In this issue of Journal, Darvish-Damavandi et al. evaluated the effect of hazelnut intake on fasting blood sugar (FBS) and lipid profile on diabetic subjects. The results of mentioned study showed that hazelnut consumption can prevent from reducing the high density lipoprotein (HDL). The effect of nut consumption on health risk-factors has been discussed from about 20 years ago and a favorable association between this food group and cardiovascular events has been reported previously. The results of recent observational studies confirm previous findings and show that nut consumption has a favorable effect on nutrient intake and health risk-factors such as lipid profile and metabolic syndrome components in children and adults.

However, Clinical trials reported controversial results. One randomized clinical trial could not show any different in changes of lipid profile between mixed nut (15 g walnuts, 7.5 g almonds and 7.5 g hazelnuts) consumer group and control group. In contrast to foresaid study, some intervention studies have been focused on one type of nuts. The findings of one study demonstrated that almond consumption may improve insulin sensitivity and reduce low density lipoprotein (LDL) concentration. Furthermore, nut consumption may increase HDL concentration among obese women in Brazil. The effect of hazelnut intake on cardiovascular disease has been evaluated in different subjects. According to previous study, consumption of different form of hazelnut can improve lipid profile and apolipoprotein concentration in hypercholesterolemic subjects. Furthermore, findings of another study showed that hazelnut intake have a role in reduction of oxidized LDL and improvement in LDL particle size. These findings are confirmed by a pooled analysis which reported that nut consumption has a dose-response effect on lipid profile.

Nut consumption is considered as a component of anti-cardiovascular disease recommendations. Health protective effects of nuts were referred to protein, fiber, unsaturated fatty acids, and phytosterol component of these foods. Previous studies showed that non-hydrogenated oils and Omega-3 fatty acids, such as found in nuts, have a favorable effect on different parameters among diabetes. So, it may be suggested that future studies, especially, randomized clinical trials, should assess the effect of long-term fatty nuts consumption on reducing different risk-factors of cardiovascular diseases. Furthermore, the effects of food industrial process should be considered because the effect of raw nut on health may be different to roasted one. Allergenic aspect of nuts intake should be kept in mind for future studies because food allergies such as peanut, tree nuts such as walnuts, hazelnuts, and almonds may induce potentially fatal hypersensitivity reactions among children. A great diversity in nuts food group is observed. Although, this diversity is a heterogeneity source for comparing previous studies, it provides an excellent opportunity in which investigators can administer different mixed nut for future researches.

Nuts are the rich source of vitamin E. So, they are considered as an antioxidant food. An improvement in total antioxidant capacity was also seen among soy consumers in comparison to control subjects. The impact of soy intake on healthy markers in diabetic patients is a hot topic which has been evaluated in previous studies. Consumption of soy and nuts (two antioxidant foods) in same time and its effect on insulin resistance and other healthy markers should be assessed in future studies.

Another unclear point that is still open to discuss relates to the effect of nut consumption in diabetic patients. Nuts, such as walnuts, are a good source of omega-3 fatty acid. The findings of previous studies regarding effects of omega-3 fatty acids on insulin resistance and FBS are controversial. On the other hand, nuts are high fat content foods and recommending nut consumption may accompany with increasing in fat intake. The impact of this increased fat intake on weight gain and lipid profile should be assessed in future studies, especially, among diabetic subjects.

In conclusion, although, the cardiac protective effect of nut consumption was evaluated in several studies, more comprehensive studies regarding the amounts and type of nuts and duration of consumption per day are required.

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