

Green Fruit and Vegetables Have Favorable Effects on 3-Year Changes of Cardiometabolic Risk Factors: A Cohort Study

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Abstract : Background and aim: We aimed to investigate the effects of green fruits and vegetables (green FV) consumption on the 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. Dietary intake of green FV, including green cabbage, broccoli, lettuce, celery, green beans, green peas, cucumber, leafy vegetables, zucchini, green chili and bell pepper, and kiwi fruit, has 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 mean intake of green FV were estimated. Results: The mean age of men and women at baseline was 39.8 ± 12.7 and 37.3 ± 12.1 years, respectively. Mean intake of green FV was 152 ± 77 g/d. More intake from green FV was accompanied to more intake of vitamin A, α and β -carotene, lutein, β -cryptoxanthine, potassium, magnesium and fiber. Consumption of green FV was inversely associated with 3-year change of waist circumference ($\beta = -0.07$, $P = 0.01$), total cholesterol ($\beta = -0.11$, $P = 0.01$) and triglycerides ($\beta = -0.13$, $P = 0.01$). Each 25 g/d increase in consumption of green FV decreased the incidence of hyper-triglyceridemia by 12% (OR:0.88, 95%CI:0.71-0.99) in men. In women, no significant association was observed between consumption of green FV with cardiometabolic risk factors. Conclusion: Higher consumption of green FV could have preventive effects against abdominal fat gain and lipid disorders.

Keywords : cardiometabolic risk factors, abdominal obesity, lipid disorders, fruits, vegetables

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