

A new study has found that higher omega-3 blood levels are associated with a larger overall brain volume in elderly women.

## Higher EPA and DHA levels are correlated with healthier brain size in aging adults

Normal aging results in overall brain atrophy, or shrinkage. In a new study published online in the journal *Neurology*, scientists looked at the possible association between higher levels omega-3 fatty acids and greater brain volume in aging adults.

The study included 1,111 women aged 65 to 80 enrolled in the Women's Health Initiative Memory Study. At the beginning of the study, blood samples were taken to analyze omega-3 fatty acid (EPA and DHA) levels. On an average of 8 years later, magnetic resonance imaging (MRI) was conducted to measure brain volumes. In addition to total brain volume, several specific regions of the brain were also measured. Adjustments were made for factors such as hormone therapy, time since randomization, demographics, and cerebral and cardiovascular disease risk.

In fully adjusted models, a greater blood volume of EPA and DHA was correlated with a larger brain volume, and even more specifically with greater hippocampal volume in these postmenopausal women. The hippocampus is an area of the brain involved with cognition and learning. This effect on brain volume is thought to be the equivalent of delaying the normal age-related loss of brain cells by one to two years.

The results of this study suggest that higher omega-3 fatty acid levels achieved through diet or supplementation may reduce normal brain atrophy and help delay cognitive aging and dementia.

Pottala JV et al. Higher RBC EPA + DHA corresponds with larger total brain and hippocampal volumes: WHIMS-MRI Study. *Neurology*. 2014 Jan 22.