**Abstract**

Introduction: chia (Salvia hispanica L.) has an elevated concentration of dietary fiber, it has been used to weight loss and enhance blood glucose and lipid profile. However, data in human are still scarce or do not exist, according to the analyzed variable. Aim: to evaluate the effect of chia supplementation in body composition, lipid profile and blood glucose in overweight or obese individuals. Methods: men and women were randomly allocated in groups that ingested 35g of chia flour/day (CHIA; n=19; 48.8±1.8 years) or placebo (PLA; n=7; 51.4±3.1 years) for 12 weeks. Body composition and food intake were evaluated in each four weeks. Lipid profile and blood glucose were measured in the beginning and in the end of the study. Results: Chia induced significant intragroup reduction in body weight (-1.1±0.4kg; p<0.05), with a greater reduction among obese than overweighted individuals (-1.6±0.4kg; p<0.00), but without difference when compared to PLA. Waist circumference reduced 1.9±0.6 cm in CHIA group (p<0.05), but only intragroup. It was observed a reduction in total cholesterol (p=0.04) and VLDL-c (p=0.03), and an increase in HDL-c (p=0.01) but only in the groups that ingested chia flour and presented abnormal initial values. Triglycerides, blood glucose and LDL-C showed no changes for either group. Conclusion: consumption of chia for 12 weeks promotes significant but discrete reduction in weight and waist circumference, and enhances lipid profile dependent of initial values.
Keywords