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Study identifies food combination associated with reduced Alzheimer's disease risk

Individuals whose diet includes more salad dressing, nuts, fish, poultry and certain fruits and vegetables and fewer high-fat dairy products, red meats, organ meats and butter appear less likely to develop Alzheimer's disease, according to a report posted online today that will appear in the June print issue of *Archives of Neurology*, one of the JAMA/Archives journals.

"Epidemiological evidence linking diet, one of the most important modifiable environmental factors, and risk of Alzheimer's disease is rapidly increasing," the authors write as background information in the article. "However, current literature regarding the impact of individual nutrients or food items on Alzheimer's disease risk is inconsistent, partly because humans eat meals with complex combinations of nutrients or food items that are likely to be synergistic."

Yian Gu, Ph.D., of Columbia University Medical Center, New York, and colleagues studied 2,148 older adults (age 65 and older) without dementia living in New York. Participants provided information about their diets and were assessed for the development of dementia every 1.5 years for an average of four years. Several dietary patterns were identified with varying levels of seven nutrients previously shown to be associated with Alzheimer's disease risk: saturated fatty acids, monounsaturated fatty acids, omega-3 fatty acids, omega-6 fatty acids, vitamin E, vitamin B12 and folate.

During the follow-up, 253 individuals developed Alzheimer's disease. One dietary pattern was significantly associated with a reduced risk of the disease. This pattern involved high intakes of salad dressing, nuts, fish, tomatoes, poultry, fruits and cruciferous and dark and green leafy vegetables and low intakes of high-fat dairy, red meat, organ meat and butter.

The combination of nutrients in the low-risk dietary pattern reflect multiple pathways in the development of Alzheimer's disease, the authors note. "For example, vitamin B12 and folate are homocysteine-related vitamins that may have an impact on Alzheimer's disease via their ability of reducing circulating homocysteine levels, vitamin E might prevent Alzheimer's disease

via its strong antioxidant effect and fatty acids may be related to dementia and cognitive function through atherosclerosis, thrombosis or inflammation via an effect on brain development and membrane functioning or via accumulation of beta-amyloid," they write.

"Our findings provide support for further exploration of food combination–based dietary behavior for the prevention of this important public health problem," they conclude.

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