Abstract

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Dietary antioxidants and long-term risk of dementia.

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BACKGROUND: The Rotterdam Study previously found that higher dietary intakes of vitamins E and C related to lower risk of dementia and Alzheimer disease (AD) over 6 years of follow-up.

OBJECTIVE: To study consumption of major dietary antioxidants relative to long-term risk of dementia.

DESIGN: Population-based prospective cohort study.

SETTING: The Rotterdam Study in the Netherlands.

PARTICIPANTS: A total of 5395 participants, 55 years and older, who were free of dementia and provided dietary information at study baseline.

MAIN OUTCOME MEASURES: Incidence of dementia and AD, based on internationally accepted criteria, relative to dietary intake of vitamin E, vitamin C, beta carotene, and flavonoids.

RESULTS: During a mean follow-up period of 9.6 years, dementia developed in 465 participants, of whom 365 were diagnosed as having AD. In multivariate models adjusted for age, education, apolipoprotein E epsilon4 genotype, total energy intake, alcohol intake, smoking habits, body mass index, and supplement use, higher intake of vitamin E at study baseline was associated with lower long-term risk of dementia (P = .02 for trend). Compared with participants in the lowest tertile of vitamin E intake, those in the highest tertile were 25% less likely to develop dementia (hazard ratio, 0.75; 95% confidence interval, 0.59-0.95 with adjustment for potential confounders). Dietary intake levels of vitamin C, beta carotene, and flavonoids were not associated with dementia risk after multivariate adjustment (P > .99 for trend for vitamin C and beta carotene and P = .60 for trend for flavonoids). Results were similar when risk for AD was specifically assessed.

CONCLUSION: Higher intake of foods rich in vitamin E may modestly reduce long-term risk of dementia and AD.

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