Fruit and Vegetable Consumption and Diabetes Mellitus Incidence among U.S. Adults

Abstract

Background. Adequate fruit and vegetable intake may lower the risk of several chronic diseases, but little is known about how it affects the risk of diabetes mellitus.

Methods. We examined whether fruit and vegetable consumption was associated with diabetes incidence in a cohort of U.S. adults aged 25–74 years who were followed for about 20 years.

Results. In the analytic sample of 9,665 participants, 1,018 developed diabetes mellitus. The mean daily intake of fruits and vegetables as well as the percentage of participants consuming five or more fruits and vegetables per day was lower among persons who developed diabetes than among persons who remained free of this disease ($P < 0.001$). After adjustments for age, race or ethnicity, cigarette smoking, systolic blood pressure, use of antihypertensive medication, serum cholesterol concentration, body mass index, recreational exercise, nonrecreational exercise, and alcohol consumption, the hazard ratio for participants consuming five or more servings of fruits and vegetables per day compared with those consuming none was 0.73 (95% confidence interval (CI), 0.54–0.98) for all participants, 0.54 (95% CI, 0.36–0.81) for women, and 1.09 (95% CI, 0.63–1.87) for men. Adding education to the model changed the hazard ratios to 0.70 (95% CI, 0.59–1.06) for all participants, 0.61 (95% CI, 0.42–0.88) for women, and 1.14 (95% CI, 0.67–1.93) for men.