

A new study in adults over 65 has found that people with higher intakes of long-chain fatty acids, like those found in fatty fish, have a lower prevalence of subclinical brain damage and better overall brain health.

## Higher intakes of omega-3 fatty acids linked to healthier brains

Previous research has shown that consumption of tuna or other broiled fatty fish may be associated with fewer sub-clinical brain abnormalities.

In a new study published in the *Journal of the American Heart Association*, researchers investigated the association between plasma phospholipid omega-3 polyunsaturated fatty acids (PUFAs) and biomarkers of brain health using magnetic resonance imaging (MRI). Silent infarcts, which are small brain lesions caused by lack of blood flow, are associated with a decrease in thinking skills and are estimated to affect approximately 20% of healthy older individuals.

The present study included participants aged 65 and over that were part of the Cardiovascular Health Study who were analyzed by MRI between 1992 and 1994. Plasma samples from 1992 and 1993 were collected and analyzed for PUFA levels. Of this group, 2,313 adults underwent another scan after 5 years. Those with incomplete fatty acid data or who had a history of stroke were excluded from the study.

Measured by MRI, the subjects with EPA, DHA, and DPA levels in the highest 25% had a 40% lower risk of subclinical infarcts compared to participants whose levels were in the lowest 25%. The group with the lowest levels of PUFAs also had more white matter changes than those in the highest group.

The results of this study support the benefits of fish intake on brain health. Older adults with high PUFA levels may have a reduced risk of subclinical infarcts and better white matter and brain health compared to adults with low intake of long-chain polyunsaturated fatty acids.

Jyrki K. Virtanen, PhD et al. Circulating Omega-3 Polyunsaturated Fatty Acids and Subclinical Brain Abnormalities on MRI in Older Adults: The Cardiovascular Health Study. *J Am Heart Assoc.* 2013; 2: e000305.