbar spine (odds ratio = 0.31; 95% confidence interval: 0.11-0.86: P = 0.02), compared with those in the lowest tertile. However, no significant association was observed between the PI score and risk of having osteoporosis at the femoral neck.

Conclusion: Findings of the present study suggest that a higher dietary PI score could have protective effects against the risk of osteoporosis at the lumbar spine in postmenopausal Iranian women. However, future prospective studies of sufficient methodological quality are required to further confirm our findings.

Keywords: Dietary phytochemical index, osteoporosis, postmenopausal women, Iran

Effect of l-carnitine supplementation during a resistance training protocol on oxidative stress parameters in untrained men

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Background: Oxidative stress is a consequence of professional sports, which can be further diminished athletic performance, but also endanger the health of athletes.

Methods: This quasi-experimental designed with pretest-posttest, control group was performed on 24 healthy male non-athletes in the form of double-blind study. Study subjects were randomly divided into two equal groups ,l-carnitine and placebo. Both groups fallowed a same resistance training protocol for 8 weeks. During the study, two groups consumed 2 g/day L-carnitine and 2 g/day placebo (maltodextrin), respectively. Anthropometric measurements, dietary intakes and blood biochemical parameters included total malondialdehyde, glutathione, superoxide dismutase and catalase were measured at the beginning and end of the study. Paired t-test and t-test was used for quantitative data.

Results: 20 patients (9 in the supplemented group and 11 in the placebo group) completed the study. At the end of the study in comparison to the beginning of the study, in l-carnitine group, glutathione (GSH) levels were significantly increased, and malondialdehyde (MDA) levels were significantly decreased (p< 0.05).

Conclusion: In this study, supplementation with 2 grams of L-carnitine per day for 8 weeks, caused raising significant amounts of glutathione, catalase and superoxide dismutase levels and a significant reduction in serum levels of malondialdehyde over a period of resistance training in untrained men. The results of this study indicate that L-carnitine has an antioxidant role.

Keywords: l-carnitine, resistance training, oxidative stress.

Traditional functional foods used in the Kurdish medicine

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Background: Functional foods are food like traditional foods; however, when consumed as a part of a diet, they

will exhibit physiological benefits and in addition to the basic nutritional properties are effective in reducing the risk of chronic and serious diseases. Products that have potentially helpful properties, such as modified foods or beneficial nutritional compounds, which have health benefits in addition to traditional nutritional properties in their content, are also considered as functional foods. Therefore, this study aims to investigate traditional functional foods used in the Kurdish medicine.
Methods: Internal and external articles and books in the Internet search engines were used in this review paper.
Results: According to the results of the study, many traditional foods consumed in Kermanshah are considered to be functional foods, including Shole Amiri, Pereshge, Peresht, Shalam, Tarkhine, and cabbage soup that can be used as a medicine to treat colds. Moreover, the Masoa soup and Paghaze are consumed to treat digestive diseases, Khore Bari to remove heat exhaustion, the Sourane soup to relieve bone pain, and Vanoushak Polo that are energizing and stimulating. Other functional foods include Yekave to boost the immune system of body, Kalane bread with the disinfectant property, and nettle soup to treat respiratory diseases. In addition, the Gilankhe stew is purgative and laxative and the lentil soup is used to prevent colds.
Conclusion: Due to the role of functional components in the food industry and its extension in Kurdish medicine, it is necessary to pay more attention to traditional functional foods and economic efficiency of such foods as the therapeutic ones. Furthermore, due to the limited studies on this area in the West of Iran, it is felt to further study and experimentation in this area.
Keywords:Functional foods, Kurdish medicine

Relationship between physical activity and television watching with body mass index in older children in Zahedan at 2012
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Background: Child hood obesity is a major public health problem, Evidence suggests that reducing physical activity and increasing sedentary behaviors such as watching television, Computer Games as risk factors for obesity. Objective: The present study aimed to determine relationship between physical activity and television viewing time with body mass index in older children.
Methods: We did cross-sectional study on 585 student (293 boys and 292 girls) aged 7- to11-years-old from Zahedan in 2012. body mass index is calculated as the ratio of weight in kilograms divided by the square of height (m) and Status of underweight, normal weight, overweight and obesity based on BMI percentiles for age and sex as proposed by standard control disease center (CDC-2000) were evaluated .television watching time was reported through interviews with children and Moderate to vigorous physical activity during the previous 7 days was determined by International physical activity questionnaire for children (PAQ-C).
Result: physical activity score in underweight, normal weight ,over weight and obese subjects, respectively, were 2.32 , 2.31 ،2.46 ،2.45 .the physical activity score had significant relationship with body mass index (p = 0.018), finding showed physical activity score in normal subjects was higher than obese subjects, But physical activity score had no significant differences in underweight and overweight subjects . time spent watching TV per day had no significant association with body mass index (P=0.13) while time spent watching TV per day had significant relationship with physical activity score (P = 0.011).
Conclusion: The results showed, Physical activity score is associated with body mass index, so physical activity should be included and promoted within schools, as it important component of a healthy lifestyle and improves many aspects of health.
Keywords: Physical activity, television watching, body mass index

Assessment of attitudes of urban and rural households toward consumption of buttermilk and soda in the Hormozgan Province
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Background: One of the major causes of nutritional deficiencies, lack of nutritional knowledge, attitude and practice and therefore is inappropriate in this case. Inappropriate intake of drinks such as soda can, over time, health-endangering and person at risk for various diseases, including obesity, impaired digestion and absorption of nutrients in food, osteoporosis, diabetes, and …. . Replacement of healthy drinking such as water, milk and juices fresh and natural with carbonated drinks, ready commercial fruit juice, prepared powders syrup over the recent years is the result of lifestyle changes. This study aimed to assess attitudes of urban and rural households in the Hormozgan Province was administered consumption buttermilk and soda.
Methods: In this cross-sectional study to assess the state of knowledge of urban and rural households in Hormozgan province about the fast food consumption is associated with overweight and obesity 456 households (57 clusters) were selected using a cluster sampling was conducted. Out of the 57 clusters, 33 clusters were considered urban and 24 rural cluster. The data collection instrument was a questionnaire survey of knowledge, attitudes and practices regarding nutrition in rural and urban households (NUTRICAP) in an interview in 1390 that the house has been completed. Data collected were analyzed using methods descriptive statistics.
Results: This study shows that a total of 95/2% of the study population (96/2 percent in a sample of urban and rural samples 93/8 percent) preferred buttermilk rather than soda and 4.8 percent (3.8 urban samples and 3.6 in a sample of rural) preferred soda rather than buttermilk.
Conclusion: The results in this case show that the need for continuity education in this field, especially in rural areas.

The correlation between the serum level of 25- hydroxy vitamin D and anthropometric indices,glucose,lipid profile,serum insulin,and insulin resistance in obese women
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Background : There are some evidences that the serum concentration of 25- hydroxy vitamin D which is represent the status of body vitamin D,has a diverse relationship with obesity status,and the risk of obesity decreases in people with high level of 25- hydroxy vitamin D. The aim of this study is to investigate the correlation between

the serum level of 25- hydroxy vitamin D and anthropometric indices,glucose,lipid profile,serum insulin,and insulin resistance in obese women.

Methods: 43 obese women and 43 healthy women with normal weight as a control group,aged 20-50,participated in current case-control study. They were matched for age and physical activity. From each participant,a 3-day 24-hours food recall was filled. Moreover,fasting blood sampling was taken to measure blood levels of fasting blood glucose,25- hydroxy vitamin D,lipid profile and serum insulin.

Results: The mean level of serum 25- hydroxy vitamin D,insulin and also insulin resistance based on IR-HOMA index in the group of obesity and control were 28.05 ± 16.66 versus 25.72 ± 14.08 (P=0.48),25.97 ± 7.53 versus 25.93 ± 9.32 (P=0.98),and 6.39 ± 2.6 versus 5.83 ± 2.5 (P=0.30) respectively. Between the anthropometric indices,25- hydroxy vitamin D only had a significant relationship with body weight in obese group (p=0.033,r= 0.326). There was no significant relationship between serum 25-hydroxy vitamin D with blood sugar,lipid profile,serum insulin level and HOMA-IR in obese women.

Conclusion: We didn't find relationship between serum level of 25- hydroxy vitamin D with anthropometric indices (except for body weight),serum levels of glucose,lipid profile and insulin resistance in obese women participated in this study.

Keywords: obesity,25- hydroxy vitamin D,lipid profile,insulin,insulin resistance

The comparison of serum vaspin and visfatin concentrations in obese and normal weight women

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Background: There is evidence based studies which show that plasma level of visfatin and vaspin in patients with type 2 diabetes mellitus elevate in comparison with healthy people. But there is no consistency in plasma visfatin and vaspin concentration between studies done on obese people. For this reason,the aim of this study is to investigate the serum level concentrations of visfatin and vaspin in obese women compared to normal weight women.

Methods: The participants of this study consist of 43 women aged 20-50,and 43 healthy women with normal weight as a control group. They were matched for age and physical activity. 24- hours food recall was used to collect dietary information from subjects. Moreover,blood sampling was taken to measure the blood levels of sugar,lipid profile,vaspin and visfatin.

Results: The mean serum level of visfatin was not statistically different between obese and normal weight women. But,the obese women had statistically higher mean serum level of vaspin than normal women (p= 0.04). We found no relations between serum levels of vaspin with serum concentration of visfatin. Also,serum levels of these two adipokines were not related to the serum concentrations of fasting glucose,Total cholesterol,Low-density lipoprotein cholesterol and Triglycerides and Highdensity lipoprotein cholesterol. Also,there was a significant positive relationship between carbohydrate intake and serum visfatin level in women participating to this study (p= 0.018,r= 0.257).

Conclusion: The results of this study demonstrated that the level of serum vaspin was significantly higher in obese women. But there were no differences in serum levels of visfatin in comparison to normal weight women. Meanwhile this study demonstrated a positive relationship between serum levels of visfatin with dietary intake of carbohydrate,but no relationship between serum level of visfatin and vaspin in women participating in this study.

Keywords: Obesity,Vaspin,Visfatin,Women

Assessment of nutritional status, food intake and serum albumin levels in patients with pressure ulcers, admitted to Qaem hospital in Mashhad

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Background: This study was designed to assess the nutritional status, food intake and hypoalbuminemia in patients with pressure ulcers, admitted to Qaem hospital in Mashhad - Iran.

Methods: This was a cross-sectional study. Nutritional status of 22 patients with pressure ulcers were assessed using SGA form and their calorie intake, calculating by the amount of enteral and parenteral nutrition and the feeding rate and then compared with their calorie requirement determined by the Harris Benedict equation. Mid arm circumference was measured for each patient and total serum albumin level and information of patient records was noted. Data were analyzed trough t-test, analysis of variance (ANOVA), Fisher test and pearson correlation test.

Results: From 22 patients, 40.9 % had severe malnutrition, 31.8 % had moderate malnutrition and 62.8 % had grade 3 of pressure ulcer. The mean of calorie intake, calorie requirement, were respectively, 1177±424.26, 1790.7±331.91. 90.9% of patients had serum albumin level below 3.4 mg/dl. There was significant difference between serum albumin level of patients with mild and severe malnutrition P = 0.03, There was also a significant positive correlation between serum Alb level and MAC P = 0.003.

Conclusion: Most of patients with pressure ulcers had moderate or severe malnutrition and were hypoalbominemic, we suggest that coexistence of wounds and malnutrition, possibly through depleting the lean body mass, can be involved in further reduction of serum albumin level.

Keywords: pressure ulcer, nutritional status, hypoalbuminemia, malnutrition

Association between Healthy Eating Index (HEI) and anthropometric measurements in the 18-30 years old girls, supported by charities in Iran

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Background: since poverty and undernutrition are common inIndividuals whom are supported by charities and to our knowledge dietary status of these individuals has

not been assessed so far in Iran, our purpose was to assess the healthy eating index and anthropometric measurements in 18-30 years old girls whom supported by charities in Iran.

Methods: In a cross sectional study, a total of 1141 girls with the age of 18-30 years old, selected randomly between girls supported by charities from all provinces in Iran. Dietary intake was assessed with a reliable and validated semi-quantitative 302-item food frequency questionnaire. HEI was calculated with modifying kennedy et al method in a 0-90 point scale. Anthropometric and sociodemographics data were collected for all participants. Data were analyzed trough regression logistic analyses, T-test, spearman correlation test and analysis of variance (ANOVA).

Results: The mean of HEI score was 46.77±9.75 and the results showed that dietary quality of 45 % of subjects was poor, 53.8 % needs improvement and only 1.2% was good. 79.3 % of subjects were normal or underweight and the prevalence of abdominal obesity was low in this population (5.3 % had WC≥88 cm and 19.5 % of subjects had WHR ≥ 0.8). In addition to total HEI, meat, cereal and variety scores had negative correlations with WHR (P<0.05). Results revealed that higher level of HEI and variety score decreased the risk of underweight while higher percentage of calorie intake from fat was associated with increasing likelihood of having abdominal obesity (P<0.05). Also a positive correlation was found between cholesterol score and both of BMI and WHR (P<0.05).

Conclusion: The present study suggests that girls whom supported by charities across Iran are in need of nutrition interventions with an emphasis on increasing the consumption of meat, dairy products, fruits and vegetable and also dietary variety. Adherence to the dietary guidelines can reduce the abdominal obesity and also the risk of being underweight in this population. Keywords: Healthy eating index (HEI), dietary quality, abdominal obesity, low socio-economic status

Relationship between Nutritional status and appetite among HIV Patients on HAART

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Background:Based on the global HIV epidemic,utilization of all potential interventions to stop the progress of HIV/AIDS necessitates enhancing the health status,quality of life and increasing the expectancy of life. Generally nutritional problems among PLHIV increase the risk of morbidity among the patients. Back ground and Aims: A cross sectional study was carried out to determine association between nutritional status and appetite among people living with HIV receiving antiretroviral medication in Malaysia

Methods: Association between nutritional status and appetite level were also determined among subjects who were comprised of 170 Chinese,Malay and Indian patients aged from 19-59 years old in SungaiBulohHospital. Questionnaires include socio-demographic status,appetite level done by two interviewers. Nutritional status was determined by using Patient-Generated Subjective Global Assessment (PG-SGA),BMI,MUAC. In addition,Nutrition Appetite Questionnaire (CNAQ) was modified and validated to evaluate the appetite among people living with HIV (PLHIV) during the pre-study time (Cronbach α=0.77).

Results: Outcome of PG-SGA showed that mean scoring of the questionnaire was 5.85 ± 4.46 with a range of zero to 33. 49% (n=83) of subjects were well-nourished and 51% (n=87) of participants had unintentional weight loss with a high score of PG-SGA regarded as undernourished. Furthermore,92 (54.1%) participants showed symptoms of poor appetite using CNAQ. According to correlation test,PG-SGA score were negatively correlated to appetite score based on CNAQ (r= - 0.24; p < 0.001). Assessing BMI and MUAC among undernourished cases indicated that majority of subjects with BMI < 22.5 cm (71.4%) had the symptoms of poor nutritional status using PG-SGA. Besides,there was a significant association between BMI and MUAC with PG-SGA level (p < 0.01).

Conclusion: Identifying the special link between nutritional status and appetite level among HIV patients is not always possible; actually there are the various factors pertaining to malnutrition. Even though the clinical factors might have the direct or indirect impact on the HIV infection,poverty and socio-demographic issues play remarkable roles on malnutrition among these patients

Keywords: Appetite,Nutritional Status,HIV

The relationship between body fat percentages of sperm in infertile men attending the IVF center in Hamadan

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Background:Purpose Infertility is one of social problems that can threaten stability of the family Therefore,regarding the significance of the issue,this research was carried,for the purpose of studying the correlation of body mass index and body fat percentage with the quality and quantity of the sperms in infertile men who referred to IVF center in hamedan.

Methods: 350 infertile men were the participants of this study. After making sure of the absence of disorders or defects,the demographic properties and information related to anthropometric indices (weight,height,and body fat percentage) were collected. For statistical analysis,Spss.11.5 software was used. For determination of correlation between quantitative properties,the correlation test of Pierson was used. For the comparison of quantitative properties like sperms in different levels of BMI or fat percentage,the variance analysis test or T-test was used.

Results: Mean of age and body mass index were respectively 32.6 % years and 25.2% kg/m2 in the participants of this study. In respect of assessment of body mass index,12% of participants were underweight (BMI< 20),36.3% had normal weight (BMI= 20-24.9),40.6% were overweight (BMI= 25-29.9) and 11.1% were obese (BMI> 30). Therefore,the majority of participants were either overweight or obese (51.7%). There was no statistically significant relationship between BMI and number of sperms,motility of sperms,mean of sperm volume,percentage of sperm morphology and density of sperms in infertile men. Mean of fat percentage of participants was 17.63%. People who had a normal percentage of fat,had the most number of sperms (90/74 X 10) and people who had less than normal fat percentage had the least number of sperms (10 X 68.88). There was no statistically significant relationship between fat percentage and number of sperms,motility of sperms,and percentage of sperm morphology and sperm density in infertile men .

Conclusion: Although,There was no statistically significant relationship between indices,but Considering the

relationship between fat percentage and number of sperms in the participants of this study,it is necessary to urge men to have physical activities and appropriate nutrition,as effective factors of men's fertility,to balance the fat percentage of their body.

Determination of the effect of CLA supplementation on weight loss in people under treatment regimen

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Background: Effect of Conjugated Linoleic Acid on weight loss in patients with weight loss program Conjugated linoleic acid or CLA is a natural fatty acid that accelerate transport mechanism of fat into fat cells,energy production and helps the body to build more muscle mass. It is also used for a "fat burner" specially in stomach. Therefore seems to matter in this role in addition to improving immune system,prevention of cancer and atherosclerosis. In weight loss but also may influence the studies in this area was limited and the existing studies have been inconsistent. Therefore,this study in order to determine the effect of CLA supplementation on weight loss in people under treatment regimen was designed to weight loss.
Methods: In this clinical trial,200 individuals obese (BMI> 30) over 18 years,selected randomly to two groups of 100 persons who received 1000 mg CLA,along with diet,weight loss or the group receiving diet,weight loss alone 4 months,were divided. Anthropometric measurements for all subjects at baseline and after 4 months of supplementation were measured. Statistical analysis software SPSS (VER 13) using t-test and Chi-square was performed. Communications through the Pearson correlation coefficient was investigated.
Results: Based on the results in the case group after 4 months the mean weight loss was 0.54 ± 14.05 kg weight individuals had significantly decreased (001/0p =) in the control group mean weight loss was 0.66 ± 8.11 kg.
Conclusion: The results,1000 mg CLA supplementation resulted in significant weight loss was. Seems to be CLA can be an important component of weight-loss program,along with calorie restriction,and this issue requires further clinical trial.
Keywords: conjugated linoleic acid,diet,weight loss

Protective role of Ellagic acid as an antioxidant on gentamicin-induced oxidative stress,apoptosis and nephrotoxicity in rats

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Background: Gentamicin (GEN)-induced renal toxicity is a well-documented event which limited its therapeutic usefulness. Although exact nephrotoxic mechanisms of GEN are not well clarified,but oxidative stress is assumed to be involved in its toxicity. Ellagic acid (EA) is a polyphenol found in many species of plants such as fruits and vegetables like raspberries,strawberries,walnuts,grapes,a nd black currants. The present study was designed to investigate the protective effect of EA against GEN-induced kidney injury.
Methods: Rats (n=6) were divided into 4 groups: control (isotonic saline plus corn oil),GEN (100 mg/kg,i.p.),EA (10 mg/kg,p.o.) and GEN plus EA. The regimes were administered for 10 successive days. 24 hours after last treatment,kidney and blood samples were collected for measurement of oxidative and histopathological parameters.
Results: Plasma creatinine and urea levels,which were initially increased due to GEN administration,were reduced by EA treatment. GEN administration led to an increase in kidney thiobarbituric acid reactive substances (TBARS). The activity of antioxidant enzymes,including catalase (CAT) and superoxide dismutase (SOD),as well as glutathione (GSH) were significantly decreased due to GEN treatment. A significant recovery was observed in oxidative parameters following co-administration of EA and GEN. Flow cytometry analysis of kidney cells revealed that GEN treatment exhibited early apoptotic (29%) and late apoptotic and/or necrotic (16%,P<0.001). Co-administration of EA with GEN led to a significant decrease in apoptotic cell populations. The kidney section from GEN-treated rats displayed tubular necrosis,while EA along with GEN administration showed apparently normal morphology with moderate tubular degeneration.
Conclusion: Our findings suggest that EA treatment attenuates GEN-induced nephrotoxicity,which may be ascribed to its antioxidant and anti-apoptotic. Taken together,these results suggest the potential of ellagic acid as a candidate for the treatment of GEN-associated renal toxicity.
Keywords: Gentamicin,Ellagic acid,Antioxidants,Oxidative stress, Apoptosis

Association of Junk Food Consumption with Mental Health in a National Sample of Iranian Children and Adolescents: the CASPIAN-IV Study

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Background: The consumption of high energy and low nutritional content foods which are known as junk foods has been increased. The aim of this study is to evaluate the association of junk food intake with mental health in a national sample of Iranian children and adolescents.
Method: Data were obtained from a surveillance system entitled CASPIAN-IV study in school students aged 6-18 years in Iran. The students and their parents completed two sets of reliable questionnaires obtained from Global School Health Survey (GSHS) translated to Persian. The student questionnaire comprised of several questions such as psychiatric distress (worry,depression,confusion ,insomnia,anxiety,aggression and worthless) and violent behaviors (physical fight,victim and bully). The junk foods consisted of sweets,sweetened beverages,fast foods and salty snacks.
Results: In the sample of 13486 children and adolescents,the frequency of junk food consumption was significantly associated with psychiatric distress (P0.05). In addition,the results of logistic regression showed that daily consumption of sweetened beverages and snacks significantly increased the odds of self-reported psychiatric distress. In addition,daily consumption of salty snacks was significantly associated with violent behavior

including physical fight (OR 1.39,95% CI 1.21-1.60),victim (OR 1.19,95% CI 1.04-1.37) and bully (OR 1.55,95% CI 1.32-1.82).
Conclusion: junk food consumption may increase the risk of psychiatric distress and violent behaviors in children and adolescents. Improvement of eating habits towards healthier diets may be an effective approach for improving mental health.
Keywords: Junk food,psychiatric distress,violent behaviors

Is there any association between healthy food intake and mental health among Iranian children and adolescents? the CASPIAN-IV study

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Background: Healthy dietary habits are known as a key factor for improving brain functions and cognitive ability in children and adolescents. The goal of this study was to evaluate the association of healthy food consumption with mental health in Iranian children and adolescents.
Materials &Methods: Data were obtained from the fourth national school-based surveillance survey entitled CASPIAN-IV study. In this study, 14880 children and adolescents aged 6-18 years were selected by multistage, cluster sampling method from rural and urban areas. The students and their parents completed two sets of questionnaires. The psychiatric distress included depression, worry, insomnia, anxiety, aggression, confusion, and worthless and the violent behaviors comprised of physical fight, victim and bully. The healthy foods included fresh fruits, dried fruits, vegetables and dairy products.
Results: The participants include 13486 students from elementary, intermediate and high school degree. The prevalence of psychiatric distress was significantly higher among high school students, while violent behaviors were more prevalent in the middle school students. According to the multivariate model (model IV), the risk of psychiatric distress was significanty lower in students with daily consumption of fresh fruits, vegetables and milk. In addition, those with daily consumption of vegetables and milk had significantly lower risk for violent behaviors.
Conclusion: Consumption of healthy foods may reduce the risk of psychiatric distress and violent behaviors. Therefore, in addition to its benefits, increasing healthy food consumption among children and adolescents can be useful in preventing mental health disorders.
Keywords: Healthy food, psychiatric distress, violent behaviors

Association between serum levels of homocysteine with characteristics of migraine attacks in migraine with aura

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Background: Migraine is a debilitating, progressive and chronic neurovascular disorder that affects approximately 6% of males and 18% of females worldwide. Evidences have shown thatmigraine with aura (MA) is associated with elevated homocysteine levels but, few studies have evaluated the relationship between homocysteine levels and characteristics of migraine attacks such as severity, frequency, duration and Headache Diary Result (HDR). Thus, in this study, we investigated the association between homocysteine levels and characteristics of migraine attacks in patients with MA.
Methods: Fasting serum levels of homocysteine were measured in 120 MA patients (29 males and 91 females) aged 15-65 years. Severity, frequency and duration of migraine attacks as well as HDR were determined in each patient according to international headache society (IHS) criteria by a neurologist. Linear and ordinal logistic regression was used to evaluate the relationship between serum homocysteine levels and characteristics of migraine attacks.
Results: There is no significant association between serum levels of homocysteine with severity, frequency, duration and HDR. This association was not significant after adjustment of confounding variables such as age, BMI and family history of migraine. In addition, sex-stratified analysis revealed no significant relationship between serum homocysteine levels and characteristics of migraine attacks either in crude and adjusted models. However, serum homocysteine levels was significantly associated with HDR among males after adjustment for age, BMI and family history of migraine (P-value = 0.01).
Conclusion: Significant relationship between homocysteinelevels and characteristics of migraine attacks such as severity, frequency, duration and HDR were not found. However, after adjustment of confounding variables, we found a significant positive relationship between homocysteine levels and HDR among men.This is the first study to examine the association between serum homocysteine levels and characteristics of migraine attacks including duration and HDR in patients with MA.
Keywords: Duration,frequency,homocysteine, migraine, severity

The association between abdominal and general obesity with characteristics of migraine attacks in Iranian adults

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Background: Migraine is a highly prevalent disorder worldwide. It affects 10-20% of the population during their lifetime. Recent studies have indicated a significant association between obesity status and migraine incidence. This study was undertaken to assess the relationship between obesity (abdominal and general) and characteristics of migraine attacks in Iranian adults.
Methods: This cross-sectional study was performed on 120 migraine patients, aged 15-65 years. We evaluated anthropometric parameters such as weight, height, body mass index (BMI), body fat mass, waist circumference

(WC) and waist-hip ratio (WHR) in each patient. Migraine disease as well as characteristics of migraine attacks such as severity, frequency, duration and headache diary result (HDR) was determined by neurologist according to international headache society (IHS) criteria. Linear regression in crude and adjusted models was used to examine the association between anthropometric measurements and characteristics of migraine attacks.
Results: Obesity and overweight were prevalent in 16.3% and 34.9% of study population, respectively. There was a significant positive association between BMI and body fat mass with severity ($P < 0.01$) and frequency ($P < 0.01$) of migraine attacks as well as HDR ($P < 0.001$) either in crude and adjusted models. Moreover, this relationship was significant in sex-stratified analysis. There was no significant association between BMI and body fat with duration of migraine attacks in total population and in both genders, separately. Waist circumference and WHR were positively associated with severity and frequency of migraine attacks as well as HDR ($P< 0.05$). In addition, this relationship remained significant in adjusted models and sex-stratified analysis. No significant association was found between abdominal obesity and duration of migraine attacks.
Conclusion: Abdominal and general obesity were associated with increased severity and frequency of migraine attacks in addition to HDR, but not with attacks duration. Further studies are needed to confirm our findings.
Keywords: Migraine, obesity, severity, frequency, duration

Nutrient patterns and their relation to general and abdominal obesity

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Background: Few studies have linked major dietary nutrient patterns to chronic diseases. Despite the growing evidence on the association between dietary patterns and obesity, we are aware of no study that examined the association between patterns of nutrient intake and obesity.Objective: To identify major nutrient patterns in Iranian adults and investigate their association with general and abdominal obesity.
Methods: In this cross-sectional study, dietary data were collected using a validated dish-based 106-item semi-quantitative food frequency questionnaire in 8691 subjects aged 18-55 years. Complete data of 6724 and 5203 adults were available for general and abdominal obesity, respectively.Data on anthropometric measures were collected through a self-administered questionnaire. General obesity was defined as body mass index≥30 kg/m^2 and abdominal obesity was defined as waist circumference >102 for men and >88 cm for women. Daily intakes of 38 nutrients and bioactive compounds for each participant were calculated. Principal component analysis was applied to derive major nutrient patterns.
Results: Three major nutrient patterns were identified: 1) pattern 1 was high in fatty acids (including saturated, mono and poly-unsaturated fatty acids) , cholesterol, vitamin B_{12}, vitamin E, zinc, choline, protein, pyridoxine, phosphorus, and pantothenic acid. ; 2) pattern 2 was high in thiamine, betaine, starch, folate, iron, selenium, niacin, calcium, and manganese, and 3) pattern 3 was high in glucose, fructose, sucrose, vitamin C, potassium, total dietary fiber, selenium and vitamin K. Men in the highest quintile of pattern 2 were less likely to be generally obese in the fully adjusted model (Odds ratio (OR): 0.39, 95% confidence interval (CI): 0.20-0.76). After adjustment for potential confounders, a significant positive association was observed between pattern 3 and general obesity among men (OR:1.77; 95%CI: 1.04-3.04), but not in women (OR: 1.18; 95% CI: 0.74-1.88). No overall association was seen between patterns of nutrient intake and abdominal obesity in either gender.
Conclusion: Major nutrient patterns were significantly associated with general, but not abdominal obesity in the Iranian population. Further studies in other populations along with future prospective studies are required to confirm these findings.
Keywords: Anthropometry, obesity, diet, nutrient, factor analysis, fat accumulation

Caesarean delivery is associated with childhood general obesity but not abdominal obesity in Iranian elementary school children

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Background: This study examined the association between caesarean delivery and general and abdominal obesity among children.
Methods: In a cross-sectional study,635 children aged from six to 12 years-of-age (476 girls and 159 boys)were randomly selected from Isfahan elementary schools. Weight, height and waist circumference were measured. General and abdominal obesity were based on World Health Organization growth charts and Iranian national cut-off points, respectively. Parents were asked about delivery type and other factors potentially related to childhood obesity using a self-administered questionnaire. The association between delivery type and obesity was examined using univariate and multivariate logistic regression models.
Results: The overall prevalence of general and central obesity was 17.6% and 17.1%, respectively, and caesarean delivery was significantly associated with general obesity after controlling for potential confounders (OR: 2.46; 95%CI: 1.30-4.63, P=0.005). We observed a significant association between caesarean delivery and abdominal obesity in crude analyses (OR: 1.66; 1.02-2.69, P=0.04), but this disappeared after adjusting for covariates (OR: 1.96; 0.82-4.69, P=0.13).
Conclusion: Our results suggest that caesarean delivery is adversely associated with general childhood obesity, but not abdominal obesity. This provides support for recommending vaginal births, unless contra-indicated. Further research in large populations is required to confirm these findings.
Keywords: Caesarean delivery, obesity, abdominal obesity, anthropometry

Association between red meat consumption and

stroke risk: A Case-Control Study

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Background: Epidemiologic data on the relationship between red meat consumption and stroke are sparse and inconsistent. Data in this regard are lacking from the Middle-East.We aimed to examine the association between red meat consumption and stroke in a group of Iranian adults.
Methods: This hospital-based case-control study included 195 stroke patients and 195 hospital-based controls. Cases were stroke patients hospitalized in neurology ward of Alzahra University Hospital and control subjects were recruited from patients hospitalized in other wards with no history of cerebrovascular diseases or neurologic disorders. Usual dietary intakes of participants were assessed by means of a validated 168-item semi-quantitative food frequency questionnaire. Total red meat consumption was calculated by summing up the consumption of red, processed and visceral meats.
Results: Participants with stroke were older, more likely to be male and less likely to be obese. Individuals in the highest tertile of red meat intake, were 119% more likely to have stroke (OR: 2.19; 95% CI: 1.33, 3.60) compared with those in the lowest tertile. After controlling for age, sex and total energy intake, the association between red meat consumption and stroke was strengthened (OR: 2.72; 95% CI: 1.53, 4.83). This association remained significant even after further controlling for physical activity and smoking as well as dietary intakes. Additional adjustments for BMI did not influence the association significantly (OR: 2.96; 95% CI: 1.30, 5.60).
Conclusion: Consumption of red meat was associated with greater odds of having stroke in a group of Iranian population.
Keywrods: Red meat, stroke, diet, Iran

Effectiveness oftrainingprogramsonnutritional statusduring pregnancy:Comparison of Focus groups and multi-media package

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Background: The most dangerous period of life of pregnant women and the nutritional health of the mother and the fetus will be affected. This study aimed to Comparative Effectiveness of nutrition education using multimedia& Focus groups On nutritional status and learning Pregnant Women.
Methods: This study, which is controlled on 174 pregnant women who were recruited from health centers in Mashhad and GONABAD done. Nutrition education program for Focus groups discussion and multi-media package with Autoplay Media Studio v8.2 software video frame, slides, audio, text, image editing, and how to implement the intervention. Before the test, the subjects were food-frequency questionnaire. Finally, a month after the intervention, post-test questionnaires were completed. Data collected using the software after Dietplan6 - and spss20 analytic sided statistical tests, t tests, and the level of p <0.05 was analyzed.
Results: Variables vitamin E (P = 0/006), pantothenic acid (P = 0/03), protein (P = 0/03) , carbohydrate (P = 0/03), folate (P = 0/02) and potassium (P = 0/04) among pregnant women after the intervention were statistically significant.
Conclusion: In the group discussion scores nutrition variables was more of a multimedia package.The two methods of Focus group, multimedia slide significantly improve the nutritional status of pregnant women were compared to pre-intervention compared to the control group. Comparison of two methods of teaching, group discussion was effective multi-media packages. Further research in this area seems necessary.
Keywords: effectiveness, multi-media packages, group discussion, nutritional status

Assessing the Serum Levels of Ferritin and Selenium in three Important Infections of Childhood, compared to a control group

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Background: Iron and selenium fluctuates widely among nations and play an essential role in occurrence and prevention of various diseases, such as cancers, hepatitis, cretinism, thyroid dysfunction, and sleep disorders. Infections, on the other hand, cause great mortality and morbidity in children and no studies have evaluated this matter.
Methods: Patients aged 2-15, hospitalized from autumn 2010 to autumn 2011 in infectious ward of Rasoul-e-Akram hospital were recruited to the study. Patients with documented diagnosis of RTI, GI infection, or UTI were three categories of case groups, who were compared to one control group, including patients hospitalized in the same hospital in surgery ward, in whom the diagnosis of the three aforementioned infections were ruled out. Blood samples were gathered from all patients and ferritin and selenium level were measured in serum specimens. Diagnosis of the three infections was made by a unique infectious specialist.
Results: The four groups were similar at age (P-value=0.09) and gender.(P-value=0.09) The mean and standard deviation of serum selenium concentration of GI, RTI, UTI and control groups were 64.70±21.43 µg/l, 61.60±19.25 µg/l, 66.37±22.11 µg/l and 62.20±22.08 µg/l, respectively without significant differences in serum selenium levels between these groups (P-value =0.608). The median of serum ferritin levels in GI, RTI, UTI and control groups were 60.05(48.82-78.01), 62.00(49.07-79.35), 60.60(51.78-79.52) and 58.75 (45.32-76.72), respectively. The difference in ferritin levels between these groups was statistically significant (P-value <0.001). Compared with the control, the RTI and GI groups had significantly higher levels (P<0.001); however, the UTI group was not statistically different from the control (P=0.098). None of the children had ferritin constrictions below 12.
Conclusion: As far as selenium and ferritin deficiency is an important issue in developing countries, it would be

valuable to assess the role of micronutrients in infectious diseases, as we may be able to prevent such fatal infections by micronutrient supplementations.
Keywords: Ferritin, Selenium, Infections, Childhood

Determination of SULT activity level after exposure to aqueous solution of the breads and HMF in different doses using Caco-2 and Hep-G2 cell lines
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Background: Hydroxymethylfurfural (HMF) is produced in large quantities by acid-catalyzed or Millard reaction during the processing of carbohydrate containing foods. It can be metabolized to sulfooxymethylfurfural (SMF) by sulfotransferase (SULT), a reactive intermediate of HMF. According to scientific evidence, these compounds cause mutagenic effects. The aim of this study was to determine SULT activity level after exposure to aqueous solution of the breads and HMF in different doses using Caco-2 and Hep-G2 cell lines .
Methods: Two cell lines, Caco-2 and Hep-G2 were cultured under standard conditions and the cytosolic fractions were prepared from each cell line in several stages and by frequent freeze- defreezation. The activity of SULT was determined in presence of 3- Phosphoadenosine-5-phosphosulfate after exposure to aqueous solution of the breads and HMF in different doses (0, 25, 50 and 100 mmol). HMF content of the samples was measured by HPLC at 0 and 60 minutes of reaction after incubation in 37 ˚C and a reduction in HMF content (enzyme substrate) was considered as indicator of enzyme activity.
Results: Neither aqueous solution of the breads nor HMF in different doses caused a significant reduction in HMF levels in Caco-2 cell line during 60 minutes incubation ($p > 0.05$). However, there was a statistically significant reduction in HMF content of samples in Hep-G2 cell line ($p < 0.05$).
Conclusion: It is speculated that aqueous solution of the tested breads and absolute HMF induces enzyme activity more remarkable in Hep-G2 cells as compared to Caco-2 cells which may be attributed to hepatic originate of the cells. Therefore, it seems that production of more SMF in hepatocytes may induce more adverse effects in this organ. Future studies will help to clarify this hypothesis
Keyword: Caco-2, Hep-G2,Hydroxymethylfurfural, sulfotransferase

Serum leptin levels correlate with obesity parameters but not with glucose metabolism markers in overweight or obese women with polycystic ovary syndrome
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Background: Serum leptin level is usually increased in obese PCOS women. Although BMI has been clearly demonstrated to be an important determinant of serum leptin concentration,other factors have also been implicated. In the present study,we aimed to investigate the relationship of serum leptin level with glucose metabolism markers and obesity parameters in overweight or obese PCOS women.
Methods: This cross-sectional study was conducted among 54 overweight or obese women with PCOS in Tabriz,Iran,from January 2011 to August 2012. Blood samples were collected to measure serum leptin level and metabolic parameters [inc. fasting blood sugar (FBS),blood sugar after 2 hours (BS2h),fasting insulin concentrations] and hormonal parameters [inc. testosterone (T) and free T]. Also,oral glucose tolerance test (OGTT) was done and homeostasis model assessment of insulin resistance (HOMA-IR) and quantitative insulin check index (QUICKI),and body mass index (BMI) were calculated. Pearson and partial correlation tests were performed to determine the relationships between serum leptin levels and independent variables.
Results: Results: Serum leptin concentrations were significantly correlated with BMI ($r = 0.52, p = 0.001$),body fat percent ($r = 0.53, p < 0.001$) waist to height ratio ($r = 0.43, p = 0.007$),as well as with HOMA-IR ($r = 0.31, p = 0.040$),glucose to insulin ratio ($r = -0.40, p = 0.011$),and QUICKI ($r = -0.37, p = 0.022$). However,after controlling for BMI through partial correlation analysis,no significant correlation was found between serum leptin levels and HOMA-IR or other glucose metabolism markers. Moreover,no correlation was observed between serum leptin level and serum free or total testosterone. Discussion and
Conclusion: While serum leptin concentrations had a significant correlation with obesity parameters,it showed no significant correlation with glucose metabolism markers. Therefore,serum leptin concentration in PCOS women seems to be primarily correlated with obesity parameters than glucose metabolism markers.
keywords: body mass index**,** leptin**,** polycystic ovary syndrome,resistance

Investigation of the effect of nutrition education on the fluctuation of liver enzymes in patients with liver ultrasound result in non alcoholic fatty liver in clinic jahad daneshgahi khouzestan
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Background: non-alcoholic fatty liver (NAFLD), the most common cause of liver disease worldwide , especially triglyceride fat accumulation in liver cells. The increase Mild to moderate hepatic Transfraz•amino alanine aminotransferase (ALT) , aspartate aminotransferase (AST) sign of laboratory diagnosis of NAFLD can be used to assess the degree of hepatic echogenicity as an indicator in determining the levels of ALT and AST is strongly related fatty liver. .This study aimed to investigate the effect of nutrition education on the fluctuation of liver enzymes in patients with liver ultrasound result in non alcoholic fatty liver in clinic jahad daneshgahi khouzestan.
Methods: The study included 30 patients with NAFLD referred to Jahad Khuzestan in 1390 confirmed by ultrasonography was performed by a specialist . All subjects provided blood samples by enzyme alanine aminotransferase , aspartate aminotransferase , alkaline phosphatase were measured. Height and weight were measured. The patients received 6 sessions of 20 minutes of nutrition education . The data obtained were analyzed using descriptive statistical tests .
Results: The findings of this study , the mean liver enzyme alanine aminotransferase , aspartate aminotransferase , alkaline phosphatase before and after nutrition education ranged from 63/8 ± 59/21 to 32/9 ± 12/96 and 43/47 ± 32/05 to 25/9 ± 9/19 and 219/6 ± 74/34 to

204/43 ± 66/02 significantly decreased (P = 0.004). Grading of hepatic echogenicity was determined as follows: Zero degrees (normal), Grade I (mild steatosis), Grade II (moderate steatosis), Grade III(sever steatosis). The degree of hepatic echogenicity before and after education Respectively the 3/3 to 40% and the 40 to 53/3 %, 50 to 6/7% and the 6/7 to 0% changed. **Conclusion**: The results showed that nutrition education can improve Echogenicity of liver enzymes in patients with NAFLD

Keywords: Alanin, Amino Transferaze, Fatty liver, sonography

Effect of L-carnitine supplementation on oxidative stress parameters in patients with hyperlipidemia

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Background: Oxidative stress is one of the main causes of atherosclerosis in hyperlipidemic patients. This study aimed to determine the effect of L-carnitine supplementation on selected parameters of oxidative stress in patients with hyperlipidemia.

Methods: This double blind randomized clinical trial study was performed on 50 hyperlipidemic patients attending the cardiology clinic of baqiyatallah hospital in Tehran in 1393. Study subjects were randomly divided into two equal groups (n=12). Both groups during 8 weeks of study, consumed 2 g L-carnitine and 2 g placebo(maltodextrin), respectively. Anthropometric measurements, dietary intakes and blood biochemical parameters included Total Antioxidant Capacity(TAC), glutathione and malondialdehyde(MDA) were measured at the beginning and end of the study. Paired t-test and t-test was used for quantitative data.

Results: The mean serum total antioxidant capacity between L-carnitine and placebo groups at the end of the study showed no significant difference (p=0.42).The mean deference of this parameter at the beginning and the end of the study in l-carnitine group was significantly higher than placebo group (p=0.04). At the end of the study, mean serum glutathione between L-carnitine and placebo groups showed significant difference (p=0.01). Also in the L-carnitine group at the end of the study compared with baseline, serum glutathione concentration was significantly increased (p=0.001). At the end of study, the mean serum levels of malondialdehyde between the two groups showed no significant difference. Also at the end of the study both L-carnitine (P=0.40) and placebo (P=0.14) groups had no significant differences in mean serum malondialdehyde concentrations compared to baseline.

Conclusion: This study showed that eight weeks of daily consumption of 2 grams of L-carnitine supplement in patients with hyperlipidemia caused a significant increase in serum glutathione and improve the total antioxidant capacity status. The results of this study indicate that L-carnitine has an antioxidant property.

Keywords: Oxidative Stress, L-carnitine, Hyperlipidemia

Association between metabolic syndrome and BMIin nurses in Ahvaz Khuzestan Iran

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Background: Metabolic syndrome is a complex disorder defined by a cluster of interconnected factors that increase the risk of cardiovascular atherosclerotic diseases and diabetes mellitus type 2.Metabolic syndrome is becoming more common in the world and in Iran as well. Researchers are not sure whether the syndrome is due to one single cause, or all of the syndrome's risk factors are related to obesity. This research determined an association between metabolic syndrome and BMI in nurses in Ahvaz, Iran.

Method: This is a cross-sectional study; the present study was carried out in the industrial oil city of Ahvaz, State of Khuzestan, Iran. For this study, the participants included 417 Iranian male and female nurses, aged between 23 and 65 years, non-pregnant (for women), and with at least 1 year's work experience. In total 450 nurses signed the consent form for participation in the project and agreed to complete the study questionnaires. A blood test was conducted for all nurses and their anthropometry measurements were recorded.

Results: The mean age of the respondents was 35.06 ± 7.78 years. More than half or 245 (58.8%) were married, 162 (38.8%) were single, and only 10 (2.4%) were widowers or divorcees. Based on the ATPIII definition, the overall prevalence of metabolic syndrome among the nurses aged 23-60 years working in Ahvaz hospitals was 10.8Thebodymass indexwassignificantlyrelatedtometabolicsyndromewith(χ2=6.928,p=0.008). Only 7.4%ofthenurseswithmetabolicsyndromewereoverweight(BMI≥25 kg/m2), while42.9%withoutmetabolicsyndromewereoverweight.

Conclusions: The prevalenceofmetabolicsyndromeinpopulation,prevention,early identificationand treatmentof thissyndrome representa majorchallenge for physiciansandpublic health systems facinganepidemic ofoverweight and sedentarylifestyle.

Keyword: Prevalence, Metabolic Syndrome, Nurses, Ahvaz, Iran

Evaluation of DNA Damage in Caco-2 and Hep-G2 Cell Lines Following Exposure to Hydroxymethylfurfural in Different Doses

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Background: DNA and human cells are subjected to oxidative stress (endogenous or exogenous) consistently. Hydroxymethylfurfural (HMF), formed in carbohydrate-rich foods during heating process, is capable of converting to sulfoxymethylfurfural (SMF) which in turn induces DNA damage and subsequent mutagenic effects. The aim of this study was to evaluate DNA damage in Caco-2 and Hep-G_2 cell lines after exposure to HMF in different doses.

Methods: In order to evaluate DNA damage, two cell lines including Caco-2 and Hep-G_2 were cultured under standard conditions. After passage of cells in several times and obtain a suitable morphology, the experiments were performed. All cells were therefore exposed to the following concentrations of HMF: 0, 25, 50, and 100 mM. Treated cells with HMF were incubated for some hours in 37°C. Eight-hydroxydeoxyguanosine (8-OHdG) level was

determined using ELISA and considered as DNA damage indicator in both of the cell lines.
Results: Mean (SD) concentration of 8-OHdG was significantly different between the HMF various doses in both of the cell lines ($p<0.05$). As though, HMF 100mM caused the highest DNA damage, 47.29 (0.75) and 47.95 (0.12) ng/L in Caco-2 and Hep-G_2 cell lines, respectively. Moreover, the mean concentration of 8-OHdG was significantly higher in Hep-G_2 Cell line ($p<0.05$).
Conclusion: It is concluded that 100 mM HMF causes the highest DNA damage. Considering the conflicting results about the mutagenic and carcinogenic effects of HMF and on the other hand the high level of this compound in carbohydrate rich processed foods, it seems necessary to conduct further studies to determine the exact threshold of concern and the amount of adverse effect induced by HMF.
Keywords: DNA damage, Hydroxymethylfurfural, Hep-G2, Caco-2, hydroxydeoxyguanosine

Evaluation of DNA damage in Caco-2 and Hep-G2 cell lines following exposure to aqueous solution of breads

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Background: Hydroxymethylfurfural (HMF) is formed as an intermediate in the Maillard reaction. In recent years, the presence of HMF in the carbohydrate rich foods has raised toxicological concerns. According to literature, HMF or its bioactive metabolite, sulfoxymethylfurfural (SMF), induces DNA damage and subsequent mutagenic, genotoxic and carcinogenic effects. We have previously shown that HMF content of traditional Iranian flat breads is high. Regarding that bread is one of the main energy sources in our country, we aimed to evaluate DNA damage in Caco-2 and Hep-G2 cell lines following exposure to aqueous solution of bread**.**
Methods: in present experimental study, 5 loaves from each type of traditional Iranian flat bread including Lavash, Taftoon, Sangak and Barbari were selected with simple sampling. Aqueous solution of breads was prepared in several stages to extract HMF content of samples. In order to evaluate the DNA damage caused by HMF of breads, two cell lines including Caco-2 and Hep-G2 were cultured under standard conditions and treated with aqueous solution of breads. Eight -hydroxydeoxyguanosine (8-OHdG) level was determined using ELISA method and considered as DNA damage indicator in both of the cell lines after incubation for some hours in 37°C.
Results: Mean (SD) concentration of 8-OHdG was significantly different between the tested breads in both of the cell lines ($p<0.05$). Barbari caused the highest DNA damage in both of the cell lines, 45.34 (0.35) and 46.02 (0.20) ng/l in Caco-2 and Hep-G2, respectively. Moreover, the mean concentration of 8-OHdG was significantly higher in Hep-G_2 Cell line ($p<0.05$).
Conclusion: It is concluded that despite lower concentration of HMF in Barbari compared to Sangak, induced more DNA damage which is interpreted that factors other than HMF might be responsible. Higher concentration of HMF in Hep-G2 cell line might be attributed to hepatic originate of the cells which are responsible to detoxification of different chemicals and drugs by functioning of cytochrome P-450 enzyme system, glutathione and sulfotransferase.
Keywords: DNA damage, Traditional breads, in Caco-2, Hep-G2, hydroxydeoxyguanosine

Evaluation of Correlation between Nutritional Status and Menarche Age in Student Girls in Schools of Hamedan

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Background: Puberty is anabolic period with increase in height, weight and change in amount and distribution type of fat and body composition with increase in muscle mass. Therefore, regarding the significance of the issue, this research was carried on 1541 student girl in Hamedan, for the purpose of studying the mean menarche age and relationship between anthropometric indices with the nutritional status in Hamedan school girls.
Methods: 1541 student girl from 45 schools in Hamedan were the participants of this perspective descriptive study. For statistical analysis, Spss.11.5 software was used. For determination of correlation between quantitative properties, the correlation test of Pierson was used
Results: The mean age of menarche was 12.8 years .The anthropometric indices such as weight, height, body mass index, body fat were calculated. The mean of anthropometric indices was respectively weight (43.38 kg), height (149.26cm). BMI (19.33kg/m2) and the ratio of wrist circumference to hip circumference (0.834). There was significance correlation between onset time of menarche with weight ($p<0.01$). There was significance correlation between onset time of menarche with height ($p<0.01$). There was significance correlation between onset time of menarche with BMI ($p<0.05$). There was significance correlation between the mean age of menarche and nutritional status and mean age of menarche decrease with improvement of nutritional status. There was weakness correlation between onset time of menarche with percent of body fat but was not significance ($p>0.01$).
Conclusion: The nutritional status was one of the effective factors on onset time of menarche. Therefore in present study with improvement in nutritional status, mean age of menarche was decreased

Assessment of Attitude and Practice of Household Women toward Safe Keeping Method Cooking Oils in Deylam Town

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Background: safe keeping method of cooking oils is an important factor of healthy life style and incidence of cardiovascular disease. Light and heat are important factors of sedition and chemical destruction cooking oils. Therefore the goal of this study is to assess attitude and practice of household women toward safe keeping method cooking oils in Deylam town.
Methods: this analytic, cross-sectional study was conducted among 400 household women who are cookery manager at home, selected through stratified systematic sampling. The data were analyzed by SPSS16 software.
Results: findings show 92.5% of women had incorrect at-

titude toward safe keeping method cooking oils. In practice section, 57.5% of women keep cooking oil near stove in kitchen space and only 20.5% keep oil bottle in cabinet or dark closet.

Conclusion: according to the findings of this study, providing more nutritional education through sanitation system to improve nutritional knowledge, attitude and practice among household women is suggested.

Keywords: attitude, practice, safe keeping, cooking oil, heat

Prevalence of Exclusive Breastfeeding and Reasons of its Discontinuation in Zero to Six Months of age Infants at Samen-Ol-A'emme Health Care Centers of Kermanshah District In 2014

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Background: Exclusive breastfeeding in infants fed breast milk alone, without eating other foods (not include drugs, vaccines, vitamins, dietary supplements). Breastfeeding until 6 months of age is able to meet the physical and mental needs for babies. This study aimed to assess the prevalence of exclusive breast feeding and reasons of its discontinuation in zero to six months of age infants at Samen-ol-amme health care centers of Kermanshah district in 1393.

Methods: A cross-sectional study in 202 infants between zero and six months of age at Samen-ol-amme health care centers of Kermanshah district. Data using questionnaires (accredited by the Ministry of Health and Medical Education) was collected and analyzed by 16 SPSS software.

Results: The results showed that among 202 infants under review, only 32% have been fed exclusively with breast milk. Among these patients number of boys (46 cases, 70.8%) were double more than the female infants (19 cases, 29.2 percent). The mothers of these infants were mostly of high school education (30 cases, 62.2%) and the 26-30 years of age (33 cases, 50.8%). As more than 85% (n = 56) of the mothers were housewives. The statistically was significant between exclusive breastfeeding with mother's education and sex, with a probability of 0.003 and 0.037, respectively (at a significant level 0.05). From the looks of maternal age increases the prevalence of exclusive breastfeeding. The main reasons for discontinuation of exclusive breastfeeding and the use of food aid was advice of a doctor.

Conclusion: Breast milk is the preferred feeding exclusively compare with others milk and breast best food for infants up to six months is recommended. Given that breastfeeding has many benefits for both mothers and their infants physically and emotionally, so the identification of factors affecting breastfeeding improvement, its increasing and physicians' definitive education are proposed.

Keywords: exclusive breastfeeding, Kermanshah, discontinuation breastfeeding

The Assessment of the Knowledge, Attitude and Practice of Healthcare Workers of Falavarjanin Safe and Proper Cooking Methods and Food Consumption In 1393

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Background: Understanding the proper eating behavior and its impact on human health, is an important step to improve dietary pattern and having an adequate, balanced and diverse diet.The purpose of this study was to determine the knowledge, attitude and practice of health care workers in safeand proper methods of cooking and consumption of food.

Methods: This cross-sectional study was performed on Family Health and Midwifery staff working in health centers in the city of Falavarjan. Data on the subject was collected by means of the pilot questionnaire included demographic information, knowledge, attitude and practice by self-assessment method and were analyzed with software spss16.

Results: The study population was 19.7% male and 89.3% female. The mean age was 35 ± 6.3 years, the years of education15±2 years and occupation of all the employees was non-managerial. 17% believed that proper food is the one that complies with the requirements of the body and its contamination is not important. 90% believed that the first step in food hygiene is food safety and having high-quality food is the next stage.77% of participants did not believe in the influence of nutritional value of the food on the cooking method of steaming. 96.7% believed that frying food in a long time is a bad habit, and 95% believed that the healthiest cooking method cooking methods is steaming. However, 49% of participants knew that steamed vegetables for cooking in addition to meat and poultry is also a good way. 78.8% were aware of the improperness of the barbecue on charcoal for cooking, not a suitable method. And 52.5% before grilling meat, it's time to put the sauce has reduced temperatures during grilling. 62% were prepared by indirect heat grilling, and 42.6% of lean meats for grilling used and arranged amidst the tail. 65.6% of employees surveyed, plasma from the exit of frozen meat poured out. 95% of staff, time to buy milk fat percentage were considered. 95% of people, when they buy milk considering to its fat content, and 13% were aware of the harmful effects of high-fat dairy products, but it ate. 64.4% were aware of boiled milk in the refrigerator storage time.

Conclusions: Prediction of the performance-oriented training programs in modifying attitudes and practices of healthcare workers to provide, maintain and improve their health is essential.

Keywords: Food safety, Cooking, Health workers, Falavarjan

Adherence to a DASH-Style Diet in Relation to Stroke: a Case-Control Study

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Background: Despite the growing body of evidence from western societies on the association of dietary patterns and stroke, limited data are available in this regard from developing countries. This study was conducted to examine the association between adherence to the Dietary Approaches to Stop Hypertension (DASH) diet and risk of stroke among Iranian population.
Methods: This hospital-based case-control study, included 195 stroke patients and 195 controls, was conducted in Alzahra University Hospital, Isfahan, Iran. Cases were stroke patients that were hospitalized in neurology ward of Alzahra University Hospital. Controls were randomly selected among hospitalized patients in orthopedic or surgical wards of this center. A validated FFQ was used to assess the usual dietary intakes. We constructed the DASH diet score based on food and nutrients emphasized or minimized in the DASH diet.
Results: The prevalence of stroke among those in the top quartile of DASH diet score was 40%, which was 15% lower than that in bottom quartile; this difference was marginally significant (P= 0.10). After controlling for age, sex and total energy intake, adherence to the DASH diet was inversely associated with the risk of stroke (OR: 0.52; 95% CI: 0.28; 0.98). These associations remained significant even after additional controlling for physical activity and smoking; such that individuals in the highest quartile of the DASH diet score had 58% lower risk of stroke than those in the lowest category (OR: 0.42; 95% CI: 0.22, 0.81). However, after further adjustment for BMI, this association became marginally significant (OR: 0.54; 95% CI: 0.27, 1.08) indicating an obesity-dependent association.
Conclusion: We found an inverse relationship between the DASH style diet and prevalence of stroke. Prospective studies are needed to confirm this association.
Keywords: DASH diet, stroke, case-control study

Influence of Dietary Approaches to Stop Hypertension (DASH) Diet on Blood Pressure: A Systematic Review and Meta-Analysis on Randomized Controlled Trials

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Background: Findings were not consistent on the therapeutic effect of Dietary Approaches to Stop Hypertension (DASH) diet on blood pressure. We aimed to systematically review and perform a meta-analysis to assess the magnitude of the effect of the DASH diet on blood pressure in randomized controlled trials (RCTs) among adults.
Methods: We conducted a systematic review and random effects meta-analysis of all RCTs which evaluated the effect of the DASH diet on blood pressure including published papers until June 2013, using PubMed, ISI Web of Science, Scopus and Google scholar database. Subgroup analysis and meta-regression were used to find out possible sources of between-study heterogeneity.
Results: Seventeen RCTs contributing 20 comparisons with 2561 participants were included. Meta-analysis showed that the DASH diet significantly reduced systolic blood pressure by 6.74 mm Hg (95%CI: -8.25,-5.23, I^2 = 78.1%) and diastolic blood pressure by 3.54 mm Hg (95%CI: -4.29,-2.79, I^2 = 56.7%). RCTs with the energy restriction and those with hypertensive subjects showed a significantly greater decrease in blood pressure.
Conclusion: Meta-regression showed that mean baseline of SBP and DBP was explained 24% and 49% of the variance between studies for SBP and DBP, respectively. The results revealed the profitable reducing effect of the DASH-like diet on both systolic and diastolic blood pressure in adults; although there was a variation in the extent of the fall in blood pressure in different subgroups.
Keywords: DASH-diet, systolic blood pressure, diastolic blood pressure, randomized controlled trials, meta-analysis

Dietary Patterns in Relation to Stroke among Iranians: a Case-Control Study

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Background: Although several studies linked dietary patterns to the risk of stroke in Western countries, we are aware of no report in Middle Eastern populations with regard to this association. The aim of this study was to examine the association between major dietary patterns and risk of stroke among a group of Iranian population.
Methods: In a hospital-based case-control study, 195 stroke patients, hospitalized in Alzahra University Hospital in 2008, were selected as cases and 195 control subjects from patients hospitalized in orthopedic or surgical wards with no history of cerebrovascular diseases or neurologic disorders were recruited. Usual dietary intakes of participants were assessed by means of a validated 168-item semi-quantitative food frequency questionnaire. To identify major dietary patterns, principal component analysis was used and each participant received a factor score for each identified pattern.
Results: We identified three major dietary patterns: "high carbohydrate-low fat dietary pattern", "sweet-fatty dietary pattern" and "traditional dietary pattern". Those in the highest quartile of traditional dietary pattern were 4.48 times more likely to have stroke compared with those in the lowest quartile. After adjustment for confounders, the association was attenuated. A significant association between high carbohydrate-low fat dietary pattern and stroke was also observed after controlling for potential confounding factors (Odds Ratio=2.19, 95% Confidence Interval: 1.08-4.44). Consumption of sweet-fatty food pattern was not associated with the risk of stroke either in crude or in adjusted models.
Conclusion: Major dietary patterns identified by principal components analysis are significantly associated with stroke in a Middle-Eastern population.
Keywords: Dietary patterns, stroke, case-control study.

Red and Processed Meat Consumption and Risk of

Glioma in Adults: A Systematic Review and Meta-Analysis of Observational Studies

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Background: Although several observational studies have investigated the association between red meat consumption and gliomas, findings were inconsistent. We conducted a systematic review and meta-analysis of observational studies to summarize available date assessed the relation between red and processed meat intake and risk of glioma.
Methods: A systematic literature search of the PubMed, Google scholar and Scopus databases for relevant reports published until May 2014 was conducted. Data from eighteen publications (14 case-control, 3 cohort and 1 nested case-control study) on unprocessed red meat, processed meat, and/or total red meat consumption in relation to glioma were included in the analysis.
Results: We found a positive significant association between unprocessed red meat intake and risk of glioma (RR=1.30; 95 % CI: 1.08-1.58) after excluding studies with uncertain type of brain cancer. Consumption of processed meats was related to the increased risk of glioma in population-based case-control studies (RR=1.26; 95%CI: 1.05-1.51) and reduced risk in hospital-based case-controls (RR=0.79; 95%CI: 0.65-0.97). No significant association was seen between processed red meat intake and risk of glioma in cohort studies (RR: 1.08; 95%CI: 0.84-1.37). Summarized RRs from the studies that had not controlled the analyses for total energy intake revealed a significant positive association between both unprocessed (RR=1.27; 95% CI: 1.05-1.55) and processed red meat intake (RR=1.28: 95% CI: 1.03–1.59) and risk of glioma. Total red meat consumption was not associated with risk of adult glioma.
Conclusion: In this meta-analysis of observational studies, we found a positive association between unprocessed red meat intake and risk of gliomas. Processed meats intake was also related to the increased risk of gliomas in population-based case-control studies and reduced risk in hospital-based case-control publications. Further studies, particularly well-designed prospective studies, are needed to confirm these findings.
Keywords: Glioma, Red meat, processed meat, Meta-analysis, Risk factor

Red Meat Intake, Insulin Resistance and Markers of Endothelial Function among Iranian Women

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Background: Few data, with conflicting findings, are available linking red meat consumption to indexes of insulin resistance and endothelial dysfunction. This study aimed to investigate the association of red meat consumption with insulin resistance and endothelial dysfunction among a sample of female nurses in Isfahan, Iran.
Methods: This cross-sectional study was carried out among 420 female nurses that were selected by a multistage cluster random sampling method. Usual dietary intakes were assessed using a validated food frequency questionnaire. Red meat intake was calculated by summing up the consumption of all kind of red meat in foods and processed meat in sausage and fast foods. To measure serum concentrations of adhesion molecules and glycemic indexes, a fasting blood sample was taken.
Results: After adjustment for potential confounders, high red meat intake was significantly associated with higher fasting plasma glucose, quantitative insulin sensitivity check index and homeostasis model assessment of insulin resistance and beta-cell function. Although high red meat intake was significantly associated with higher serum insulin levels and homeostasis model assessment of beta-cell function in the crude model, after controlling for body mass index, the association was no longer significant. Red meat consumption was associated with high concentrations of E-selectin, soluble vascular cell adhesion molecule-1 (sVCAM-1) and soluble intercellular adhesion molecule-1 (sICAM-1) after adjustment for different potential confounders.
Conclusions: We found that increased red meat intake was associated with high concentrations of plasma endothelial dysfunction biomarkers and abnormal glucose homeostasis among Iranian women. Prospective studies are required to confirm these findings.
Keywords: Red meat, insulin resistance, endothelial function, Iran.

Tooth Loss Is Associated with Irritable Bowel Syndrome

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Background: Although the relationship between number of teeth and gastric disturbances has been recognized, limited data are available linking tooth loss and irritable bowel syndrome (IBS). This study aimed to investigate the relation between dental status and IBS among Iranian adults.
Methods: In a cross-sectional study on 4669 Iranian adults, dental status was evaluated using a self-administered questionnaire. Participants were categorized into five main groups: those with full dentition (without denture), those with denture, individual who had lost 1-2 teeth , 3-5 teeth and half of one arch or more. IBS and its subtypes were defined using Rome III criteria.
Results: After adjusting for different confounding variables, those who had lost 1-2 and 3-5 teeth had 1.35 and 1.33 times greater odds for IBS than fully dentate subjects,

respectively. After controlling for different confounders, individuals who had denture had 103% greater chance to have constipation-predominant IBS than those with full dentition (Odds ratio: 2.03, 95% confidence interval: 1.29-3.21). Neither in crude nor in adjusted models was any significant association between dental status and other subtypes of IBS. In addition, we did not find any association between losing half of one arch or more and IBS.
Conclusion: We found that losing 1-2 or 3-5 teeth were significantly associated with increased risk of IBS. Having denture was related to constipation-predominant IBS. There should be further studies to confirm these findings.
Keywords: Irritable bowel syndrome, functional gastrointestinal disorders, tooth loss, masticatory function.

Health-promoting properties of whey protein in hemodialysis patients

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Abstract: Hemodialysis patients encounter a lot of complications which roots from their disease condition and their therapeutic modalities. High oxidative stress, inflammation and other abnormalities are prevalent in this disease. Concerning the malnutrition problem in these patients, more attention was paid to protein sources with health-promoting properties which can improve their complications. One of the proteins discussed in this regard is whey protein. Whey protein (WP) consists a heterogeneousgroup of proteins (i.e., b-lactoglobulin, a-lactalbumin, serum albumin, and immunoglobulins). This protein bears antioxidant activity as a result of cysteine abundance or the presence of glutamylcysteine groups. In addition it reducesthe Fas gene expression and DNA segmentation in the apopototic pathways.This way, it can protect against hydrogen peroxide and inhibits the production of 8-hydroxy guanosine. This protein also regulates catalase and superoxide dismutase activities which are from the potent known antioxidative enzymes. Hence, this protein can be used as a therapeutic agent for oxidative stress-associated diseases such as ESRD (especially those on hemodialysis). Another characteristic of whey protein is its hypotensive effect due to its impacts on vascular function (NO-dependent and -independent vascular responses). On the other hand, this protein can affect insulin secretion through its effects on elevating serum amino acid levels, and GLP-1 and insulin-secreting peptide, while at the same time provokes glucose uptake by muscles through PK-C and PI3-K pathways. Additionally, WP possesses anti-inflammatory properties as well. So, regarding the health promoting effects of whey protein and complicated conditions of hemodialysis patients with high oxidative stress, inflammation, blood pressure and other metabolic abnormalities, this protein can be a good preventive and therapeutic supplement for use in this disease condition.
Keywords: Fas gene, whey protein, ESRD, Catalase

Prevalence of overweight, obesity and central obesity in high school girls studying in the 5th educational zone in Tehran city, 2012-2013

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Background: Obesity and overweight are one of the most common nutritional health problems in developed and developing countries. Obesity is known as a risk factor for a lot of chronic diseases and central obesity is associated with metabolic syndrome and cardiovascular diseases. Considering that adolescent obesity is related to mortality and morbidity in adulthood, the present study was conducted to determine the prevalence of overweight, obesity and central obesity in tehranian high school girls aged 14-17 years in 1391-1392.
Methods: Using a systematic sampling method in this descriptive- analytic study, 400 school girls aged 14 to 17 years were selected from 6 high schools in the 5th educational zone of Tehran city. Weight, height, waist and hip circumferences were measured and body mass index (BMI) and waist to hip ratio (WHR) were calculated. BMIs at or above the 85th and 95th percentiles for age and sex (based on WHO standard) were classified as overweight and obese. Also, WHR of 0.8 or greater was considered as central obesity.
Results: It was found that prevalence of obesity and overweight were 4.2% and 14.8% respectively. 21.2% of subjects had central obesity. The frequency of central obesity was 70.6% in obese girls and 37.3% in overweight girls.
Conclusion: Educating students about obesity and its complications and urging them to have healthy nutrition and to do exercise, can be effective in decreasing the prevalence of obesity.
Keywords: Obesity, overweight, high school girls

Comparison of quality properties, content and retention of vitamin B1, folic acid and iron in enriched instant rice with absorption method in two Iranian and Indian rice varieties

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Background: Rice is one of the most important crops in the world, and half of the world depends on it. Due to increasing population, rising to be busy, expensive energy carriers and the loss of the vitamins B for removal of bran layers during milling and reducing the nutritional value of white rice to rinse the rice when cooking, need to be considered quick and easy ways to cook and also increase the nutritional value of cooked rice.
Methods: In order to evaluate and compare the quality and chemical characteristics and durability of vitamin B1 and folic acid in fortified instant rice, two samples of Iranian rice, Hashemi , and Indian rice, Mozhdeh, were selected in a randomized complete block factorial design and were evaluated in three replications. To make of instant rice enriched, 10 g of each variety were prepared and after soaking in 100 ml of distilled water with 300 mg vitamin B1, 30 mg of ferrous sulfate as a source of iron, 30 mg folic acid, and 2 grams of salt without iodine for 24 hours, with steaming and boiling water were cooked and after removing the water, dried in the oven at 50 ° C to 10% moisture. Cooking quality parameters and also content and durability of iron, vitamin B1 and folic acid were measured.
Results: Based on variance analysis data, iron content,

vitamin B1 and folic acid absorption in both Iranian and foreign rice samples were significantly different from the control sample. And retention of nutrients added was also higher compared to the previous results reported. The gelatinization score was 4.9 in control sample of Hashemi variety and after instant rice procurement process and enrich the score was 6. It indicates that enriched Hashami instant rice requires less cooking time rather than its control sample. About elongation ratio in both of Iranian and Indian enriched rice samples, no significant differences were observed with respect to the control sample.

Conclusion: To explore the possibility of preparing instant rice enriched, we can recommend a proposal to make rice with quick and easy cooking and also we can enhance the nutritional value of rice by adding nutrients.

Keywords: Instant rice, Enriched, Folic acid, Vitamin B1, Iron

Effectiveness of training programs on nutritional status during pregnancy: Comparison of Focus groups and multi-media package

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Background: Pregnancy is from the most risky period of women's life and nutrition during this period will affect the health of the mother and fetus. This study was performed aimed to compare the effectiveness of nutrition training by group discussion method and using multimedia package on the nutritional status of pregnant women.

Methods: This quasi-experimental study with a control group was performed on 174 pregnant women in health centers of Mashhad and Gonabad. Multimedia package was designed using Autoplay software (version 8.2). The pretest of output of the test subjects were studied. Then, nutrition training was performed by group discussion method and multimedia packages. Finally, a month after the intervention, posttest of output was completed. Data analysis was performed using Dietplan software (version 6) and SPSS software (version 20) and one-way ANOVA and paired t-test.

Results: Variables niacin (P=0/04), vitamin B6 (P=0/04), vitamin D (P=0/01), B12 (P=0/03) in a closed multimedia pre- and post-intervention difference were statistically significant. Folate (P=0/04) vitamin c (P = 0/03), carotene (P=0/006) and fiber (P = 0/03) in group discussions before and after the intervention group had a statistically significant difference. Compared to the methods used, the mean scores were higher in group discussion about the multimedia package.

Conclusions: The two methods of group discussion and multimedia package significantly improve the nutritional status of pregnant women than pre-intervention compared to the control group. Comparison of two methods of teaching showed that group discussion method was more effective than multi-media package method.

Keywords: effectiveness, multi-media packages, group discussion, nutritional status

Frequency of hypothyroidism in infants and its relation to maternal iodine in salt Mashhad Health Center No. 5 in 2013

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Background: Iodine deficiency has no nutrients to the disaster has not been read. The need for an effective role in making hormones and their effects during fetal, childhood and puberty. 30-25 mg of iodine in the thyroid gland of the human body is 75% and the rest of the gastric mucosa and blood there. Lack of iodine required to cause a shortage disorders as disorders should be.

It is estimated that 1/6 billion people (30%) of the residents are at risk of iodine deficiency goiter this number 655 million Kurten 5.7 million and 26 million are at risk for brain damage.

Methods: This cross-sectional study, based on information recorded in the portal application form and completion of a questionnaire CH Health Center 5 of Mashhad in 1392 was carried out.

Results: The results showed a total of 2512 samples were taken 78% of salt with iodine 8 ppm =, 5% of 15ppm =, 1% of 30ppm = 16% of pregnant women had consumed salt without iodine. A total of 11,637 infants screened for hypothyroidism were 26 cases of patients were identified as 5 persons of maternal patient during pregnancy in 1391, and no training on the maintenance and use of iodized salt were not and 20 mothers iodine salt test was 1 case iodine is also lacking. Of the total number of 26 patients identified, 58% of boys and 96% of patients at the time of the birth weight of 2500 g and in 69% of patients have no family relatives the couple was seen in 88% of collected patient's disease and hypothyroidism in first degree relatives there and 100 the patients were breastfeeding.

Conclusions: In this study of 1391 pregnant mothers about how no one will care how iodized salt consumption did not see any training and In 1392 the number of 2512 pregnant women in particular were trained and tested their household salt This reduces the incidence of hypothyroidism of 3.6 per thousand live births in 1391 to 2.3 in 92 health centers were 5 of Mashhad.

While other risk factors for this disease Such as gender, twinning, Down syndrome, birth weight, relative and disease in first degree relatives of iodine deficiency diseases affecting newborns were observed under the center of lesser importance.

Collected during the study, none of the women who had been trained, she did not recognize and all sick newborns from mothers who had not been tested for untrained salt consumption

Therefore, with regard to the role of iodine in reducing the incidence and complications of hypothyroidism caused them irreparable education for all members of society, greater oversight of manufacturing centers of production and distribution of salt and the food is. While we hope that future inter-sectoral cooperation with other organizations, additional assumptions discussed the challenge of shortage of iodine disorders are effectively placed under control.

Keyword: Salt pregnant women- CH disease- Disorders caused by iodine shortage- Health Center 5 of Mashhad

Authors Index T

The association of eating disorders with body mass index and body image in an adolescent female high-school students,in Ahvaz,Iran

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Background: Studies on the prevalence of eating disorders in children and adolescents are rare and weight concerns are quite common among them. In addition, research on the relationship between eating disorders and Body Mass Index (BMI) is inconclusive. The goals of the present study were to investigate the association of eating disorders with body mass index and body image in adolescent female high-school students in Ahvaz, Iran.
Methods: Data were collected from a sam¬ple of 180 female students (14-18 years old) in 3 regions of Ahvaz, Iran. We used the Eating Attitudes Test (EAT-26) questionnaire to assess the symptom of eating disorders. Height and weight were measured according the standard protocols and were compared to the World Health Organization's references. Body image was assessed by Body Image Concern Inventory (BICI) questionnaire. Data analyses were performed by SPSS version 15.
Results: The findings showed that 77.2% of students had scores of Eating Attitudes Test lower than 20 and mean of the score for BICI was 42.65. The age adjusted BMI was lower than -1SD in 15.1%,and upper than +1SD in 31.2% of the students. Forty percent and 61% of the students had breakfast seldom or often, respectively. There were no statistically significant differences between two groups of Eating Attitudes Test (the score of lower and higher than 20) with BMI (P = 0.89),the frequency of eating breakfast (P = 0.09),and the score of BICI (P=0.32).
Conclusions: Eating disorders were not associated with BMI, frequency of eating breakfast and the score of BICI in female high school students in Ahvaz, Iran.
Keywords: Eating disorders, Body mass index, Breakfast, Adolescents, Body image

The use of oils in the rural province of Khuzestan in 1391 and 1392

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Background: In recent years the food culture of the country and many countries in the region, People s health status has changed. The traditions of the past and create new ways of bringing about change in consumption patterns , including increased consumption of saturated fat and fruit and vegetable consumption has been reduced and the increasing prevalence of non-communicable diseases including heart disease - cardiovascular, cancer and diabetes . But the variety and nutritional balance, replace liquid oils instead of solid and the use of oil for frying can reduce the risks.
Methods: In this cross-sectional study, information on household oils of rural households covered 15 city of Ahwaz University of Medical Sciences taken concurrently with the first census year. Data collection tools, dietary data collection checklist Refined salt and oil consumption households that the interview has been completed . The data collected were analyzed using descriptive statistics.
Results: In 91 and 92 respectively, 20.52% and 14.78% consumption of hydrogenated fats and intake of liquid vegetable oil and frying is 18.97% and 34.61%. Also intake of vegetable oil for frying decreased from 32.85% in 91 to 20.06% in 92 .
Conclusion: Due to the reduced consumption of hydrogenated vegetable oils and increased use of liquid vegetable oil , It can be seen that increasing nutrition knowledge society through educational campaigns healthcare workers, volunteers, teachers, NGOs and grassroots groups, IRIB and other media can effectively choose the right foods, promoting public health and affect household food security.
Keywords: Oil - Household - Rural - food security

Determination the association between food insecurity as well as some socio-economic factors with functional dyspepsia in adult women

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Background: Functional dyspepsia(FD) is a gastrointestinal disorder wih multi-factorial pathophysiology. Physiological and environmental factors may play a role. The purpose of this study was to determine the association between food insecurity as well as some socio-economic factors,with functional dyspepsia in adult women.
Methods: A case control study of 100 adult women (50 cases newly diagnosed and 50 controls,aged 19-60 years old) referred to Imam Khomeini Hospital in Tehran was conducted. Validated food insecurity USDA and a general questionnaire were used to assess general characteristics,socioeconomic and food insecurity status respectively. Chi-square test,t-test and logistic regression analysis were used as statistical tests. The significance level of <0.05 was acceptable.
Results: 40.8% of FD patients had a family history of dyspepsia. The severity of food insecurity and a recent history of depression-anxiety were in direct statistical correlation with FD; while,education level,occupation status and level of physical activity were inversely related with FD. Considering all the variables in the logistic regression model,only the occupation status,physical activity and recent history of depression-anxiety were associated with FD.
Conclusion: Occupation status,physical activity and recent history of depression-anxiety as confounding factors in relationship between food insecurity and functional dyspepsia,had the most relevancy with FD.
Keywords: case-control, functional dyspepsia, food insecurity, socioeconomic factors

Determination effect of 2 month CLA supplementation in non trained healthy young male students on blood pressure and body composition: A randomized,double-blind, placebo-controlled clinical trial

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Background: However the effect of conjugated linoleic acid (CLA) on blood pressure and body composition are revealed in several in vitro and animal studies but the result of human studies are controversial. The purpose of the current clinical double blind trial was to determine effect of 2 month CLA supplementation in non trained healthy young male students on blood pressure and body composition.
Methods: This randomized,double-blind,placebo-con-

trolled clinical trial was conducted on 66 non trained healthy male students. Before and after eight weeks supplementation with 4´0.8g.d-1 CLA or placebo (soybean oil),lean body mass and fat mass were measured with BIA,trunk and visceral fat and waist circumference were measured with ViScan. Physical activity amount and dietary intake of participants were similar together,because they lived in dorms. Statistical analyses were performed using the SPSS16 software,the statistical tests being analysis of covariance,Independent sample t test,paired-sample t-test and Mann-Whitney U tests.

Conclusion: These results show that CLA does not impact on lean body mass,body fat mass,trunk and visceral fat and waist circumference and blood pressure in non trained young male students.

Keywords: CLA supplementation,hypertension, body composition, weight loss, visceral fat

A new approach to clinical nutrition program implementation in Iranian hospitals, from Theory to Practice

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Background: Malnutrition is a common problem in hospitalized patients. The consequences of malnutrition affects quality of life. It increases length of staying in hospital,risk of unsuccessful treatment,mortality and morbidity risk and costs of hospitalizations. Clinical nutrition program implemented in Iranian hospitals since 2011. Now there is a comprehensive annual action plan in two field of action: nutrition consultation and Food catering. This program includes: planning and implementing of standardized nutrition screening and assessment forms of patients,defining of food service process in hospitals,accreditation of food and nutrition services in hospitals,planning and implantation of national advanced courses of nutritional support in ICU and kidney diseases for dietitians. Goal: This program is going to apply standardized nutrition consultation and food services in hospitals in order to prevent and control of malnutrition in inpatients. The other specific goals are: accelerating of patient treatment,improving served food quality and its' appropriateness for patients,nutrition consultation and patient education before discharge for controlling of disease and improving lifestyle.

Methods: A broad observation on the food and nutrition services in the hospitals,give us a clear view of gaps and needs in aspect of human resources in nutrition field,protocols and guidelines. Researches in other countries services provided very useful experiences. Constitution of clinical nutrition committee was the second step for organization of clinical nutrition in hospitals. Strategic plan for implementing of the program contained two different parts of services: Nutrition consultation and food service management.

Results: At the beginning of implementing of the clinical nutrition program,there were different aspects of problems due to gap of standards,lack of nutritional evaluation forms and protocols,lack of well defined food catering process,no dietitians practice check list and no terms of reference for dietitians. Developing nutrition evaluation forms and standardized food catering in hospitals and also planning and conducting training courses for clinical dietitians was the initial outputs of the committee.

Conclusions: There are valuable experiences in the present time because of implementing of nutritional supports in the hospitals. Applying standard evaluation forms,protocols and food management process at national level help dietitians to manage food services and nutritional consultation in hospitals. In order to promote patients treatment,experienced dietitian as key member of treatment team of patients should be employed in hospitals actively. Investment in this case will be effective on patient's treatment.

Keywords: Clinical nutrition; malnutrition; hospital; catering

Association between body mass index, diet and physical activity with primary dysmenorrhea severity pain in university students

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Background: Primary dysmenorrhea is the most common menstrual disorders in adolescent and young girls, which make it the first cause of adolescent absenteeism from school, work and reduce profitability referred. Association between body mass index (BMI), diet and physical activity with pain severity of primary dysmenorrhea was evaluated in university students.

Methods: This cross-sectional study carried out in Tabriz University of Medical Sciences in Jun 2014 with random selection, on the 124 university students that had moderate to severe primary dysmenorrhea. Data were collected by demographic, and food frequency questionnaire (FFQ). Food items categorized to: (1) sources of calcium and vitamin D, (2) omega-3 sources, (3) fruits and vegetables, (4) snack foods, (5) processed meats, (6) fats, and (6) sugars. In order to determine the severity of pain, visual analogue scale (VAS) and the verbal Andersch-milsom multidimensional scale (MDS) was used. Linear and logistic regression tests were used for statistical analysis.

Results: Linear regression analysis showed statistically significant association between fat intake and severity of pain (B= -0.04; P = 0.02). BMI, physical activity and dietary factors did not show significant association with severity of dysmenorrhea pain. In multivariate regression analysis, the only statistically significant association found between fat intake and severity pain. In other words, fat intake was independent predictor of pain intensity in this study. Based on logistic regression BMI, physical activity and diet did not show significant association with pain severity.

Conclusion: The results showed only fat intake was inversely correlated with severity of pain. With regard to residence in university dormitories, it seems that the homogeneity of the participant's age, BMI range, food intake, physical activity and method of dietary assessment (FFQ) were the main causes of non-significant association between pain severities with these variables. Further studies with large and heterogeneous sample in terms of age, occupation, social class may have better results.

Keywords: primary dysmenorrhea, diet, body mass index, physical activity

Influence of diet and dietary habits on dysmenorrhea: systematic review

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Background: Dysmenorrhea is the most common gynecologic complaint among young adult females that Impact on their quality of life and cause disability and dysfunction in severe cases. Drugs are the most common pharmacologic treatment for dysmenorrhea, but may causes side effects such as gastrointestinal problems and kidney failure. Thus many people with dysmenorrhea are looking for alternative treatments such as nutritional therapy. The objective of this review was to assess a possible role of diet and dietary habits in the treatment of dysmenorrhea.
Methods: This systematic review includes a summary of literature reviews, case studies, and clinical trials in full text English and Persian from 1987 - 2014 and was performed using PubMed, Science direct, Scopus, and Google Scholar, IranMedex and SID databases for terms: Dysmenorrhea, diet, dietary habits and nutrition. Review and unpublished articles were excluded.
Results: According to our search found 5980 related articles that among them 300 articles were associated with dysmenorrhea, nutrition and diet. Finally, 35 trials with different designs, including 7642 women was investigated the relationship between diet and dysmenorrhea. All trials are in humans and with different designs: 9 Cross-sectional, 22 RCT, 2 Case-control and 2 Descriptive trials. Intake of fish oil, especially with components such as vitamin E and B1 seems to reduce dysmenorrhea, but searches about effects of dietary habits and different groups of foods such as vegetables, fruits, dairy products, fats and etc. were insufficient.
Conclusion: The literature suggest that specific types of dietary fats especially with antioxidant components may be effective in control of dysmenorrhea, but further researches about other dietary components are recommended.
Keywords: dysmenorrhea, diet, dietary habits, nutritional therapy

The effect of dialysis duration on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran

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Background: Long duration of dialysis treatment is a risk factor for malnutrition in hemodialysis patients. This study was performed to determine the effect of dialysis duration on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran.
Methods: This cross-sectional study was performed on hemodialysis patients referred to Imam Khomeini hospital (114 patients). In order to evaluate the nutritional status, anthropometric indices (body mass index (BMI), triceps skinfold (TSF) and mid-arm muscle circumference (MAMC)) were measured. The patients were divided based on the duration of less or more than 3 years under dialysis treatment.
Results: Average BMI in the groups with duration of less and more than 3 years were 24.24 ± 0.52 and 22.31 ± 0.79 Kg/m2, average MAMC in the groups with duration of less and more than 3 years were 231.67 ± 3.89 and 222.6 ± 5.36 mm, average TSF in the groups with duration of less and more than 3 years were 7.34 ± 0.47 and 7.14 ± 0.62 mm, respectively. Average BMI was significantly different in two groups (P=0.036).
Conclusion: In the present study, BMI, TSF and MAMC decreased with increasing the duration of dialysis. This reduction was significant for BMI. Since long term dialysis is death prognosticate in patients with chronic kidney disease, thorough evaluation of nutritional status in these patients, MNT and consult with the nutritionist is advised.
Keywords:hemodialysis,duration of dialysis,malnutrition indices

The effect of comorbidity on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran

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Background: Protein- energy malnutrition is a complicated, multifactorial and prevalent problem in hemodialysis patients which is directly associated with increased mortality in these patients. This study was performed to determine the effect of comorbidity on malnutrition indices in hemodialysis patients referred to Imam Khomeini hospital, Tehran.
Methods: This cross-sectional study was performed on hemodialysis patients referred to Imam Khomeini hospital (114 patients). In order to evaluate the nutritional status, anthropometric indices (body mass index (BMI), triceps skinfold (TSF) and mid-arm muscle circumference (MAMC) were measured. The patients were divided based on the comorbidity.
Results: Average BMI in the groups with or without comorbidity were 23.2 ± 0.5 and 24.66 ± 1 Kg/m2, average MAMC in the groups with or without comorbidity were 226.3 ± 8.6 and 228.1 ± 3.49 mm, and average TSF in the groups with or without comorbidity were 6.83 ± 0.41 and 9.18 ± 0.85 mm, respectively. Average TSF was significantly different in two groups (P=0.017).
Conclusion: In the present study the average BMI, TSF and MAMC were lower in the group with comorbidity than the group without comorbidity. This difference was significant for TSF. According to other studies, suffering from comorbidity is associated with higher prevalence of malnutrition in hemodialysis patients. Thorough evaluation of nutritional status in these patients, MNT and consult with nutritionist based on comorbidity is advised.
Keywords:hemodialysis, comorbidity, malnutrition indices

Can ginger lower Disease Activity Score in patient with active rheumatoid arthritis?A Clinical Trial Study

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Background: Despite beneficial effects of ginger in osteoarthritis,there is little information on their effects on active RA patients. Aim: To investigate the effects of ginger as an adjuvant therapy on the clinical manifestations of rheumatoid arthritis (RA) in adults with an active disease.
Methods: In a randomized,double-blind placebo-controlled trial,79 patients with active RA were divided into two groups to receive randomly either ginger (group B) or placebo (group A) for 3months. Ginger was prescribed 1500 mg daily as 2 capsules (each capsule was 750 mg and contained 100% ginger). Clinical data was determined by physician examination and filling the questionnaire by interview. Erythrocyte sedimentation rate (ESR),C- reactive protein (CRP) were measured in each patient. DAS28 (diseases activity score) was also determined.

Results: In relation to clinical symptoms,significant differences were observed between groups in the number of swollen joints and tender,and in ginger group,the difference was significant compared to baseline (P < 0.00). VAS improved in ginger group and the difference was significant (P < 0.00),but this difference was not significant between groups (P < 0.17). CRP,ESR,DAS28 and GPA improved in ginger group and the difference was significant between groups (P < 0.02)(P < 0.00)(P < 0.00) (z=3/75,P< 0.04),although it was not significant in stiffness (z=0/35,P>0.05) after the study.

Conclusion: Ginger supplementation resulted in significant improvement in clinical manifestation except morning stiffness among RA patients and may be useful in their treatments.

Keywords: Ginger,Clinical signs,CRP,ESR,Active Rheumatoid Arthritis

Association of Mood Disorders with Nutritional Zinc Status in Adolescent Female Students

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Background: Among various factors influencing mood disorders,the impact of micronutrients deficiencies especially zinc has attracted a great attention which considered playing a crucial role in onset and progress of mood disorders in different stages of life. The main objective of this study was to assess the correlation between serum zinc levels and mood disorders scores in high school female students.

Methods: This cross-sectional study conducted on a random sample of 100 students. Serum zinc status was assessed using flame atomic absorption spectrometry. Mood disorders were estimated by calculating the sum of two tests scores including Beck depression inventory (DBI) and Hospital Anxiety Depression Scales (HADS) tests. General linear model (GLM) and Pearson's Regression were applied to show the effectiveness of serum zinc levels on mood disorders scores,and the correlation between zinc serum levels and DBI score,respectively.

Results: The mean of zinc serum levels were 105.5±31µg/dL. The mean scores of depression and anxiety tests were 18.2±10.42 and 9.7±4.3,respectively. Serum zinc levels were inversely correlated with DBI and HADS scores (p<0.05). Increasing each 10 µg/dL in serum zinc levels leaded to 0.3 and 0.01 decrease in depression and anxiety scores,respectively (p<0.05).

Conclusion: Serum zinc levels are inversely correlated with mood disorders including depression and anxiety in adolescent female students. Increasing serum levels of zinc in female students may improve their mood disorders.

Keywords: Mood disorders,Serum zinc levels,Female students

Investigatation of effect of the concentration of homocysteine,oxidative stress and lipid profiles on pre-eclampsia

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Background: Pre-eclampsia is a syndrome which is characterized by the increase in blood pressure to above 140/90,oedema and proteinuria,and is the second leading cause of maternal death in developing countries,including Iran. A total of 5 % of pregnant women are affected worldwide. Oxidative stress is one of the key factors involved in the development of pre-eclampsia. The present study aims to investigate the effect of the concentration of homocysteine,oxidative stress and lipid profiles on pre-eclampsia.

Methods: This case-control study was conducted on healthy pregnant women visiting Taleghani and Al Zahra hospitals in Tabriz,Iran,as well as on women with pre-eclampsia admitted to these two hospitals. Fifty-eight samples were selected as controls and 58 subjects were selected as cases. The blood samples were prepared with their consents. Parameters measured included lipid profiles (total cholesterol,triglyceride,LDL-c and HDL-c),MDA as a marker of lipid peroxidation,homocysteine concentration in blood,glutathione peroxidase (GPX) enzymes,superoxide dismutase (SOD) and the total antioxidant status (Canakci et al.). In addition,a questionnaire was completed to collect information on age,gestational stage,height,weight,weight before pregnancy and folic acid (B9) intake.

Results: The results obtained in this study are based on the inhibition of confounding variables and indicate significant differences in homocysteine status,total antioxidant status (Canakci et al.) and TG in both groups. However,there was no significant difference in the concentration of GPX-SOD enzymes,OSI index,MDA/SOD and MDA/GPX or total cholesterol,LDL-c and HDL-c. Increased homocysteine and TG could be considered as factors in the aetiology of pre-eclampsia. In addition,the dietary intake and serum antioxidant regime that are evaluated under TAS are important in the reduction of oxidative stress induced by homocysteine and improving the status of pre-eclampsia-affected women.

Keywords: homocysteine,oxidative stress,lipid profiles,pre-eclampsia

Assessment of nutritional conditions in patients of ICU (Intensive Care Unit), Hamedan Hospital

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Background: The importance of nutrition in illness and specially critical states is most obvious than other conditions. Almost all critical patients most receive supportive nutrients. Considering increased requirements, malnutrition causes catabolism and immunologic responses impairments. Lack of nutrition via enteral route, causes increased passage of bacteria from intestinal lumen to mesenteric lymph nodes and other organs, passage of endotoxines circulation, uncontrolled hyper metabolism and multisystem organ failure. According to eyewitnesses, the aim 0f this survey was review of nutritional conditions of patients in intensive care unit and gathering required information to correct, probably, the existing nutritional strategies.

Methods: During a 6 months period 123 patients were observed. Their nutritional condition was studied in which existence and severity of malnutrition at the admission and the end of stay (discharge to ward or near death) in ICU were assessed and compared and thus the effect of their received nutrition was observed. In this purpose some forms were prepared according to indices specialized for this type of patients. Nutritional requirements were also assessed according to anthropometric characteristics (REE, BMI, weight and height) and after multiplying it in disease factor (1,25), analyzed to nutritional components (carbohydrate, protein, fat, vitamins and micronutrients). Acquired nutrition gathered by special forms and then analyzed as the same, thus mak-

ing one by one comparison of the acquired and required nutrition possible. Primary information gathering was the responsibility of co-worker nurses in the ward. The co-worker nutrition specialist then analyzed this information as to be comparable. The enforcers controlled gathering, analyzing and computer recording of information, comparing the results, preparing the figures and tables and presenting the final conclusion.

Results: Totally 48 tables and figures have been prepared, showing the number and duration of hospitalization, malnutrition conditions, anthropometric indices and changes, required and acquired nutritional conditions. According to these, 84% of patients were malnourished at the admission which reached to 91% at the end of stay. Also during this period the severity of malnutrition shifted from mild and moderate to severe (from 14, 72 and 14 to 4, 70 and 26 percent in ordered). Patient's BMI and weight reduced progressively. Acquired nutritional components were 35-40% of requirements.

Conclusion: Nutritional routs in this ICU caused increasing incidence and severity of malnutrition in patients. On the other hand if we assume the admission to this unit unselected and accidentally, 84% of population is malnourished which must be attention by on duties. Sever deficiency in almost all required nutrients is observed which certainly has adverse effects on patient's outcome and thus necessitates the correction of existing nutritional strategies**.**

Keywords: Anthropometry, ICU(Intensive Care Unit),Nutrition disorders, Nutrition disorders , etiology

The effect of sesame seed on glycemic index of this honey

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Background: In present study beside the determination of glycemic index of Thyme honey from Bushehr plain,the effect of sesame seed on glycemic index of this honey and postprandial blood sugar changes of honey and sesame mixture had been surveyed.

Materials & Methods: Ten healthy subjects with a mean age of 28±2.7 and a mean body mass index of 24.3±2.6 participated in this study. Subjects on 3 different days at 1 week interval,after 10 hours overnight fasting referred to the laboratory and their blood sugar was measured in the fasting,15,30,45,60,90 and 120 minutes after eating glucose solution and each of honey or mixture of honey and sesame solutions. Incremental area under the blood glucose changes curve (IAUC) was calculated using trapezoid frame ignoring fasting values. Data were analyzed with Paired samples t-test,ANOVA and repeated measure using SPSS version 17.

Results: Glycemic indexes for Thyme honey and mixture of honey and sesame obtained 65.9 and 73.5 respectively. Incremental areas under the blood glucose changes curve after eating Thyme honey and mixture of honey and sesame was significantly lower than glucose(P=0.001).

Conclusion: Thyme honey from Bushehr has intermediate Glycemic index. Therefore this honey could be replaced with sugar in daily food planning. Addition of sesame on honey increases its glycemic index.

Keywords: glycemic index,honey,sesame seed,blood sugar

Obesity and urolithiasis: a modern epidemic as a risk factor for an old issue

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Abstract: Studies revealed that obesity is associated with many chronic diseases,and the list of such diseases is growing. Recently,urolithiasis has been added to this list. Urolithiasis is a common,highly recurrent disease and its prevalence is increasing worldwide in parallel with obesity. Because of disease cost and morbidity it should be considered as a health priority. Epidemiological studies has reported a relation between obesity and urolithiasis incidence. Besides,other studies reported that urolithiasis was associated with numerous chronic diseases such as hypertension,diabetes mellitus and cardiovascular diseases,thus urolithiasis has been considered as a systemic disease. However,understanding the causal association between obesity and urolithiasis need in-depth review of current literature. Effect of obesity on stone composition and size Some studies found that obesity may favor different type of stone compared with general population. Morbid obese stone formers had more uric acid stones comparing to non-obese patients. Moreover,uric acid stone formers showed a significantly higher visceral fat. A positive association between stone size and BMI was also reported. Effect of obesity on urine composition Obesity has been shown to be associated with urinary inhibitors and promoters of crystallization. Higher BMI was associated with higher urinary calcium,oxalate,uric acid,sodium, phosphate and also lower urinary PH,all favors formation of calcium oxalate and uric acid stone formation. These differences may be the result of higher animal protein and sodium consumption by obese patients. Obesity and urolithiasis,role of systemic inflammation Since urolithiasis was associated with many chronic diseases which are closely associated with chronic systemic inflammation,chronic inflammation is suggested to be the cause of association between obesity and urolithiasis. A recent invitro study showed that co-culture of renal tubular cells with adipocytes and macrophages,simulated metabolic syndrome conditions,resulted in more crystal adherence to renal tubular cells. Further studies are needed to assess this hypothesis.

Conclusion: Obesity seems to raise the risk of urolithiasis via different mechanisms. Understanding these mechanisms may help to improve disease prevention and treatment.

Keywords: urolithiasis,obesity,chronic disease

Comparison the nutritional support to pregnant women in need of households in 2011 and 2013

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Introduction: Pregnant Women health is one of the most important principles in population growth and a healthy society in future. The support program is one of several initiatives to improve the health of vulnerable groups such as pregnant women. The purpose of this study was to compare the effect of nutritional support to pregnant women in the years 1390 and 1392 have been.

Method and materials: In this plan that perform with partnership Bonyad Alavi organization in 1390 and 1392 ,750 pregnant women in the rural province of Ahwaz University of Medical Sciences, recognized with on under specifications : 1)BMI under 18.5 2)Prepragnant weight less than 45 Kg 3)Undesired weight in pregnancy 4)Hb less than 11 5) Twins or more 6)Low birth weight previous 7)Height under 150 cm And one , two or three pregnancy and weak family and they are maximum 4 month of pregnancy . Providing food baskets to the end of 6 months breastfeeding contin-

ues. If mother involved abortion or birth dead or migration from surpassed region, delete from food basket.Of course all women should present in nutritional classes celebrated in health house and other than this health center allowed delete food basket of pregnant or lactate women.
Results: During 2 stage of evaluation in the years 1390 and 1392, respectively 89.2%, and 92.7% of mothers during pregnancy weight gain favorable, 97% and 98% of children under 6 months of age have good growth. Educated mothers are 87% and 96%.
Conclusion: Improvement is observed with respect to maternal that Programs to support pregnant women with the knowledge and practical skills about nutritional issues positive effect on the improvement of maternal and child she left. The need to strengthen family support programs with a focus on vulnerable groups and direct training and continuous improvement needed to mothers in households highlights. However, to enhance the awareness of mothers regarding the loss of trained mothers , Implementation of new interventions designed to teach and reinforce strategies such as maternal education should be considered.
Keywords : Nutritional Support Program- Pregnant Women- Improvement

The Effect of ginger powder supplementation on Blood Pressure of Patients with Type 2 Diabetes: A Double-Blind Randomized Clinical Controlled Trial
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Background: Diabetes mellitus is one of the most common chronic metabolic disorders. Nowadays there is an uprising trend toward new approaches in type 2 diabetes management. In this study the effect of Ginger supplementation on blood pressure in type 2 diabetic patients was examined.
Methods: 81patients with type 2 diabetes who were referred to Yazd Diabetes Research Center participated in this randomized clinical trial. Patients were randomly divided into two groups; Placebo (PG) and supplemented (GG) groups. GG were supplemented with 3 ginger capsules (1 gr ginger powder in each capsule) and PG received placebo. systolic pressure (SBP), diastolic pressure (DBP),Pulse pressure and Mean arterial pressure were measured before the intervention, week 2,week 4, week 6 and at the end of study (week 8).
Results: The SBP, DBP, Pulse pressure (PP) and Mean arterial pressure (MAP) were decreased significantly in the GG (p=›0.001) group at the end of week 8 and statistically decreased at the end of the study compared to the beginning of the study. No significant changes were observed in the PG. However its mean was statistically different between the two groups at the end of intervention. **Conclusion**: This study indicated that daily consumption of 3 grams of ginger powder in capsules for 8 weeks by patients with type 2 diabetes leads to lowering SBP and DBP , PP and MAP .
Keywords: Ginger, Type 2 Diabetes, Blood Pressure

Evaluation of the effect of conjugated linoleic acids supplementation on blood pressure and body composition of 20-27 year old males: A double blind placebo – controlled clinical trial
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Background: Although the effect of Conjugated Linoleic Acids (CLAs) on blood pressure and body composition is revealed in several in vitro and animal studies, the results of human studies are controversial. The purpose of the current clinical double blind trial was to determine the effect of 2 months CLA supplementation on blood pressure and body composition of non trained healthy young male students.
Methods: This randomized, double-blind, placebo-controlled clinical trial was conducted on 66 non trained healthy male students. Before and after eight weeks supplementation with 4×0.8g.d-1 CLA or placebo (soybean oil), lean body mass and fat mass were measured with BIA, trunk and visceral fat and waist circumference were measured with ViScan. Physical activity amount and dietary intake of participants were similar together, because they lived in dorms. Statistical analyses were performed using the SPSS16 software, the statistical tests being analysis of covariance, Independent sample t test, paired-sample t-test and Mann- Whitney U tests.
Results: CLA supplementation had no effect on blood pressure, lean body mass, body fat mass, trunk and visceral fat and waist circumference.
Conclusions: These results show that CLA does not affect on body composition and blood pressure in non trained young male students.
Keywords: Conjugated linoleic acids, Blood pressure, Body composition, Weight loss, Trunk fat

Food security and nutritional concepts in verses of holy Quran
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Background: Food variety is one of the basic recommendations in modern nutrition sciences for providing energy, and macro/micronutrients. Nutritional concepts have been mentioned in many verses of holy Quran. This study aimed to evaluate these concepts with food security, while emphasizing on dietary diversity and food groups.
Methods: In this descriptive analytical study, "Ghamoos e Quran" and "Vazheyab" online softwares were used to determine the nutritional keywords in Quran. For searching, translating, and interpretation of verses, "Noor-e-Jami Tafasir version 2.5"; "Zekr" and "Pars Quran"softwares were applied. Consistencies of modern nutrition recommendations with nutritional concepts of holy Quran were assessed.
Results: Results showed that with a few exceptions (pork, wine, blood, and carrion meat), consumption of various foods (at least 30 items from all of food groups), even in heaven have been emphasized in holy Quran. Milk, vegetables, fruits, starchy foods, protein foods, and fat groups have been mentioned 2, 33, 80, 65, 132, and 13 times respectively in verses of holy Quran. In addition compliance to balanced diet, eating healthy and varied foods including animal and plant origin strongly recommended. In the holy Quran extravagance in food consumption and banning certain foods without acceptable rationality severely reprimanded.
Conclusion: With regard to banning consumption of only few foods and because of strong reprimand on healthy foods, it seems that nutritional security is one of the indisputable concepts in the Quranic verses.
Keywords: Quran, food security, Nutritional concepts.

Authors Index V

Biochemical Effectiveness of chestnut seed powder on diabetic rats

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Background: Biochemical Effectiveness of chestnut seed powder on diabetic rats Introduction: Diabetes is accompanied by micro and - and macrovascular complications, which contribute significantly to cardiovascular complications in diabetic patients. Nowadays, the interest towards herbal medicine in treatment of diabetes has elevated. We aimed to investigate the effect of chestnut seed powder on liver specific enzymes, cardiac and renal function in streptozotocin (STZ)-induced diabetic rats.
Methods: Diabetes was induced in 18 wistar male rats (250-300 gr) by single dose of STZ (60 mg/kg i. p.). Animals were divided into 3 groups, consisting of six animals each, as follows: diabetic controls (group 1), diabetic rats administered 500 (group 2) and 1000 mg/kg per day (group 3) chestnut seed powder orally in aqueous solution. After 4 weeks of administration, a fasting blood samples were taken from all groups to measurement of alanin transferase, aspartat transferas, alkalin transferas, high sencetice-CRP (hsCRP), urea, creatinine and complete blood count (CBC).
Results: The study results showed a significant reduction in the hsCRP level in diabetic rats fed with either the 500 mg/kg or 1000 mg/kg chestnut seed powder ($p<0.05$) compared to diabetic controls . Also, the seed powder- administrated rats showed decreased mean corpuscular hemoglobin compared to diabetic controls [19.33±1.6 pg, 17.70±0.15 pg and 17.51±0.32 pg as groups 1, 2 and 3, respectively; $p<0.001$. The offspring from diabetic dams administrated with chestnut seed powder showed insignificant different levels of liver enzymes, renal function tests and other CBC tests.
Conclusion: The experiments provided evidence to support the cardioprotective effect of chestnut and the health function of chestnut seed against cardiovascular complications dependent on type 2 diabetes.
Keywords: chestnut seed, diabet, Serum glucose

Dietary quality of Iranian school-aged children with Down syndrome: Healthy Eating Index

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Background: Down Syndrome (DS) is a common chromosomal disorder,accompanied with intellectual and physical disabilities. Diet of children with DS has not been studied much for its quality. The aim of the present study was to assess diet quality of these children residing in Tehran,Iran,in comparison with their intellectually average peers using Healthy Eating Index-2005 (HEI-2005). HEI was developed by the U.S. Departments of Agriculture (USDA) and Center for Nutrition Policy and Promotion (CNPP). Unlike many other indexes it is suitable for investigating the quality of children's diet.
Methods: 110 children with DS (devoid of mental or physical disabilities resulting from genetic disorders irrelevant to DS) and 110 typical age-matched peers were randomly selected from schools in Tehran,Iran. Participants had no heart diseases,cancer,metabolic disorders and followed no particular diets like vegetarianism. Anthropometric assessments were done and the dietary intake was assessed using one 24-hour diet recall and three diet records. Total HEI-2005 score and the scores of its 12 components were calculated for the subjects; the groups were then compared.
Results: Although no significant difference was found between the children with DS and their typical peers regarding the total HEI score ($P= 0.05$),the DS group acquired significantly lower scores of main components of the index including total fruit ($P= 0.001$),whole fruit ($P= 0.001$),meat and bean ($P< 0.001$),total vegetables ($P= 0.001$) and also dark green and orange vegetables and legumes ($P= 0.001$). The milk score of children with DS was significantly higher ($P< 0.001$).
Conclusions: In addition to the innate disabilities,children with DS are at greater risk of some chronic health issues such as cardiovascular disease. Considering the critical diet components,these children have lower diet quality than their intellectually average peers,which may increase the risk of the very health issues. Great attention is needed in this regard.
Keywords: Down syndrome; Children; Diet; Healthy Eating Index; Iran

The Effect of Omega3 Supplementation on Lipid peroxidation and inflammation in Women with Polycystic Ovary Syndrome,a Randomized Clinical Trial

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Background: There is evidence suggesting an association between reduction of inflammation and probable beneficial effects of omega3 supplementation on Polycystic Ovary Syndrome (PCOS). The aim of this study was to determine the effect of omega3 supplementation on oxidized low density Lipoprotein(oxLDL),highly sensitive C-reactive protein(hsCRP) and interleukin6(IL6) as supplement in treatment of women with polycystic ovary syndrome.
Materials: This double- blind randomized clinical trial was conducted on 84 women with PCOS Subjects were randomly assigned to consume either omega3 (3gr/day) or placebo for 8weeks. Data about weight,height and nutrient intake by 24hr recall as well as blood samples were collected before and after intervention. Serum concentrations of oxLDL (ng/ml),hsCRP (mg/L) and IL6 (pg/ml) were measured.
Results: Seventy eight patients completed the study. There was no significant difference in mean age,weight,height,BMI and intake of energy and macronutrients between 2 study groups before and af-

ter treatment. In omega3 group,the concentrations of hsCRP,IL6 and oxLDL significantly decreased after supplementation (p<0.001).The mean of change of hsCRP,IL6 and ox-LDL concentration were significantly different between two groups (p<0.001).
Conclusion: 8weeks supplementation with 3gr omega3 could reduce lipid peroxidation and inflammation in PCOS patients.
Keywords: Polycystic Ovary Syndrome,IL6,hsCRP,oxLDL,Omega-3

Adherence to the DASH diet in relation to psychological profile of Iranian adults

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Background: Although empirically-derived dietary patterns have been examined in relation to depression, limited data are available linking theory-based dietary patterns to psychological health.Objective: We aimed to investigate the association between adherence to DASH-style diet and psychological health among Iranian adults.
Methods: This cross-sectional study was done among 3846 Iranian general adults in Isfahan, Iran. Dietary assessment was conducted using a validated 106-item dish-based semi-quantitative food frequency questionnaire. To investigate participant's adherence to DASH-style diet, we created DASH score based on earlier publications focusing on 8 components (fruits, vegetables, nuts and legumes, dairy products, and grains, sweetened beverages and sweets, sodium, and red and processed meats). Participants were classified into three categories based on their DASH score [low (≤40), moderate (41-50), and high adherence (≥51)]. Psychological health was examined by means of validated Hospital-Anxiety- Depression Scale (HADS) and GHQ questionnaires. Depression, anxiety and psychological distress were defined based on standard criteria.
Results: We found that moderate adherence to DASH dietary pattern was associated with lower odds of depression (OR: 0.73; 95% CI: 0.59-0.90, P_{trend}=0.63) compared with those with the lowest adherence. In our stratified analyses, these associations remained significant for women (0.70; 0.54-0.91) and for normal-weight participants (0.70; 0.52-0.92). Moreover, after controlling for potential confounders, an inverse association was observed between high adherence to DASH-style diet and anxiety in normal-weight participants (0.61; 0.37-0.98). Such associations were also seen between moderate adherence to DASH diet and anxiety in overweight or obese individuals (0.63; 0.42-0.95). We failed to find any significant association between consumption of DASH diet and psychological distress.
Conclusion: We found an inverse association between moderate adherence to DASH dietary pattern and depression. The inverse association between DASH diet and anxiety was only observed in normal-weight participants. Further prospective studies are required to investigate to confirm these findings.
Keywords: Diet, healthy eating, psychological health, depression, anxiety

Effect of antioxidants supplementation and/or restricted diet on oxidative stress in a rat model of diet-induced obesity

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Background: Obesity is independently associated with increased oxidative stress in men andwomen. Natural antioxidants showed substantial antioxidative and anti-inflammatory activities in vivo. The aim of this study was to examine the preventive effect of antioxidant supplements and/or restricted diet on the stress oxidative index (8-Iso-PGF2α) and total antioxidant capacity (TAC) in obese rats induced by a high-fat (HF) diet.
Methods: In this experimental study forty-eight male Wister rats were randomly assigned to HF purified diet (61% kcal from fat) ad libitum, HF restricted (30%), HF supplemented with astaxanthin, vitamin E and C (HFS), HFS restricted (30%) for 12 weeks. Their daily foodintake and weekly body weight gain were measured. Serum 8-Iso-PGF2α and TAC measured by EIA methods.
Results: Energy intake was not significant in HF with HFS (58.8 and 58.6 kcal/rat/d, respectively) and in HF restricted with HFS restricted (41.7 and 41.6 kcal/rat/d, respectively). Serum 8-Iso-PGF2α in HF was 1416.2±443.5 and in HF restricted was 1209.4±424.4pg/ml (p>0.05) and equal for other groups. The lowest TAC was seen in HF and highest was in HFS (0.36±0.43 and 3.0±1.13 mM, respectively) (p<0.001).
Conclusion: These results suggest that antioxidant supplements and caloric restriction may improve TAC and partially suppress stress oxidative index in high fat diet induced obese rats.
Keywords: Antioxidants, High- Fat diet, Obesity, Stress, Oxidative

Effect of garlic powder consumption on plasma renin activity and vascular response after injection of angiotensin I and angiotensin II in normotensive male rats

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Background: Garlic plays an important role in hypertension decrease. The aim of this study was to investigate the effect of consumption of garlic powder on blood pressure and renin angiotensin systemin normotensive male rats.
Methods: In this study, sixteen adult male *wistar* rats

(200- 250 g) were randomly divided into two groups as follows: control and garlic.Garlic group was daily fed 900 mg garlic powder by oral gavage for forty-five days. All experiments were done at the end of study, so that immediately after the end of the experimental procedure animals were anaesthetized by pentobarbital (i.p.), blood samples were collected and after injection of angiotensin I, II and captopril, blood pressure was again determined. Plasma renin activity was also measured.

Results: At the end of experiments, systolic, diastolic and mean arteriole pressures were lower in garlic group than control group (but not significantly). Angiotensin I level and plasma renin activity were low in control group whereas were high in garlic group. After different doses injection of angiotensin I and II, mean arteriole pressure were significantly increased in garlic group. By using of captopril, mean arteriole pressure and its changes were high (not significant) after injection of different doses of angiotensin I in garlic group.

Conclusion: Garlic powder consumption could slowly reduce blood pressure but it was reinforced renin angiotensin system, at least in this study. It seems this effect be due to increasing plasma renin activity or decreasing angiotensin converting enzyme activity.

Keywords: Garlic, Angiotensin, Renin, Angiotensin converting enzyme

Effect of L-carnitine supplementation on blood lipid profile in patients with hyperlipidemia

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Background: hyperlipidemia is one of the main causes of atherosclerosis in cardiovascular diseases. This study aimed to determine the effect of L-carnitine supplementation on blood lipid profile in patients with hyperlipidemia.

Methods: This double blind randomized clinical trial study was performed on 50 hyperlipidemic patients attending the cardiology clinic of baqiyatallah hospital in Tehran in 1393. Study subjects were randomly divided into two equal groups (n=12). Both groups during 8 weeks of study, consumed 2 g L-carnitine and 2 g placebo (maltodextrin), respectively. Anthropometric measurements, dietary intakes and blood biochemical parameters included TG, total cholesterol, LDL-C and HDL-C were measured at the beginning and end of the study. Paired t-test and t-test was used for quantitative data.

Results: The mean serum triglyceride in L-carnitine group was significantly lower in comparison to placebo group at the end of the study (p=0.03); Serum triglyceride concentration in L-carnitine group, at the end of the study compared with baseline, was significantly decreased (p=0.012). The mean total cholesterol in L-carnitine group was significantly lower in comparison to placebo group at the end of the study (p=0.007); Total cholesterol concentration in L-carnitine group at the end of the study compared with baseline, was significantly decreased (p=0.03). The mean LDL-C between L-carnitine and placebo groups at the end of the study showed no significant difference (p=0.17); The mean LDL-C in L-carnitine group, at the end of the study compared with baseline, Was reduced, but But not significant.(p=0.074). The mean HDL-C between L-carnitine and placebo groups at the end of the study showed no significant difference (p=0.41); The mean HDL-C in L-carnitine group, at the end of the study compared with baseline, Was Increased, but But not significant. (p=0.13).

Conclusions: This study showed that eight weeks of daily consumption of 2 grams of L-carnitine supplement in patients with hyperlipidemia caused a significant decrease in serum TG and total cholesterol.

Keywords: L-carnitine, Hyperlipidemia ,lipid profile

Authors Index Y

Comparing the fruits consumption pattern based on fructose content in Non-alcoholic Fatty Liver Disease patients and healthy subjects

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Background: In recent years the relationship between fructose and Non-alcoholic Fatty Liver Disease (NAFLD) have attracted considerable attention. Most studies in this area, discussed the fructose intake of artificial sweeteners, and studies conducted to get it from natural sources, especially fruits, are extremely rare. This study aims to compare the pattern of fruit consumption based on fructose content in patients with NAFLD with healthy subjects.
Methods: This case-control study was conducted on 57 patients with NAFLD (confirmed by ultrasonography and elevated serum liver enzymes, Alanine Aminotransferase (ALT),Aspartate Aminotransferase (AST)) and 57 healthy controls matched for age, sex and body mass index (BMI) in Sheykh-ol-Rais clinic Tabriz. To assess fruit consumption frequency, a 97 items food frequency questionnaire and also to assess the amount of fructose and sucrose a 3-day food record were used. Classification of fruits using food composition tables based on fructose milligrams per100 grams of fruit took place in three groups, high fructose fruits (≥5), medium amount fructose fruits (2.5-5) and low fructose fruits (≤2.5). Serum Alanine Aminotransferase (ALT),Aspartate Aminotransferase (AST),Alkaline Phosphatase (ALP),triglycerides, total cholesterol, HDL-C was measured and LDL-C was calculated.
Results: Weekly frequency of fruits consumption was significantly higher in NAFLD patients than in controls (P=0.004). Weekly frequency of high fructose fruits consumption was almost double in patients than healthy subjects and were statistically significant (30.2 vs, 16.7 times per week, and P=0.002). Also found that, dates and grapes weekly consumption, both classified in high fructose fruits are significantly higher in patients than in controls (with P=0.014 and P=0.003). The ratio of fructose to total energy intake was significantly higher in NAFLD patients than in controls (1.5 vs. 1.2 and P=0.045) while no significant differences were found in the amount of fructose intake.
Conclusions: Since NAFLD patients were taking higher fructose containing fruits, it is possible that consumption of high fructose fruits by increasing the fructose content of the diet is effective at NAFLD.
Keywords: Fruit, Fructose, Non-alcoholic Fatty Liver Disease.

Evaluation of combination effect of Rosmarinus plant and Enteroccoccus Hairaei proteins on Escherichia coli

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Background: Extract of Rosmarinus plant has medicinal and pharmeucetical properties and it has anti infectional and diaphoretic effects. This plant increases blood flowing in gastronomical organs. It is much useful for stimulating of biliary and digestive mucousal secretion amount. This therapeutic plant is useful for treatment of rheumatism, paralysis, paroxysm, nervous and respiratory disorders, liver inadequacy . Enteroccoccus Hiraei PTCC 1239 has antimicrobial effects , so, It can use as a probiotic in food industry.
Object of this research is evaluation of combined effect of rose Rosmarinus medicical plant and protein sediment of Enteroccoccus Hiraei .
Method: In First, aquatic extract of Rosmarinus plant was prepared. Protein sediment produced Enteroccoccus Hiraei by was separated by centrifuging with 10000 rpm in 4 0c and pured by dialysis. Extract and sediment were combined in different proportions . In final, for evaluation of plant and Enteroccoccus effects on E.coli, antimicrobial effect was measured by disk and well methods in millimeter Amounts.
Results:
The results suggested zone diameter resulted from combination of Rosmarinus extract and *Enteroccoccus Hiraei* PTCC 1239 (50mm) was more then balnk sample (protein of *Enteroccoccus Hiraei* PTCC 1239, only)(10mm).
Conclusion: In result, Rosmarinus extract increases entimicrobial effect of *Enteroccoccus Hiraei* PTCC 1239 against E.coli bacterium. Thus, application of Rosmarinus extract as a flavor agent in food with purified protein sediments of *Enteroccoccus Hiraei* PTCC 1239 can increase foods shelf life.
Keywords: Escherichia coli, Enteroccoccus Hiraei, Rosmarinus extract

Evaluation of synergistic effects of mint medicinal plant on protein sediments biological effect produced by *Enterococcus faecalis* against *Listeria monocytogenes*.

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Background: Mint extract is a famous flavor agent in food, pharmaceutical,makeup formulations. *Enterococcus faecalis* PTCC 1394 has antimicrobial effects very much . so, this bacterium can use as a probiotic in food industry. Aim of this research is evaluation of combination effect mint medicinal plant and protein sediments produced by *Enterococcus faecalis* PTCC 1394 against *Listeria monocytogenes*.
Methods:In First, aqatic extract of this plant was prepared. protein sediments produced by Enterococcus faecalis PTCC 1394 were separated by centrifuging at 10000 rpm in 4 0c and were purified by dialysis. Mint extract and protein sediments were combined in different proportions. In Final, zone diameter resulted from Listeria monocytogenes was measured for mint extract and protein sediments combination and protein sediments (as a blank sample) by disk and well methods in millimeters.
Results:The results indicated zone diameter resulted from mint extract and protein sediments combination (50mm) was more than balnk sample (19mm).
Conclusion: In result, mint extract was caused to increase biological effects of *Enterococcus faecalis* PTCC 1394 against *Listeria monocytogenes.*
Keywords:*Enterococcus faecalis*, biological effects , protein sediments, *Listeria monocytogenes*, mint

Evaluation of antagonistic effect of Salvia officinalis medicinal plant to decrease protein sediments antimicrobal effect produced by *Enterococcus faecalis*

PTCC 1394 against *Listeria monocytogenes*

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Background: Salvia officinalis plant is very benefit for treatment of paroxysm, articular pains, vertigo, decreduction of blood sugar and organs vibration. Enterococcus faecalis PTCC 1394 for showing expanded antimicrobial effects, It can use as a probiotic in food industry. Aim of this research is evaluation of antagonistic effect of Salvia officinalis plant on protein sediments antimicrobial effect produced by Enterococcus faecalis PTCC 1394 against Listeria monocytogenes.
Methods: In First, aquatic extract from this plant was prepared. protein sediments produced by Enterococcus faecalis PTCC 1394 were separated by centrifuging at 10000 rpm in 4 0c and were purified by dialysis. Salvia officinalis extract and protein sediments were combined in different proportions. In Final, zone diameter resulted from Listeria monocytogenes was measured for combination of Salvia officinalis extract and protein sediments and protein sediments (as a blank sample) by disk and well methods in millimeters. Results: The results indicated zone diameter resulted from Salvia officinalis extract and protein sediments combination (5mm) was letter than balnk sample (19mm).
Conclusion: In result, Salvia officinalis extract was caused to decrease biological effects of *Enterococcus faecalis* PTCC 1394 against *Listeria monocytogenes*.
Keywords: *Enterococcus faecalis*, *Listeria monocytogenes*, probiotic, Salvia officinalis, zone diameter.

Evaluation of the *Enterococcus faecalis* role on growth inhibition of *staphylococcus aureus* by antimicrobial compound production.

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Background: The object of this research performance was Evaluation of the *Enterococcus faecalis* role on growth inhibition of staphylococcus aureus by antimicrobial compound production .
Methods: After the culture of *Enterococcus faecalis* with property of PTCC 1394 and ATCC 9854 in the BHI agar,centrifuging and isolation of microbial mass,that antimicrobial compound was purified by dialyze .Antimicrobial effect of present compound was evaluated on gram positive and gram negative indicator bacteries by well diffusion method. Inhibitory Concentration is determined by dilution method.
Results: The results of this research proved that Activity Unit,Specific activity,purification factor increased after dyalisis . Total protein,Concentration,Total activity,amount of total protein decreased after dyalisis. Produced the lowest inhibitory concentration by antimicrobial compound was on *Staphylococcus aureus* .
Conclusion: In attention to achieved results of this antimicrobial compound, *Enterococcus faecalis* with property of PTCC1394 can play a important role as a probiotic in food industry by producing of a anitimicrobial compound .
Keywords: Antimicrobial, affect,*Enterococcu faecalis*, Probiotic

Review of evaluation of grape fruit interactive compounds with cilostazole and aspirin drugs

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Background: cilostazole is used for lag and aspirin is used for decreasing of pain, inflammation and fever.aim of this article is Review of evaluation of grape fruit interactive compounds with cilostazole and aspirin drugs
Results: all of the juices, grape fruit has expanded interactions with types of drugs. Thid juice changes metabolic pathways of recommended drugs in body and it effects in liver activity for activation of drug. Taniguchi reported in 2007 that a sample of pourpora disease was caused by contemporaneous digestion of cilostazole and aspirin with grape fruit . the most probability of this disease is increasing of cilostazole level in blood. It is caused by inhibition of cilostazole metabolism produced by grape fruit compounds. Other reporters showed that drugs interactions with grape fruit are resulted of inactivation mechanism of CYP3A enzymes. Furanokumarins presented in grape fruit inactivate intestinal enzymes and cause to increasing of availability of these drugs in toxic levels.
Conclusion: grape fruit consumption can increase effects of some of dugs and their side effects
Keywords: Aspirin, cilostazole, food and drudg interaction, Furanokumarins, grape fruit

Effect of oral administrationof Fenugreek seeds powdered on lipid profile

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Background: Atherosclerosis is the major cause of death in the developed country. Impairment in plasma lipoproteins and the metabolism of fats related in the pathogenesis of atherosclerosis more than any other factors. Therefore control andtreatment ofhyperlipidemia,seems to be necessary. Inrecent years public tendency ofsocietiestotraditional medicineand the use ofherbal medicineshas beenincreasing. The roleof various herbsinreducingblood lipidsand reducecardiovasculardiseasehave been identified. Inthiscontext, can mentioned fenugreek, dill andwalnut leaves. In Iran,human studies that indicate the effects ofthese herbsonblood lipids,has limited. Thus present study aimed toevaluate the effectof oral administrationofpowdered Fenugreek seed on thelipidprofile.
Methods: This studywas Clinical Trial and conducted on 49hyperlipidemiapatientswhowerenot use lipidloweringmedications.Patients were randomlydivided intotreatment and control groups (24 treatment group and25control group) and bothgroupsreceived nutritional educationregardingdietchangesand lifestyle. Alsotreatment group received5 g/dof powdered offenugreek seeds(as a package) for 8weekswith food. BMI, Tchol, TG, LDL, HDL and FBS of patients were measuredat the beginning andend of the study and finally data were comparedusingpaired t test.
Result: the results indicate significant decrease ($p<0.05$) among treatment group in LDL, Tchol, TG and FBS . There

was no significantchange was seen in HDL and BMI of patient in neither of the two groups.
Conclusion: the results ofthis studyshowedthatconsumptionoffenugreek seeds powderedis effective inreduce of blood lipidsinhyperlipidemiapatients.
Keywords: Fenugreek, Hyperlipidemia, lipid Profile.

The effect of cardamom supplementation on anthropometric measurements in overweight and obese prediabetic women

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Background: People with impaired fasting glucose (IFG), impaired glucose tolerance (IGT) or a combination of both, are identified as prediabetic subjects. Prediabetic subjects are at risk for type 2 diabetes and cardiovascular diseases (CVD) in the later years of their life. Prediabetes and insulin resistance often have no symptoms. Diet changes and pharmaceutical interventions can be effective in delaying type 2 diabetes in prediabetic subjects. Spices consumption has been considered for treatment of diseases complications because of their antioxidant and anti-inflammatory contents. One of these spices that contains a great variety of antioxidant compounds is cardamom. Since the effect of this spice has not been studied in prediabetic people this study designed to determine the effect of cardamom supplementation on anthropometric measurements in overweight and obese prediabetic women.
Methods: In this double blind randomized clinical trial, 80 prediabetic peoples (30-70 years) randomly allocated to 2 groups. Intervention group received 3 g of green cardamom and placebo group received 3 g of rusk powder (1 g capsules three times per day) with meals. Anthropometric measurements including weight, height and waist circumference were recorded before and after intervention. Body mass index (BMI) was calculated through dividing the weight by height squared.
Results: Weight and BMI means significantly decreased in the intervention group after the study (p-value<0.05). In the placebo group changes in weight, BMI and waist circumference means was not significant at the end of study. There was no significant differences between the two groups in terms of anthropometric measurements.
C**onclusion:** In this study in the intervention group (cardamom supplement) weight and BMI means significantly decreased after the intervention but compared to the placebo group, changes in weight, BMI and waist circumference means was not significant.
Keywords: Prediabetes, Impaired Fasting Glucose, Impaired Glucose Tolerance, Anthropometric measurements, Green Cardamom

Authors Index Z

Szamyn effect of oral zinc supplementation on inflammatory factors in patients with type 2 diabetes, randomized, double-blind controlled clinical trial

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Background: Diabetes mellitus is a metabolic disorder that non-enzymatic glycated end products make change in the composition of biomolecules and these products increase inflammatory cytokines synthesis by macrophages activating and increasing the oxidative stress and cause some complications such as atherosclerosis, nephropathy, and retinopathy. Given the possible effects of the abundant natural sesame lignin, sesamin, in correcting metabolic disorders leading to diabetes, this study was carried out to evaluate the effect of sesamin oral supplementation on plasma levels of inflammatory markers IL-6, TNF-α and hs-CRP in type 2 diabetic patients.
Methods: In this clinical trial, 44 type 2 diabetic patients were recruited and randomly assigned into two groups, the Sesamin (200 mg/day sesamin) and control(200mg/day starch). Serum inflammatory markers were measured at baseline and again 8 weeks after intervention using ELISA commercial kits.
Results: In the sesamin group after 8 weeks mean serum Interlukin6 concentration decreased significantly (20.2±12.1 vs.17.2±9.13 pg/ml) (P=0.02) and TNF-α decreased significantly (1.9±0.76 vs. 1.3±0.27pg/ml) (p=0.00) ,compared with controls. Mean of other inflammatory marker, hs-CRP, after adjustment for Baseline values showed no significant changes between sesamin and control groups (p=0.357).
Conclusions: Our results suggest that consumption of 200mg/day sesamin can reduce plasma levels of inflammatory cytokines in type 2 diabetic patients and thereby play an important role in preventing chronic complications.
Keywords: Szamyn, type 2 diabetes, Inflammation

Relationship between body mass index before pregnancy, weight gain during pregnancy and birth weight: a retrospective cohort study

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Background: Body mass index before pregnancy, weight gain during pregnancy is an important factor affecting birth weight, the aim of this study was whether maternal weight gain within the recommended BMI have been effective on birth weight.
Methods: Retrospective cohort study was done on 1216 women referred to health centers in Jahrom city in 1392. Demographic, anthropometric, history of gestational were extracted from records. Women according to WHO recommendations and prepregnancy body mass index were divided into four groups, lean body mass index (30), the amount of weight gain during pregnancy, based on the recommendations of the World Health Organization and prepregnancy body mass index separate to the three groups :Lower than recommended, the recommended limits and over the recommended limit, birthweight of infants were divided into three groups of LBW (4000 g). The relationship between pre-pregnancy BMI and weight gain during pregnancy was examined using logistic regression.
Results: In this study, weight gain during pregnancy of less than limit were 43.5% (535cases) of lean maternal body mass index, 36.2%(438cases) normal and 26%(316cases) overweight or obese, 13%(158cases) of lean mothers, 22.1% (268cases)normal weight, 47.8%(584cases) overweight and 66%(851cases) obese, had excessive weight gain by the World Health Organization recommended. Average weight gain during pregnancy in mothers with low birth weight infants (11.3±4.9) was significantly lower than the mean weight of mothers with macrosomia(13.5 ±4.3). (P = 0.03) The rate of LBW was 8.7% (70 patients) and macrosomia 4% (n= 32). Variables: BMI, weight gain during pregnancy, maternal age, gestational age, maternal education, maternal occupational status, gestational age at delivery and maternal illness (diabetes, hypertension, preeclampsia, anemia, urinary tract infection, vaginal infection) were entered into a regression model. That the only variables affecting birth weight, was gestational age at delivery (OR = 3.5-11.2) and high blood pressure in pregnancy (OR = 1.5-10).
Conclusion: Body mass index and gestational weight gain was not affecting birth weight, but high blood pressure during pregnancy was one of the most influential variables on birth weight, however, due to the majority of studies, normal weight gain during pregnancy is one of the variables affecting birth weight may be considered the basis weight range of body mass indices need to revision and adjustment for confounding variables.
Keywords: body mass index, birth weight

Effect of Omega-3 fatty acids supplementation on serum levels of TNF-a in pemphigus patients

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Background: Pemphigus is a chronic life-threatening and uncommon blistering disease of the skin. Although, using systemic corticosteroids has decreased mortality rate dramatically, but because of long term consumption and their side effects mortality and morbidity are still matters of concern. Pemphigus Vulgaris is the most common and the most severe form of the disease. Nutritional factors can trigger or diminish pemphigus. Foods contain tannins, phenols, thiols and isothiocyanates could induce pemphigus or make it more severe but Omega-3 fatty acids have anti-inflammatory effects on auto-immune diseases and are parts of anti-inflammatory diet. The aim of this study was to evaluate the effect of Omega-3 fatty acids supplementation on serum levels of TNF-α in pemphigus patients.
Methods: This study was a double-blind placebo-controlled randomized clinical trial. Thirty adult patients with pemphigus disease were randomly assigned into 2 groups including Omega-3 fatty acids supplements (three 1 gr capsules per day) or placebo (paraffine) for 3 months. At the baseline,1 and 3 months after the intervention,serum levels of TNF-α were measured in fasting state by ELISA method. Anti-inflammatory diet recommendations were provided for all participants.

Results: There were no significant changes in serum levels of TNF-α between Omega-3 and placebo groups before,1 and 3 months after the intervention. But after the intervention the mean difference of serum levels of TNF-α in the Omega-3 group was statistically significant compared to the baseline.
Conclusion: This study showed that Omega-3 fatty acids supplementation may decreased serum levels of TNF-α.
Keywords: TNF-α, Pemphigus, Omega-3 fatty acids

The association between serum levels of retinol binding protein 4 and metabolic syndrome components in first degree relations of type 2 diabetic patients

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Background: Retinol binding protein 4 (RBP4) are known to regulate lipid and glucose metabolism and insulin resistance. The influences of RBP4 on metabolic syndrome are still unclear. The purpose of this study is to evaluate the association between serum levels of retinol binding protein 4 (RBP4) and metabolic syndrome components in first degree relations of type 2 diabetic patients.
Methods: In a cross-sectional study, a total of 78 first degree relations of type 2 diabetic patients were enrolled. Weight, height, waist and hip circumferences, blood pressure of participants and fasting plasma glucose, HbA1C, total-, HDL- cholesterol, triglyceride and serum RBP4 were measured from fasting blood sample taken from each participant after an overnight fast (12-14 hour).
Results: Systolic and diastolic blood pressure were significantly higher in people with higher levels of RBP4 (P=0.01, P=0.03). Moreover, triglyceride in people with high levels of RBP4 were higher compared with those with low levels of RBP4 (P=0.02). People with low levels of RBP4 had marginally significant greater hip circumferences (P=0.04). There were no correlation between RBP4 and metabolic syndrome in crude model (p=0.97). This null correlation remained after adjustment for BMI, age and physical activity (P=0.31).
Conclusion: RBP4 levels were positively association with some risk factors of metabolic syndrome including hip circumference, triglyceride, systolic and diastolic blood pressure.
Keywords:retinol binding protein 4, metabolic syndrome, first degree relations, type 2 diabetic patients

A study on different food groups intake according to My Plate food pattern among students of Shahid Chamran University of Ahvaz

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Background: An appropriate food pattern is important for healthy lifestyle in different sex and age groups like students. This study was designed to investigate intake of food groups according to My Plate food pattern among university students**.**
Methods: One hundred and thirty university students of Shahid Chamran University of Ahvaz participated in this study. General questionnaire was filled from all participants. The picture of My Plate pattern was shown to all students, then asked them to show their food pattern by filling two distinct blank My Plate picture (one of them was including current food pattern and another including preferred food pattern), then the drawing surface of each food group was determined by geometrical analysis and was compared with standard My Plate pattern.
Result: University student boys had more current intake of grain compared with student girls (P=0.018), but preferred intake of grain had no significant difference between boys and girls. Fruit and vegetable current consumption was higher among girls compared with boys (P=0.05 and P=0.002 respectively), and girls preferred to have more intake of vegetables than boys (P=0.001). Protein consumption in boys was more than girls (P=0.006) and both genders preferred to just a little decrease in their protein consumption. Current and preferred dairy products intake didn't show any significant differences between boys and girls.
Conclusion: Differences in grain products and protein intakes between boys and girls university students return to protein and calorie requirements but the important point is less intake of fruits and vegetable in boys university students compared with girls.
Keywords: Food pattern, My Plate, Food groups, university students

Association between iron stores,dietary iron intake and lipid profile in Iranian women

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Background: Some studies have shown that increased rate of iron stores even in a normal range may cause individual suspected to cardiovascular diseases. Lipid disorders are also the risk factors for cardiovascular diseases. Therefore,the question is whether or not iron store is correlated with lipid profile? This study evaluate association between iron stores and dietary iron intake and lipid profile.
Methods: This cross-sectional study done on 82 healthy female university students and university staff in Isfahan University of Medical Sciences in reproductive age who announced their readiness to participate in the study. Serum ferritin concentration,components of lipid parameters,blood glucose and insulin were measured in all subjects. Dietary intake was assessed by semi-quantitative food frequency questionnaire. Data analysis was done through Software SPSS version 18.
Results: Pearson correlation test showed a positive and significant correlation between serum ferritin concentration levels with triglyceride (r = 0.278; P = 0.006),total cholesterol (r = 0.267; P = 0.008),and blood glucose (r = 0.275; P = 0.006); however the correlation between serum ferritin and HDL-c and LDL-c and insulin was not significant. After adjustment of confounding factors,only the significant correlation occurred for blood glucose (P = 0.016). Before and after adjustment of confounding factors,there was no significant correlation between hemoglobin and hematocrit with concentration of lipid parameters,glucose and insulin. Before and after adjustment of confounding factors,there was no significant correlation between total amount of iron,heme iron and non-heme dietary iron intake with concentration of lipid parameters,glucose and insulin**.**
Conclusion: According to the current study,serum fer-

ritin is directly and significantly correlated with concentration of fasting blood flucose which emphasized on amount of iron store with blood glucose even in healthy people. Although the findings of the present study indicate no significant correlation between iron store and dietary iron intake with lipid parameters and insulin,conducting a more extensive epidemiologic study in men and other age groups is recommended for confirmation or rejection of the findings in the preset study.

Keywords: Iron store,Lipid profile,Iron intake,Iran

Patterns of diet-related practices and prevalence of gastroesophageal reflux disease

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Background: No studies have evaluated associations between patterns of diet-related practices as determined by latent class analysis (LCA) and gastroesophageal reflux disease (GERD). We aimed to assess this relationship in a large sample of Iranian adults.

Methods: In a cross-sectional study in 4763 adults,diet-related practices were assessed in four domains,'meal pattern','eating rate','intra-meal fluid intake',and 'meal-to-sleep interval',using a pretested questionnaire. LCA was applied to identify classes of diet related practices. We defined GERD as the presence of heartburn sometimes,often or always**.**

Results: The prevalence of GERD in the study population was 23.5% (n = 1120). We identified two distinct classes of meal patterns: 'regular' and 'irregular',three classes of eating rates: 'moderate','moderate-to-slow',and 'moderate- to-fast',two major classes of fluid ingestion with meals:'moderate' and 'much intra-meal drinking',and two classes regarding the interval between meals and sleeping: 'short' and 'long meal-to-sleep' interval. After adjustment for potential confounders,subjects with 'irregular meal pattern' had higher odds of GERD compared with subjects with 'regular meal pattern' (OR: 1.21; 1.00–1.46). However,when taking into account BMI,the association disappeared. 'Long meal-to-sleep interval' was inversely associated with GERD compared with 'short meal-to-sleep interval' (OR: 0.73; 95%CI: 0.57–0.95). 'Eating rate' and 'intra-meal fluid intake' were not significantly associated with GERD**.**

Conclusions: Our data suggest certain associations between dietary patterns and GERD. These findings warrant evaluation in prospective studies to establish the potential value of modifications in dietary behaviors for the management of GERD.

Keywords: Dietary habits,Gastroesophageal reflux disease,Latent class analysis,Meal regularity,Iranian adults.

The effect of nutritional support (providing food basket) of malnourished pregnant mothers in need in 2013

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Background: Maternal mortality rate is one of the most important indicators of health. One of the main factors for the correct process of pregnancy. Nutrition is pregnant. Proper and balanced diet during this period for the restoration and development of maternal tissue that is responsible for nutrition and fetal development is very important. Inadequate weight gain during this period endangers the health of mothers and fetal . In this study, the effect of nutritional support (providing food basket) of malnourished pregnant mothers in need in 2013 is examined.

Methods: This project the participation the Alavi Foundation Institute, 1200 pregnant women in rural areas are in need of nutritional support were 5 city of Hormozgan. Pregnant Entry Requirements to this program is one of the cases: BMI less than 8/19, weighing less than 45 kg before pregnancy, hemoglobin less than 5/10 grams per deciliter (the second trimester) and improper weight during pregnancy. Fourth month of pregnancy until birth mothers are eligible once every two months received a food basket. If the the mother suffered a miscarriage, stillbirth, immigration is out of your coverage area, the food basket was removed.In addition, all mothers attended classes held nutritional skills.

Results: From 4575 pregnant women in rural areas 5 desired city, 26/2% of eligible pregnant women (1200 women) to select the food basket received 92% of their weight well during pregnancy and 1/95% of their babies weighing more than 2500 g were born . In addition, 88% pregnant mothers attended nutrition classes to increase skills.

Conclusion: The results of this study, significant effects nutritional support and education programs on the weight gain desirable for both mother and baby are viewed with the appropriate weight It also requires continuing education programs) With topics nutritional needs during pregnancy and lactation, nutritional the recommendations to pregnant women at risk of malnutrition and inadequate weight gain) In order to strengthen support programs for families in need by providing food basket can be tried.

Keywords: pregnant women, nutritional support program,nutritional education

Patterns of dietary behaviors identified by latent class analysis are associated with chronic uninvestigated dyspepsia

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Background: We are aware of no study that assessed relationships between patterns of dietary behaviors,identified by latent class analysis (LCA),and chronic uninvestigated dyspepsia. This study was conducted to determine the association between patterns of dietary behaviors identified by LCA and chronic uninvestigated dyspepsia in a large sample of adults.

Methods: In a cross-sectional study conducted on 4763 Iranian adults,we assessed patterns of dietary behaviors in four domains including "meal pattern","eating rate","intra-meal fluid intake" and "meal-to-sleep interval",as identified by LCA,using a pre-tested comprehensive questionnaire. Patients with chronic uninvestigated dyspepsia were identified using Rome III diagnostic criteria**.**

Results: Chronic uninvestigated dyspepsia was preva-

lent affecting 15.2% (95% CI: 14.4-16.2%; n=723). Early satiation occurred in 6.3% (n=302),bothersome postprandial fullness in 8.0% (n=384) and epigastric pain in 7.8% (n=371),respectively. We defined two distinct classes of meal patterns: "regular" and "irregular". Three classes of eating rates were defined: "moderate","moderate-to-slow",and "moderate-to-fast". Participants were identified as ingesting fluid with meals in two major classes: "moderate intra-meal drinking" and "high intra-meal drinking". In terms of the interval between meals and sleeping,two distinct classes were obtained: "short meal-to-sleep interval" and "long meal-to-sleep interval". After controlling for potential confounders,"irregular meal pattern" was significantly associated with greater odds of chronic uninvestigated dyspepsia (OR: 1.42; 95% CI: 1.12-1.78) compared with a "regular meal pattern". Individuals with "moderate-to-fast eating rate" were more likely to have chronic uninvestigated dyspepsia compared with those who had "moderate eating rate" (OR: 1.42; 95% CI: 1.15-1.75). Patterns of "meal-to-sleep interval" and "intra-meal fluid intake" were not significantly associated with chronic uninvestigated dyspepsia.

Conclusion: There is a significant association between "irregular meal pattern" and "moderate-to-fast eating rate" with greater odds of chronic uninvestigated dyspepsia. Further prospective investigations are warranted to confirm this association.

Keywords: Dietary habits,Chronic uninvestigated dyspepsia,Functional gastrointestinal disorders,Meal regularity,Eating rate

The association between food insecurity and depression in adult living in Tehran, a Cross Sectional Study

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Background: Food insecurity (limited access to healthy and sufficient food in order to meet individual needs) is considered as a major problem for public health that can affect physical and psychological functions. The aim of the current study was to assess the association between food insecurity and depression rate of medical sciences students of Tehran University.

Materials and Methods: This study was conducted with 272 students living with their parents in spring 2013. Two-stage cluster sampling was used. Information related to food security status and depression was collected by 18-items food security questionnaire (USDA) and the Beck depression inventory respectively. SPSS-18 software was used for Chi-squared test, one-way analysis of variance and ANCOVA to describe and analyze data.

Results: The prevalence of food secure, food insecurity without hunger and with hunger of the students was 55.8, 26.8 and 17.3% respectively. The mean (±SD) of depression score between food secure, food insecurity without hunger and with hunger groups was statistically significant (13.85, 14.81, 16.70 respectively, P=0.03). After controlling for confounders (age, sex, economic status and BMI), the mean (±SD) of depression score between groups was marginally significant (13.86, 14.93, 16.51 respectively, P=0.055).

Conclusion: In this study, it was apparent that depression rate significantly increased by extension of food insecurity in adult people. Findings emphasize the importance of continuing initiatives to ensure whether there is a direct association between depression rate and food insecurity status.

Keywords: food insecurity, depression

Appropriate anthropometric index and its cutoff point for screening obese/overweight in young women

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Background: There is no singular agreement on the best anthropometric indices to evaluate overweight and obesity. This study evaluated anthropometric indices for diagnosing and screening overweight and obesity to determine an appropriate cut-off point for young women.

Materials and methods: This cross-sectional study was conducted on 279 healthy female college students aged 18-25 years living in a university dormitory. Demographic data was collected by questionnaire. Height, weight, waist circumference (WC) and hip circumference were measured and used to calculate body mass index (BMI), waist-to -hip ratio (WHpR) and waist-to-height ratio (WHtR). ANOVA and ROC were used to analyze the data, determine the sensitivity and specificity of international anthropometric cut-off points, and propose new optimal cut-off points for each anthropometric index.

Results: The area under the curve (AUC) was 0.918 for WC, 0.920 for WHtR and 0.76 for WHpR. The AUC for WHpR was significantly lower than the other values ($p < 0.001$). The sensitivity and specificity for the international cut-off points were, respectively, 77% and 88% for WC of 80 cm, 67% and 72% for WHpR of 0.8, and 80% and 90% for WHtR. The highest sensitivity and specificity values were for the proposed cut-off point for WC of 77 cm (sensitivity 82%, specificity 83%), WHpR of 0.79 (sensitivity 72%, specificity 65%) and WHtR of 0.48 (sensitivity 87%, specificity 80%).

Conclusion: WC and WHtR ratio are better indices than WHpR to detect overweight and obesity;however WC is the index applicable for clinical practice because it is easier to measure than the other twoindices and is low cost. The suggested cut-off point of WC of 77 cm had higher sensitivity and specificity for diagnosis of overweight and obesity in young women than the standard WC of 80 cm.

Keywords: ROC analysis, Sensitivity and specificity, Waist circumference**,** Waist-to-hip ratio, Waist-to height ratio

Survey the efficiency of the nutritional support of NPO patients in Mashhad Dr sheikh children

subspeciality hospital

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Background: NPO (Nil per os) or absence of oral feeding in long term for hospitalized patients and insufficient attention to correct diet of them in hospitals can be seen. Regard to the impact of this issue on nutritional status and growth of children, this study with the aim of identifying the limitations about the nutritional supports of NPO children was done in Mashhad Dr Sheikh children hospital.
Methods: This cross-sectional study was carried out in all wards of the Dr Sheikh children hospital with a questionnaire which included the items of nutritional cares for NPO children.
Results: Results of the present study showed that the total NPO patients during the study were 31.7 percent of the all patients of the hospital. Reasons of NPO in these patients included esophageal atresia, diaphragmatic hernia, abdominal distention, intestinal obstruction, intestinal mal-rotation, imperforated anus, ileus, other surgery procedures, respiratory distress and loss of consciousness level, unclear reasons and carelessness of staff and biopsy. Nearly 88 percent of patients had total parenteral nutrition (TPN) during the NPO time. A total of 88.23 percent of patients received intravenous dextrose water serums during the NPO time and 52 percent of them received less than 10 percent of their energy needs during the NPO time.
Conclusion: The present study showed that the most important reason of the NPO was surgery in Dr Sheikh children hospital and majority of the NPO patients did not receive sufficient energy during the NPO time. More future researches are needed on the nutrition of NPO children.
Keywords: Fasting in hospitalized patients, Hospital malnutrition, NPO.

Barberry treatment reduces serum anti-heat shock protein 27 and 60 antibody titres and high sensitive C-reactive protein in patients with metabolic syndrome: a double-blind, randomized placebo-controlled trial

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Background: The metabolic syndrome is an important risk factor for cardiovascular disease (CVD). The heat shock proteins (HSPs) are associated with risk factors for CVD. The aim of present study was to survey the effect of barberry on antibody titres to HSPs and hs-CRP in patients with metabolic syndrome.
Methods: In present study, subjects (n=106, 79 female and 27 male, 18-65 years old subjects) with metabolic syndrome were randomised to two groups: patients received three capsules of barberry and control group who received three capsules of placebo for 6 weeks. Antibodies against HSP 27, 60/ 65 and 70, hs-CRP and lipid profile were determined in patients before (week 0) and after (week 6) intervention. SPSS software was used for data analysis.
Results: Results showed that barberry had no significant effect on serum level of anti-HSP 65 and 70. But there was a significant decrease in anti-HSP 27 in both case and control groups (P =0.001 and <0.001 respectively in case and control group). Barberry decreased significantly anti-HSP 60 in case group (P=0.03). Hs-CRP was decreased non-significantly (P=0.17) in case group and increased significantly (P=0.04) in control group. Barberry decreased significantly LDL-C and total-C and increased significantly HDL-C (P<0.05).
Conclusion: Results of the present study suggested that barberry supplementation in patients with metabolic syndrome decreased significantly anti-HSP27 and 60 and hs-CRP levels and improved lipid profile.
Keywords: Metabolic syndrome, Anti-heat shock proteins, Barberry

Comparison of dietary macro and micro nutrient intake between Iranian patients with long-term complications of sulphur mustard poisoning and healthy subjects

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Background: Patients with long-term complications of sulfur mustard (SM) poisoning are having less physical activities and no controlled diets. The aim of present study is to investigate their dietary intakes in comparison to control group.
Methods: This was conducted on 55 Iranian male veterans, who had more than 25 % disabilities due to long-term complications of SM poisoning and 55 men age-matched healthy subjects. Previously validated food frequency questionnaire was used for measuring dietary macro/micro nutrient intake for both groups; then outcomes were analyzed with Dietplan6 software.
Results: Analysis of macro/micro nutrients in dietary intakes of the patients vs. the controls showed a significantly lower intake of some nutrients such as selenium and carbohydrate. On the other hand, the dietary intake of trans fatty acids and iodine were significantly higher in these patients than the control group.
Conclusion: Long-term complications of SM poisoning in the Iranian veterans have induced both chemical and physical disabilities. Macro/micro nutrients intake

in these patients was significantly different in comparison with the healthy subjects. Therefore, dietary advice for these patients strongly recommended preventing chronic diseases.

Keywords: Dietary Macronutrient Intake, Dietary Micronutrient Intake, Chemical Warfare Agents, Sulfur Mustard.

A survey on amount of energy intake in ICU patients according to type of formula during the first week of enteral nutrition initiation

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Background: Several formulas are available for enteral nutrition (EN). We tried to find if the amount of energy intake (I) and amount of GRV(Gastric Residual Value) is affected by the type of formula during the first week of start of enteral feeding.
Methods: 128 patients were assigned to 4 groups of formulas randomly. Formulas which were used were Entera meal Standard, Entera meal High Fiber, Ensure and Nutricomp Standard. Amount of formula was advanced according to ICU protocol.
Results: Median goal of (I) was 2294kcal/day. Only 0.8% of patients achieved goal of energy at seventh day. There was no significant differences between formula`s type (p<0.344) however according to GRV there was significant differences between formulas(p<0.0001)(Ensure13.8± 2.9 , Entera meal standard 18.4± 11 , Entera meal high fiber 23.33; ±17, Nutricomp18.09± 11
Conclusion: There was no difference in amount of energy intake according to type of formula. Attention to total amount of energy intake in order to achieve the goal of energy intake is more important.
Keywords: Nutrition, ICU, Energy Intake, GRV

Effects of probiotic yogurt consumption on salivary cytokines in students with initial stages of dental caries in Ahvaz city,Iran

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Background: Dental caries is commonly affect nearly 95% of population and is bacterially mediated processes. In people with moderate to high risk of dental caries the surgical approach needs to be combined with an antimicrobial agent to ensure adequate control of caries process. Using probiotics is suggested as another approach. Probiotics defined as 'bacterial cultures or living micro-organisms which upon ingestion in certain numbers exert health benefits beyond inherent general nutrition and support a good healthy intestinal bacterial flora. A wide range of probiotic products containing different bacterial strains are commercially available like lozenges,sucking tablets,chewing gums,dairy products such as milk,ice cream,cheese,yoghurt. Yoghurt is considerd as the model probiotic food and it is indicated that daily consumption of dairy products may be the most natural way to ingest probiotic bacteria. Dairy yoghurt is produced using a culture of several bacteria including lactobacillus acidophilus,lactobacillus bifidus. Recent studies indicate that certain gut bacteria including lactobacilli and bifidobacterium may exert beneficial effects in oral cavity by inhibiting cariogenic bacteria and reducing some cytokines in inflammation process. The aim of this study was to evaluate the effects of probiotic yogurt containing bifidobacterium lactis on salivary cytokines in students with early dental caries.
Methods: In this randomized clinical trial 66 adults (18-30 y) with early dental caries were selected. Subjects were randomly assigned to two groups: intervention group received 300 g/d probiotic yoghurt and control group received 300 g/d conventional yoghurt for two weeks. Unstimulated fasting saliva sample was collected before and post intervention. Salivary IL1-β and TNF-α were measured using enzyme-linked immunosorbent assay (ELISA).
Results: The mean level of IL1-β was significantly reduced in intervention group compared with control group post intervention (P<0.001). The mean level of TNF-α was also lower in intervention group compared with control group,however,it was not significant (P=0.06). The mean level of salivary IL1-β was significantly reduced in intervention group post intervention (P<0.001),but the difference in the level of TNF-α was not significant in this group post intervention (P<0.1). In control group the mean levels of IL1-β and TNF-α did not changed significantly between baseline and two weeks post intervention.
Conclusion: It is suggested that daily consumption of probiotic yoghurt may be beneficial in reducing some cytokines specifically IL1-β which is considered as the main cytokine in pre-inflammation process. Therefore it would be helpful to prevent the progress of dental caries.
Keyword: Probiotic yogurt,Dental caries,saliva,sytikine

Effects of probiotic yogurt consumption on Streptococcus mutans and Lactobacilli counting in students with initial stages of dental caries in Ahvaz city, Iran

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Background: Numerous microorganisms are inhabited in the oral cavity in human. Tooth decay caused by oral microbial flora is considered as one of the most widespread and common infectious diseases of human beings. The development of dental caries depends on the balance between the quantities of cariogenic and non-cariogenic microorganisms,as well as the interaction between protective and pathological agents in saliva and dental plaque. Streptococcus mutans and lactobacilli are considered as main etiological agent of dental caries and play an important role in dental plaque formation and the development of dental caries. Probiotics are considered as living microorganisms and beneficial for human health. Recently there has been increasing interest and investigation in probable useful effects of probiotic bacteria. The aim of this study was to determine the effect of short term consumption of probiotic yogurt containing bifidobacterium lactis on salivary streptococcus mutans and lactobacilli in adults with initial stages of dental caries.
Methods: In this randomized clinical trial 66 adults (18-30 y) with early dental caries were selected. Subjects were randomly assigned to two groups: intervention group received 300 g/d probiotic yoghurt and control

group received 300 g/d conventional yoghurt for two weeks. Unstimulated fasting saliva sample was collected before and post intervention. Bacteria counting was performed for streptococcus mutans and lactobacilli. Salivarius mitis agar and Rogosa agar were respectively used for streptococcus mutans and lactobacilli.
Results: The number of streptococcus mutans in saliva was significantly reduced in the intervention group,but not changed in the control group. Streptococcus mutans was also significantly lower in intervention group compared with control group post intervention. Although salivary lactobacilli was reduced significantly in both groups post intervention,this reduction was significantly greater in intervention group compared with control group.
Conclusion: It is suggested that using probiotic yogurt may be useful to prevent the progression of dental caries.
Keyword:Probiotic yogurt, Dental caries,Streptococcus mutans, Lactobacilli

Impact of cranberry juice enriched with w-3 and their individual consumption adjunct with non-surgical periodontal treatment on lipid profile in diabetic patients with periodontal disease
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Background: Type 2 diabetes mellitus and periodontal disease hold a physiologically relationship. Periodontal disease,a common widespread chronic disease,is considered as an important complication in diabetes. The prevalence and severity of periodontal disease are increased among diabetic patients. A balanced nutrition may improve either diabetes or periodontal disease by controlling one of them. The aim of this study was to evaluate the effects of cranberry juice enriched with w3 and their individual consumption on lipid profile in diabetic patients with periodontal disease.
Methods: In this randomized clinical trial 41 diabetic patients (35 – 65 y) with chronic adult periodontal disease were recruited from Endocrinology clinic of Golestan Hospital in Ahvaz city,Iran. Subjects were randomly assigned to four groups as follow: one control group (n=12) and three intervention groups as receiving w3 (n=10),cranberry juice (n=9),cranberry juice enriched with w3 (n=10) for 8 weeks. Non-surgical periodontal therapy was provided for all patients during study. Triglyceride,total cholesterol,HDLc and LDLc were measured at baseline and at the end of study.
Results: There was a significant difference (P = 0.032) in HDLc between group received cranberry juice enriched with w3 (50.6 ± 13.1 mg/dl) and group received cranberry juice (40.4 ± 10.8 mg/dl) and also between group received cranberry juice enriched with w3 (50.6 ± 13.1 mg/dl) and group received w3 (46 ± 11.9 mg/dl) with P < 0.05 post intervention. LDLc was reduced in all groups post intervention but the difference was not significant. Plasma triglyceride and total cholesterol did not also significantly changed within groups post intervention.
Conclusion: It is suggested that consumption of cranberry juice enriched with w3 in adjunct with non-surgical periodontal therapy and other medications may be beneficial in improving lipid profile by increasing HDLc in diabetic patients with periodontal disease. Therefore,the role of nutrition in controlling both diseases would be inevitable.Periodontal disease,Diabetes mellitus,w3 fatty acid,cranberry juice,lipid profile.
Keywords: Periodontal disease,Diabetes mellitus,w3 fatty acid,cranberry juice,lipid profile

Effect of nutrition and education in decreasing of growth dosorders in children 3-6 years in Hormozgan 1392
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Background: Despite worldwide efforts to raise healthy children, but malnutrition remains a major nutritional problem in developing countries is often.
Methods: This study is an experimental study. Child welfare village nurseries city of 11 selected provinces and the anthropometric After anthropometric children, growth retardation were identified 6 months to a cooked meal every day for the children were given a set menu and they were again anthropometric measurements. After reviewing the data using SPSS software and analyzed with T test.
Results: 8220 children 6-3 years old village nurseries Firstly the anthropometric measurements of height and weight of children Number of children in 1281 were based on a standard curve of growth retardation (15/58%). All parents care about the kids and teachers ways to improve the nutritional status of children under 6 years of age were taught. After a hot meal to children with developmental disorders (every day for 6 months), Height and weight were measured again, 656 children were still growth retardation (7/98%) And 625 children have reached the desired height and weight. The FTT is about 6/7% had fallen. And 48/8% improvement in weight and height in children with growth retardation was seen.
Conclusion: The results suggest that interventions designed to improve developmental disorder in 11 rural province. The experience gained from the project indicate that the training of mothers with children under 6 years, training employees in various areas of proper nutrition and correct pattern of food consumption, as well as collaboration bodies outside part can improve the nutritional status of children and their health effective steps taken.
Keywords: Village Nursery, Hot Meal, Growth improvment

Physicians' and nutritionists' knowledgeabout nutritional support of patients inintensive care units
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Background: Specific metabolic needs of patients in intensive care units (ICUs) require proper and early nutritional supports. Standard nutritional support of critically ill patients by specialists of health care team leading in wound healing,reducing length of stay and mortality in these patients. The study was designed for assessing nutritional knowledge of ICUs doctors and nutritionists according to ASPEN (American Society of Parenteral and Enteral Nutrition) and ESPEN (European Society of Parenteral and Enteral Nutrition) nutritional support guidelines.
Materials and Methods: A questionnaire designed

based on ASPEN and ESPEN nutritional support guidelines,after validation were distributed between specialists of ICUs in seven hospitals of Iran University of Medical Sciences,one hospital of Urmia University of Medical Sciences and also nutritionist of all hospitals of Iran University from June2013-July2014. Data collected from the questionnaires were analyzed by statistical software SPSS 20.

Results: 139 physician specialists in intensive care,lung surgery,neurosurgery,anesthesiology and internal medicine and also 30 nutritionists answered the questions. 4.3 percent of doctors got good score,85.6% and 10.1% have mediocre and poor score respectively. Nutritional knowledge level of 63.3% of nutritionists was mediocre and that of 36.7% was poor.

Conclusion: Unfortunately,despite the global nutritional support guidelines for patients in intensive care units and the importance of proper nutritional support for these patients,there is still a big gap between the guidelines and clinical knowledge. Identify areas of weakness in the nutritional supports of these patients in hospital will help to design necessary programs for introducing and implementation of the guidelines.

Keywords: Nutritional support,intensive care unit,physi cian,nutritionist,ASPEN,ESPEN

The Effects of Sesamin Supplementation on Serum Levels of Inflammatory Markers in Type2 Diabetes Mellitus; a Double Blinded, Randomized Clinical Trial Patients With

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Background: Diabetes mellitus is a metabolic disorder that non-enzymatic glycated end products make change in the composition of biomolecules and these products increase inflammatory cytokines synthesis by macrophages activating and increasing the oxidative stress and cause some complications such as atherosclerosis, nephropathy, and retinopathy. Given the possible effects of sesamin, the most abundant lignan in sesame, in correcting metabolic disorders leading to diabetes, this study was carried out to evaluate the effect of sesamin supplementation on serum levels of inflammatory markers in patients with type 2 diabetes.

Methods: In this double-blinded randomized, placebo controlled clinical trial, 48 patients with type 2 diabetes were recruited and randomly assigned into two groups; intervention group (sesamin capsules; 200mg/day, n=24) and control group (placebo capsules; 200mg/day starch, n=24). Serum inflammatory markers were measured at baseline and after 8 weeks intervention, using ELISA commercial kits.

Results: Sesamin reduced serum levels of TNF-α significantly in the intervention group compared with the control group (p=0.008). Interlukin-6 decreased significantly in the intervention group at the end of the study (P=0.043). Serum levels of hs-CRP were decreased in the intervention group compared with the control group, but it was not significant (***P***>0.05).

Conclusion: 200 mg/day sesamin supplementation reduced serum levels of some of inflammatory cytokines in patients with type 2 diabetes and thereby plays an important role in preventing chronic diabetes complications.

Keywords: Diabetes, Sesamin, Inflammation, Cytokine

Effect of diet on weight gain in pregnant women Hormozgan province second 6 months of 2013

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Background: Maternal mortality rate is one of the most important indicators of health. One of the main factors for the correct process of pregnancy. Nutrition is pregnant.

Proper and balanced diet during this period for the restoration and development of maternal tissue that is responsible for nutrition and fetal development is very important.

Inadequate weight gain during this period endangers the health of mothers and fetal . In this study, the effect of nutritional support (providing food basket) of malnourished pregnant mothers in need in **1392** is examined.

Methods: This project the participation the Alavi Foundation Institute, **1200** pregnant women in rural areas are in need of nutritional support were **5** city of Hormozgan. Pregnant Entry Requirements to this program is one of the cases :BMI less than **19/8**, weighing less than **45** kg before pregnancy, hemoglobin less than **10/5** grams per deciliter (the second trimester) and improper weight during pregnancy. Fourth month of pregnancy until birth mothers are eligible once every two months received a food basket. If the mother suffered a miscarriage, stillbirth, immigration is out of your coverage area, the food basket was removed.In addition, all mothers attended classes held nutritional skills.

Results: From 4575 pregnant women in rural areas 5 desired city, 26/2% of eligible pregnant women (1200 women) to select the food basket received 92% of their weight well during pregnancy and 95/1% of their babies weighing more than 2500 g were born . In addition, 88% pregnant mothers attended nutrition classes to increase skills.

Discussion: The results of this study, significant effects nutritional support and education programs on the weight gain desirable for both mother and baby are viewed with the appropriate weight It also requires continuing education programs (With topics nutritional needs during pregnancy and lactation, nutritional the recommendations to pregnant women at risk of malnutrition and inadequate weight gain) In order to strengthen support programs for families in need by providing food basket can be tried.

Keywords: Pregnant women, nutritional support pro-

gram, improvement

A Survey of Attitudes of Urban and Rural Households in Hormozgan Province the Consumption of Soda and Buttermilk

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Background: One of the major causes of nutritional deficiencies, lack of nutritional knowledge, attitude and practice and therefore is inappropriate in this case. Inappropriate intake of drinks such as soda can, over time, health-endangering and person at risk for various diseases, including obesity, impaired digestion and absorption of nutrients in food, osteoporosis, diabetes, and …. Replacement of healthy drinking such as water, milk and juices fresh and natural with carbonated drinks, ready commercial fruit juice, and prepared powders syrup over the recent years is the result of lifestyle changes. This study aimed to assess attitudes of urban and rural households in the Hormozgan Province was administered consumption buttermilk and soda.
Methods: In this cross-sectional study to assess the state of knowledge of urban and rural households in Hormozgan province about the fast food consumption is associated with overweight and obesity 456 households (57 clusters) were selected using a cluster sampling was conducted. Out of the 57 clusters, 33 clusters were considered urban and 24 rural cluster. The data collection instrument was a questionnaire survey of knowledge, attitudes and practices regarding nutrition in rural and urban households (NUTRICAP) in an interview in 1390 that the house has been completed. Data collected were analyzed using methods descriptive statistics.
Results: This study shows that a total of 95/2% of the study population (96/2 percent in a sample of urban and rural samples 93/8 percent) preferred buttermilk rather than soda And 4.8 percent (3/8 urban samples and 3/6 in a sample of rural) preferred soda rather than buttermilk.
Discussion: The results in this case show that the need for continuity education in this field, especially in rural areas.
Keywords: soda and buttermilk, Hormozgan Province

The Impact of Education on Nutrition and Growth Disorders in Children3-6 Years Old in the Village Nurseries Hormozgan Province 2014

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Background: Despite worldwide efforts to raise healthy children, but malnutrition remains a major nutritional problem in developing countries is often.
Methods: This study is an experimental study. Child welfare village nurseries city of 11 selected provinces and the anthropometric After anthropometric children, growth retardation were identified 6 months to a cooked meal every day for the children were given a set menu and they were again anthropometric measurements. After reviewing the data using SPSS software and analyzed with T test.
Results: 8220 children 3-6years old village nurseries Firstly the anthropometric measurements of height and weight of children Number of children in 1281 were based on a standard curve of growth retardation (15/58%) .All parents care about the kids and teachers ways to improve the nutritional status of children under 6 years of age were taught .After a hot meal to children with developmental disorders (every day for 6 months), Height and weight were measured again, 656 children were still growth retardation (7/98%) And 625 children have reached the desired height and weight. The FTT is about 6/7% had fallen. And 48/8% improvement in weight and height in children with growth retardation was seen.
Discussion: The results suggest that interventions designed to improve developmental disorder in 11 rural province. The experience gained from the project indicate that the training of mothers with children under 6 years, training employees in various areas of proper nutrition and correct pattern of food consumption, as well as collaboration bodies outside part can improve the nutritional status of children and their health effective steps taken.
Keywords: Village care, hot meals, improvement of child

Effect of concentrated pomegranate juice on lipid profile in type 2 diabetic patients

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Background: Although current information shows that pomegranate in type 2 diabetic patients canimprove control blood sugar and lipids profile there are controversial results about its relevance toimproving blood sugar and lipids in diabetes. This survey investigated the influence of concentratepomegranate juice (CPJ) on fasting blood sugar, lipid profile, total antioxidant capacity (TAC) andblood pressure.
Methods: This is a quasi-clinical trial which was conducted on 40 type 2 diabetic patients in Golestan hospital in Ahvaz in 2013. Fasting blood samples were taken at baseline and after 4 WK ofintervention to measure fasting blood sugar, lipid profile and TAC.
Results: While high density lipoprotein cholesterol was significantly increased afterintervention. Also, the results indicated that CPJ for 4 week significantly increase plasma levels of TAC(p<0/001),whereas no change was made in levels of fasting blood sugar, triglycerides,low density lipoprotein cholesterol and blood pressure.
Conclusion:
It is concluded that CPJ have significant positive effects on HDL and TAC in patientswith type 2 diabetes which may be attributed to its polyphenolic content. Further investigations areneeded with stronger design, larger sample size.
Keywords: type 2 diabetes, lipid profile, total antioxidant capacity, pomegranate