Abstract

Introduction: The Westernization of the Mediterranean lifestyle has led to a modification of certain dietary habits such as a decrease in the consumption of dietary fibre-rich foods. The impact of these changes on cardiovascular diseases (CVD) has been studied over the last few years and the effect of the different sources of fibre on cardiovascular risk parameters and coronary heart disease (CHD) continues to create controversy. Objective: To evaluate the association between the source of dietary fibre and the prevalence of metabolic syndrome (MetS) and other cardiovascular risk factors in a Spanish working population. Subjects and methods: The study was carried out in a sample of 1592 Spanish workers free of CVD (40-55 years old) within the Aragon Workers’ Health Study (AWHS) cohort. Sociodemographic, anthropometric, clinical and biochemical data were collected. Fibre intake was assessed by means of a validated 136-items semiquantitative food-frequency questionnaire. MetS was defined by using the modified National Cholesterol Education Program - Adult Treatment Panel III (NCEP-ATP III) definition. Results: After adjusting for possible confounding factors, we found an inverse association between insoluble fibre intake and systolic and diastolic blood pressure, total cholesterol, triglycerides, apolipoprotein B100 and ratio TG/HDL. Soluble fibre was inversely associated with triglycerides and apolipoprotein B100. Furthermore, prevalence of MetS was found to be lower (OR 0.62, 95% CI: 0.40-0.96) in those participants in the highest quartile of insoluble fibre intake. Conclusion: A higher intake of insoluble fibre could play an important role in the control and management of hypertension, lipid profile and MetS.

Keywords

Dietary fibre, Metabolic syndrome, Cardiovascular disease.