


Effects of hesperidin supplementation on weight, glycemic control, lipid profile and inflammatory factors in patients with type 2 diabetes: A Randomized, Double-Blind and Clinical Trial Placebo-Controlled

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Abstract

Introduction: This study was conducted to investigate the effects of hesperidin (a common constituent of citrus fruits) supplementation on weight, indices of glycemic control, insulin resistance, lipid profile, and inflammatory markers in patients with type 2 diabetes. **Methods:** Forty-five patients participated in this randomized, double-blind controlled clinical trial who were randomly assigned to 2 intervention and control groups. Participants consumed either 500 mg/d pure hesperidin supplement or placebo in the intervention and control groups for 8 weeks, respectively. **Results:** Hesperidin supplementation led to significant decrease in fasting blood glucose (FBG) and glycated hemoglobin (HbA1c) ($p = 0.041$ and $p = 0.028$, respectively). A significant increase in serum insulin ($p = 0.018$) and decrease in total cholesterol ($p = 0.049$) were also observed in the hesperidin group, whereas no significant changes occurred in the placebo group. Inflammatory factors, high-sensitivity C-reactive protein (hs-CRP) and interleukin-6 (IL-6) were not significantly changed in the hesperidin group compared to the control group. **Conclusion:** hesperidin supplementation lowered the plasma level of total cholesterol and improved glycemic control and insulin resistance in patients with type 2 diabetes.

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Biography

Shahryar Eghtesadi received Bachelor degree in Nutrition Science and Food Chemistry 1975, from Shahid Beheshti University of Medical Sciences, Tehran; MSPH degree in Nutrition, 1977, from Tehran University of Medical Sciences, Tehran and PhD from University of California at Davis (UCD), USA, in Nutrition (1985). He served as Visiting Scientist in USDA Human Nutrition Research Center on Aging (HNRCA), Boston, USA (1994-1995); full professor of Tabriz, Iran and Tehran Universities of Medical Sciences and currently serves as Professor of Azad University, Science & Research Branch. He was the chairs of Departments of Nutrition and Biochemistry, Biochemistry & Clinical

Nutrition, Public Health Nutrition and Nutrition in aforementioned Universities. Also Served as Associate Dean and Dean of School of Public Health & Nutrition and School of Public Health of Tabriz and Iran Universities of Medical Sciences respectively. He was selected as distinguished professor and Scientist. For long and extended period of time, experienced teaching various courses in nutrition in undergraduate, graduate and postgraduate and international Bureau programs and directed many projects and dissertation of MS and PhD programs and Published numerous peer reviewed articles in journals and also edited several books and finally served as Principal Investigator of World Bank Project for Capacity Building in Nutrition in Iran.