

Increased Consumption of Fruit and Vegetables Is Associated with Decreased Risk of the Metabolic Syndrome

The metabolic syndrome, which is characterized by the presence of more than 3 of the factors of hypertension, hypertriglyceridemia, low HDL cholesterol, increased waist circumference, and elevated fasting blood glucose, is increasingly prevalent and associated with increased risk of both cardiovascular disease and diabetes. Publishing in this month's American Journal of Clinical Nutrition, Esmailzadeh and colleagues in Tehran, Iran and the Harvard School of Public Health studied dietary determinants of the metabolic syndrome in 486 female Iranian teachers aged 40–60 years. Each subject completed a semiquantitative food-frequency questionnaire, and measures were taken of all features of the metabolic syndrome, as well as C-reactive protein, an inflammatory marker known to be associated with cardiovascular disease risk. When the data were analyzed according to quintiles of dietary intakes, those in the lowest quintile of fruit and vegetable intakes had higher incidences of metabolic syndrome (38% and 36%, respectively) than did those in the highest quintiles of intakes (19% and 17%, respectively); those in the lowest intake quintiles also had the greatest incidences of obesity and diabetes. The daily consumption of fruit and vegetables correlated inversely with C-reactive protein concentrations. After control for other lifestyle factors, the calculated likelihoods of protection from the metabolic syndrome were 34% and 30% higher in those who consumed the highest amounts of fruit and vegetables, respectively, in their diets than in those who consumed the lowest amounts. The study underscores recommendations for increasing daily dietary intakes of fruit and vegetables for prevention of the metabolic syndrome and cardiovascular disease.

Esmailzadeh A, Kimiagar M, Mehrabi Y, Azadbakht L, Hu FB, Willett WC. Fruit and vegetable intakes, C-reactive protein, and the metabolic syndrome. Am J Clin Nutr 2006;84:1489–97.