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Effect of orange juice on body composition and biochemical profile of obese individuals submitted to weight loss diet

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We have evaluated the effect of regular consumption of orange juice in body composition and biochemical variables. The subjects of this study were obese men and women (36.3±0.8 y) who were submitted to an energy-restricted diet for 12 weeks. They had normal blood serum levels of cholesterol, triglycerides and glucose, and were randomly divided into 2 parallel groups. Group 1 (n=39) had an energy-restricted diet (-500 kcal/d) and Group 2 (n=39) had the same energy-restricted diet supplemented with orange juice (500 mL/d). The assessment of body composition (weight, BMI, fat mass, waist and hip circumference and ratio) were performed at week 0 and every 2 weeks until the end of the 12-week trial period. Evaluations of biochemical parameters (total cholesterol, LDL-C, HDL-C, triglycerides, glucose, insulin, HOMA-IR and CRPu) were performed 0, 4, 8 and 12 weeks. After the treatment, individuals undergoing only energy-restricted diet had a reduction in body composition parameters as well as biochemical parameters. In addition, individuals who also regularly consumed orange juice showed lower levels of blood serum cholesterol (-20%), LDL-C (-19%), CRPu (-49 %), insulin (-27%) and HOMA-IR (-33%). In conclusion, orange juice enhanced the effects of energy-restricted diet improving both lipid and glucose metabolism, showing that it is suitable for weight loss purposes as well as for the improvement of the biochemical profile of obese individuals.

Biography

Thais Cesaris an Associate Professor of Nutrition, Faculty of Pharmaceutical Sciences, Sao Paulo State University (UNESP), Araraquara, Brazil. She has a BS in Biology and PhD in Food Science and Nutrition from University of Sao Paulo, Brazil. She did Post-doctoral at the Boston University and at the Citrus and Subtropical Products Research Laboratory, ARS-USDA. Her scientific focus is investigating the nutritional and metabolic properties of citrus fruits in clinical studies and animal models, regarding the effect of its bioactive compounds as a protection factor against the development of chronic diseases.

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