

# Eating foods rich in vitamin E associated with lower dementia risk

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Consuming more vitamin E through the diet appears to be associated with a lower risk of dementia and Alzheimer's disease, according to a report in the July issue of *Archives of Neurology*.

Oxidative stress—damage to the cells from oxygen exposure—is thought to play a role in the development of Alzheimer's disease, according to background information in the article. Experimental data suggest that antioxidants, nutrients that help repair this damage, may protect against the degeneration of [nervous system cells](#). "Although clinical trials have shown no benefit of antioxidant supplements for Alzheimer's disease, the wider variety of antioxidants in food sources is not well studied relative to [dementia](#) risk; a few studies, with varying lengths of follow-up, have yielded inconsistent results," the authors write.

Elizabeth E. Devore, Sc.D., of Erasmus Medical Center, Rotterdam, the Netherlands, and colleagues assessed 5,395 participants 55 years and older who did not have dementia between 1990 and 1993. Participants underwent a home interview and two clinical examinations at the beginning of the study, and provided dietary information through a two-step process involving a meal-based checklist and a food questionnaire.

The researchers focused on four antioxidants: vitamin E, vitamin C, beta carotene and [flavonoids](#). The major food sources of vitamin E were margarine, sunflower oil, butter, cooking fat, [soybean oil](#) and mayonnaise; vitamin C came mainly from oranges, kiwi, grapefruit juice, grapefruit, cauliflower, red bell peppers and red cabbage; beta

carotene, from carrots, spinach, vegetable soup, endive and tomato; and flavonoids from tea, onions, apples and carrots.

Over an average of 9.6 years of follow-up, 465 participants developed dementia; 365 of those were diagnosed with Alzheimer's disease. After adjusting for other potentially related factors, the one-third of individuals who consumed the most vitamin E (a median or midpoint of 18.5 milligrams per day) were 25 percent less likely to develop dementia than the one-third of participants who consumed the least (a median of 9 milligrams per day). Dietary intake levels of vitamin C, [beta carotene](#) and flavonoids were not associated with dementia risk. Results were similar when only the participants diagnosed with Alzheimer's disease were assessed.

"The brain is a site of high metabolic activity, which makes it vulnerable to oxidative damage, and slow accumulation of such damage over a lifetime may contribute to the development of dementia," the authors write. "In particular, when beta-amyloid (a hallmark of pathologic [Alzheimer's disease](#)) accumulates in the brain, an inflammatory response is likely evoked that produces nitric oxide radicals and downstream neurodegenerative effects. Vitamin E is a powerful fat-soluble antioxidant that may help to inhibit the pathogenesis of dementia."

Future studies are needed to evaluate dietary intake of antioxidants and dietary risks, including different points at which consuming more antioxidants might reduce risk, the authors conclude.

**More information:** Arch Neurol. 2010;67[7]:819-825.

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