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Nut and peanut butter consumption and risk of type 2 diabetes in women.

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Abstract

CONTEXT: Nuts are high in unsaturated (polyunsaturated and monounsaturated) fat and other nutrients that may improve glucose and insulin homeostasis.

OBJECTIVE: To examine prospectively the relationship between nut consumption and risk of type 2 diabetes.

DESIGN, SETTING, AND PARTICIPANTS: Prospective cohort study of 83 818 women from 11 states in the Nurses' Health Study. The women were aged 34 to 59 years, had no history of diabetes, cardiovascular disease, or cancer, completed a validated dietary questionnaire at baseline in 1980, and were followed up for 16 years.

MAIN OUTCOME MEASURE: Incident cases of type 2 diabetes.

RESULTS: We documented 3206 new cases of type 2 diabetes. Nut consumption was inversely associated with risk of type 2 diabetes after adjustment for age, body mass index (BMI), family history of diabetes, physical activity, smoking, alcohol use, and total energy intake. The multivariate relative risks (RRs) across categories of nut consumption (never/almost never, <once/week, 1-4 times/week, and > or =5 times/week) for a 28-g (1 oz) serving size were 1.0, 0.92 (95% confidence interval [CI], 0.85-1.00), 0.84 (95% CI, 0.76-0.93), and 0.73 (95% CI, 0.60-0.89) (P for trend <.001). Further adjustment for intakes of dietary fats, cereal fiber, and other dietary factors did not appreciably change the results. The inverse association persisted within strata defined by levels of BMI, smoking, alcohol use, and other diabetes risk factors. Consumption of peanut butter was also inversely associated with type 2 diabetes. The multivariate RR was 0.79 (95% CI, 0.68-0.91; P for trend <.001) in women consuming peanut butter 5 times or more a week (equivalent to > or =140 g [5 oz] of peanuts/week) compared with those who never/almost never ate peanut butter.

CONCLUSIONS: Our findings suggest potential benefits of higher nut and peanut butter consumption in lowering risk of type 2 diabetes in women. To avoid increasing caloric intake, regular nut consumption can be recommended as a replacement for consumption of refined grain products or red or processed meats.

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