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Editorial

Can Anthocyanins Help Weight Loss?

Ameneh Marzban[1], Abdolrazagh Marzban[2]*, Payam Emami

1. Department of Health in Disasters and Emergencies, School of Health Management and Information Sciences, Iran University of Medical Sciences, Tehran, Iran
2. Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran
3. Department of Emergency Medical Sciences, School of Paramedical Sciences, Kurdistan University of Medical Sciences, Sanandaj, Iran

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Obesity is a multiple-factorial disease and a major challenge for the public health. Nowadays, prevalence of the disease is increasing in developed and developing countries due to changes in the peoples' lifestyle (1). General obesity and abdominal obesity are significantly associated to diseases such as cardiovascular diseases (CVD), gastrointestinal tract (GIT) diseases and cancers. In addition, obesity is an important risk factor for hypertension, type 2 diabetes and hyperlipidemia. It has recently been addressed that obesity is not only linked to medical consequences, but also it is associated to people's social statuses (2). In general, high-energy foods, changes in lifestyle, loss of physical activity, composition of intestinal microbiota and increased urbanization are the major causes of obesity (3). Overweight and obesity are the most important risk factors for moderation of several diseases. However a number of medications have been approved for the treatment of obese patients, several of these medications have been withdrawn due to their severe side effects such as heart diseases and psychiatric disorders (4). It seems that phytochemicals in foods, including anthocyanins, may play roles in decreases of obesity by losing weight and adipose tissues due to the structures of these chemicals (5, 6).

Anthocyanins are natural pigments of plant origins known as antioxidant compounds. Due to the increased interests in consuming food products based on natural ingredients, anthocyanins have become popular in food industries (7). These compounds are in the group of secondary metabolites and belong to the family of flavonoids (8). Anthocyanins are water-soluble pigments and produce various colors of red, purple and blue in fruits, vegetables and flowers, depending on the pH of the environment (9). Up-to-date, nearly 540 types of anthocyanins have been identified from various plant sources. Several types of anthocyanins, including chalcone, delphinidin, petonidin, peonidin, malvidin and cyaniding, are important in foods (10). Anthocyanins are found in most fruits (e.g. apples, apricots, blueberries, blackberries, blackberries, blueberries, cherries, blueberries and grapes), vegetables (e.g. asparagus, eggplant, chili, red cabbage, purple cabbage, purple carrots, purple cauliflower, purple turnips, red onions and red radishes), legumes (e.g. black beans and black soybeans) and grains (e.g. black rice, black purple rice, black sorghum, purple barley, red sorghum and rye) (1). Eating more foods rich in anthocyanins can play important roles in maintaining weight in adulthood and help prevent obesity and its severe consequences. Preventing low weight gain can also have significant effects on general health of the community and decrease risk of diabetes, high blood pressure, CVDs and various cancers.

Authors' contributions

Marzban A conceived the original idea and designed the study. Marzban AR and Emami P collected data and wrote the primary draft of the manuscript. All authors read and approved the final version of the manuscript.

Keyword: Anthocyanin, Obesity, Weight loss

***Address for correspondence:** Abdolrazagh Marzban, Razi Herbal Medicines Research Center, Lorestan University of Medical Sciences, Khorramabad, Iran. E-mail address: marzban86@gmail.com

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