Reference:

Fish consumption, n-3 fatty acids, and subsequent 5-y cognitive decline in elderly men: the Zutphen Elderly Study

van Gelder., et al.,Am J Clin Nutr., 85:1142-1147 (2007).

Centre for Prevention and Health Services Research, National Institute for Public Health and the Environment, Bilthoven, Netherlands. Julius Centre for Health Sciences and PRimary Care, University Medical Centre Untrecht, Utrecht, Netherlands. Wageningen University, Wageningen, Netherlands

Summary:

Since a progressive cognitive decline occurs before dementia and Alzheimer's disease in aging populations, there is much interest in dietary strategies that might retard or delay cognitive decline. In the present study, the authors studied the relationship between fish consumption and DHA /EPA omega-3 fatty acid intakes in elderly men age 70-89 years with associated measurements on cognitive functioning. Cognitive evaluation (including questions on orientation to time and place, attention and calculation, recall, language, visual construction) was measured by the Mini- Mental State Examination (MMSE) where the maximum score is 30 points and higher scores indicate better overall cognitive performance.

During the 5-year follow-up period of study, fish consumers exhibited a significantly lower 5-year cognitive decline as compared to those not consuming fish. The fish consumers (consuming up to 20 g of fish a day or more on average-i.e., up to 140 g (5 oz) of fish per week or more) showed a lesser decline in cognitive functioning by 1.0 point as compared to those who do not consume fish. Furthermore, a significant trend towards a lesser progression in cognitive decline was observed with progressively higher intakes of DHA/EPA per day (going from average intakes from 20 to 104 and up to 398 mg DHA/EPA per day).

The authors conclude that a moderate intake of DHA/EPA from fish may postpone cognitive decline in elderly men.

Dr. Holub's Comments:

The current study indicates that a combined daily intake of approximately 400 mg of DHA/EPA omega-3 fatty acid is associated with a lessened subsequent cognitive decline in elderly men. The average intake of DHA/EPA (combined) in North America is approximately 130-150 mg/day – mostly consumed in the form of fish. Reaching intakes of 400 mg DHA/EPA per day could be obtained by consuming one serving of 140 g (5 oz.) of fatty fish (such as mackerel, or herring) per week. Based on the DHA/EPA concentrations recently reported in farmed and wild salmon and rainbow trout from Canada (Dewailly et al., Food and Chem. Toxicol., 2007 (ahead of print)), such intakes (400 mg DHA/EPA combined per day) could be obtained by the weekly consumption of only 55 g of farmed rainbow trout (a 2 oz serving), 172 g of wild rainbow trout (a 6 oz serving), 47 g of farmed Atlantic salmon (a 1.6 oz serving), or 53 g wild Atlantic salmon (a 1.9 oz serving). Leaner fish having generally somewhat lower levels of DHA/EPA per serving would require somewhat higher intakes per week than the aforementioned. Supplemental sources of DHA/EPA in encapsulated form would provide alternative choices as would some of the many functional foods appearing in the market place which contain DHA/EPA.