

Original Paper

Association between some dietary factors and risk of hypertension: Tehran lipid and glucose study (2008-11)

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Abstract

Background and Objective: Hypertension in long time can cause cardiovascular disorders and increase chance of stroke. This study was done to determine the association between some dietary factors and risk of hypertension.

Methods: This cross-sectional study was conducted on the fourth phase (2008-11) of Tehran lipid and glucose study (TLGS). In this study 6089 subjects (2807 males and 3282 females), aged 19-70 years, were participated and dietary, demographic, anthropometric and blood pressure of each subject were collected. Dietary intake was assessed using a validated and reliable food frequency questionnaire with 147-items. Odds ratio for hypertension according to quartiles of dietary factors was determined using logistic regression with adjustment for confounder variables.

Results: The rate of hypertension was 29.8%. Mean of weight, body mass index, waist circumference, prevalence of abdominal obesity and alliteration in the hypertensive subjects were significantly higher than normotensive subjects ($P < 0.05$). There was a non significant direct relationship between energy density, total fat and saturated fat. Higher consumption of fiber was associated with lower risk of hypertension (OR: 0.62, 95% CI: 0.37-0.97). The risk of hypertension increased in the highest quartiles of dietary protein (OR: 1.20, 95% CI: 1.02-1.43). Odds ratio for hypertension was higher among subjects whom consumed lower fruits and nuts than those subjects with higher fruits consumption (OR: 1.33, 95% CI: 1.15-1.85) and nuts (OR: 1.21, 95% CI: 1.02-1.42).

Conclusion: High consumption of fiber could protect against hypertension while some dietary factors such as high consumption of protein could increase risk of hypertension.

Keywords: Hypertension, Diet, Energy density, Macronutrients, Fruits, Vegetables, Dairy, Nuts, Meat

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