Objective: To evaluate the effect of the glycemic index (GI) on food intake, anthropometric measurements and body composition in subjects with excess body weight. Methods: Crossover study, in which 17 subjects participated in two study sessions (high GI or low GI). Two daily meals were consumed in laboratory for 30 consecutive days in each session. Subjects also consumed under free living conditions 3 daily isocaloric servings of fruits, presenting the same GI as the session in which they were participating. At each 15 days, subjects were submitted to body composition (lean mass and fatty mass) and anthropometric indexes (weight, height, body mass index, waist circumference (WC), hip circumference, hip-waist relation (WHC)) assessment. Habitual food intake was assessed before and at the end of each session. Subjects were instructed to maintain the same level of physical activity during the study. Results: There was a significant reduction on WC and WHC after the low GI session. The other parameters did not differ between the treatments applied in this study. Conclusion: These results suggest that the consumption of low GI foods may favor the prevention and control abdominal obesity and the associated metabolic diseases.

Keywords
Glycemic index, Appetite, Food intake, Anthropometric measurements, Body composition, Obesity.