

Fish consumption slows mental decline

ROTTERDAM, THE NETHERLANDS. Dutch researchers report an intriguing association between diet and the extent and rate of cognitive impairment in older men. Their study, part of the Zutphen Elderly Study, involved almost 1000 men born between 1900 and 1920. The men's intake of various food components was assessed (by personal interviews) in 1985 and 1990 and their cognitive function was evaluated in 1990 and 1993 using the Mini-Mental State Examination scale. The MMSE scale includes questions on orientation to time and place, registration, attention and calculation, recall, language, and visual construction.

The researchers found that men with the highest intake of linoleic acid (mainly from margarine, butter, baking fats, sauces, and cheeses) had a 76% higher degree of cognitive impairment than did men with the lowest intake. This association held true even after adjusting for age, level of education, cigarette smoking, alcohol consumption, and calorie intake. The intake of omega-3 fatty acids, on the other hand, was not associated with any degree of impairment. Men with a high fish intake were less likely to be cognitively impaired than men with a low intake and their rate of decline over the period 1990-93 was half that of men rarely consuming fish. The intake of beta-carotene, flavonoids, and vitamins C and E was not associated with a greater or lesser degree of impairment. However, there was a clear correlation between a high vitamin C intake and a decline in cognitive function over the period 1990-93. Men with a high vitamin C intake were twice as likely to have experienced a decline as were men with a low intake. The researchers speculate that vitamin C may act as a pro-oxidant in the presence of free iron in the brain.

Kalmijn, S., et al. Polyunsaturated fatty acids, antioxidants, and cognitive function in very old men. American Journal of Epidemiology, Vol. 145, January 1, 1997, pp. 33-41

Docosahexaenoic acid fights depression

ROCKVILLE, MARYLAND. Researchers at the National Institute of Alcohol Abuse and Alcoholism believe that the increasing rates of depression seen in North America over the last 100 years are due to a significant shift in the ratio of n-6 (arachidonic acid, linoleic acid) to n-3 (docosahexaenoic acid, linolenic acid) fatty acids in the diet. The human race evolved on a diet having a ratio of about 1:1 of these acids; it is now estimated to be between 10:1 and 25:1. Docosahexaenoic acid (DHA) is a main component of the synaptic membranes and a lack of it has been linked to depression. Fish oils are a rich source of DHA and it can also be biosynthesized in the body from linolenic acid. The researchers speculate that the depressions which often accompany alcoholism, multiple sclerosis, and childbirth (postpartum depression) are all due to a lack of DHA and can be corrected by increasing the dietary intake of DHA or linolenic acid (flax seed oil). They also point out that depression and coronary heart disease are strongly associated and that a low intake of n-3 fatty acids has been linked to both.

Hibbeln, Joseph R. and Salem, Norman. Dietary polyunsaturated fatty acids and depression: when cholesterol does not satisfy. American Journal of Clinical Nutrition, Vol. 62, July 1995, pp. 1-9

"fish oil supplementation may not only improve Alzheimer's symptoms, but may even prevent the disease from progressing further"

Fish oils help patient with Alzheimer's disease

RMURRAYVILLE, VICTORIA, AUSTRALIA. Dr. Robert Peers, an Australian family physician, reports on the case of a 77-year-old farmer diagnosed with Alzheimer's disease (confirmed by a neurologist). The patient, when first admitted to a nursing home, was restless and destructive and unable to dress himself. After several months he became calmer, regained weight, and was again able to dress himself. Dr. Peers ascribes the changes to the fact that the nursing home served fish every week thus providing the patient with long-chain omega-3 fatty acids which had been missing in his previous diet. In the five years prior to being diagnosed with Alzheimer's disease (AD) the farmer had been in the habit of just frying up meat, rice and vegetables in an omega-6 vegetable oil. Dr. Peers provides a compelling scientific explanation of the reasons why a deficiency in docosahexaenoic acid (DHA), a main component of fish oil, may lead to Alzheimer's disease. He suggests that patients with AD should be queried about an excessive intake of omega-6 fatty acids (from vegetable oils and margarine) and a deficient intake of omega-3 fatty acids. If an imbalance is observed it should be treated with fish oil supplementation. He points out that DHA is quickly taken up by the brain and hypothesizes that fish oil supplementation may not only improve Alzheimer's symptoms, but may even prevent the disease from progressing further. Two other Australian physicians, Drs. Simons and Broe, find Dr. Peers' observation interesting, but caution that considerably more research needs to be done for fish oil supplementation to be recognized as an effective treatment for AD.

Peers, Robert J. Alzheimer's disease and omega-3 fatty acids: hypothesis. Medical Journal of Australia, Vol. 153, November 5, 1990, pp. 563-64 (letter)



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