Association between macronutrients intake and cardiovascular risk factors in adults: Tehran Lipid and Glucose Study (TLGS)

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Abstract

Background: Literature on independent relation between macronutrients intake and risk factors of cardiovascular disease is sparse.

Objective: To investigate the possibility of an independent relation between macronutrient intake and the risk of cardiovascular disease.

Methods: This was a cross sectional study performed on 243 participants of the TLGS study. Blood lipids, anthropometric indices and blood pressure were measured using standard protocols. A 24-hour dietary intake recall for two days was obtained. Logistic regression method was used to determine the relationship between cardiovascular risk factors and macronutrients intake.

Findings: The mean age of participants was 53±7 years. The men who consumed more carbohydrate had lower chances for hypercholesterolemia. Women with more lipid intake had lower chances for high LDL and hypertension. Individuals in third and fourth quartiles of protein intake had a lower odds ratio for high LDL and hypercholesterolemia in comparison to those in the first quartile.

Conclusion: Our data demonstrate an independent relation between some macronutrients intake and cardiovascular risk factors. In future studies, it is recommended that such a relationship to be investigated considering the effects of controlled physical activities.

Keywords: Cardiovascular Diseases, Carbohydrates, Fats, Hypertension