

Original Paper

Relation between pattern of nutrient intake and obesity in Isfahanian Adults: SEPAHAN study

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Abstract

Background and Objective: The growing evidence suggest on the association between dietary patterns and obesity. This study was done to determine the relation between pattern of nutrient intake and obesity in Isfahanian adults.

Methods: In this descriptive - analytical study, dietary data were collected using a semi-quantitative food frequency questionnaire in 8,691 subjects aged 18-55 years. Complete data of 6,724 and 5,203 adults were available for general and abdominal obesity, respectively. Daily intakes of 38 nutrients and bioactive compounds were calculated for each participant. Factor analysis was applied to derive major nutrient patterns.

Results: Three major nutrient patterns were identified: 1) pattern high in fatty acids, cholesterol, vitamin B12, vitamin E, zinc, choline, protein, pyridoxine, phosphorus, and pantothenic acid; 2) high in thiamine, betaine, starch, folate, iron, selenium, niacin, calcium, and manganese; and 3) high in glucose, fructose, sucrose, vitamin C, potassium, dietary fiber, copper and vitamin K. Men in the highest quintile of the second pattern were less likely to be generally obese in the fully adjusted model (95% CI: 0.20-0.76, OR: 0.39, P<0.05). After adjustment for potential confounders, a significant positive association was observed between the third pattern and general obesity among men (95% CI: 1.04-3.04, OR: 1.77, P<0.05), but it was not in women (95% CI: 0.74-1.88, OR: 1.18, P>0.05).

Conclusion: Nutrient patterns were significantly associated with general, but not abdominal obesity in the male Iranians participating in SEPAHAN study.

Keywords: Anthropometry, Obesity, Diet, Nutrient intake, Fat accumulation

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