Time and Intervention Effects of Daily Almond Intake on the Changes of Lipid Profile and Body Composition Among Free-Living Healthy Adults.

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Abstract:
Favorable health benefits of almond have been shown in several previous studies. However, repeated measures, randomized, controlled trials to investigate the changes due to almond intake based on the time effects have not yet been reported. The current study was conducted to evaluate the effects of daily almond intake on changes in body composition and lipid profiles for 20 weeks with four measurements among healthy adults. Participants in the almond group showed favorable changes on blood lipid profiles, including levels of triglycerides (TG), total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), and non-high-density lipoprotein (non-HDL-C) after consuming 56 g of almond per day for 20 weeks compared with those at baseline. At week 20, subjects in the almond group showed significantly decreased TC, LDL-C, nonHDL-C, TG, body fat mass, and waist–hip ratio compared with those of the control group who consumed isocaloric control food. The mixed model also confirmed that there were significant time effects in several bioimpedance indicators (i.e., total body protein, fat-free mass, etc.) and all of the lipid profile parameters in the almond group. These results confirm the effects of lipid-lowering and modifying body composition of almond consumption. In addition, our results suggest that the measuring time points would be critical to capture the effects of dietary intervention.