Abstract

Background: Glycemic index and/or glycemic load have been explored as an alternative for the prevention and/or management of obesity, cardiovascular disease, type 2 diabetes mellitus, and cancer. Objective: The purpose of the manuscript is to describe the design and methods used in the GLYNDIET Project, a study designed to simultaneously address the questions related to the exactly role of low glycaemic index carbohydrates has on weight loss. Methods: This study was designed as a 6-months randomized, parallel, controlled clinical trial aiming to evaluate the effect of the dietary glycemic index on weight loss, satiety, glucose and insulin metabolism, lipid profile, inflammation and other emergent metabolic risk markers. Eligible subjects were community-dwelling men and women aged between 30 and 60 years, with a body mass index between 27 and 35 kg/m2. Subjects were randomly assigned to three different dietary intervention groups (low glycemic index diet, high glycemic index diet or low-fat diet), that were isocaloric, and did not differ in the amount of dietary fibre. Monthly, study subjects were scheduled for control visits where anthropometry, blood pressure, dietary habits, satiety and physical activity were assessed. Blood, urine and subcutaneous adipose tissue samples were collected at baseline and at the end of the study to further molecular and biochemical measurements. Discussion: The GLYNDIET study was designed to determine if there is a greater effectiveness of a carbohydrate restricted diet with low glycemic index compared to an isocaloric diet with carbohydrates of high glycemic index or low-fat diet on weight loss in middle long-term.

Keywords