Abstract

Background/objectives: Flaxseed has functional properties in the reduction of the risk of chronic non-communicable diseases such as cardiovascular disease, diabetes and cancer. Regardless of its high energy density, the consumption of flaxseed tends to promote body weight maintenance. The purpose of this study was to evaluate energy and macronutrient balance after flaxseed consumption. Subjects/methods: Twenty four healthy volunteers were allocated into 3 experimental groups, when they consumed flaxseed (FS), defatted flaxseed flour (FF), or flaxseed oil (FO). During the control period they were provided a diet without flaxseed products for 7-9 days. Following that diets containing 70 g of one of the flaxseed products were consumed for another 7-9 day-period. Test foods were consumed exclusively in the laboratory and fecal excretion was collected during the study. There was a higher energy excretion (P < 0.05) in the FF and FS groups, compared to their control and FO group. Results: The excretions of total lipid and the PUFA - linolenic acid were higher in FS group (P < 0.05). Conclusions: The intake of 70 g/day of FS and FF raised lipid and energy excretion, which may mitigated the effect of flaxseed consumption on body weight.

Keywords

Flaxseed, Flaxseed oil, Flaxseed flour, Energy balance.