

High serum omega-3 polyunsaturated fatty acid content protects against brain abnormalities

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According to a new study, high long-chain omega-3 polyunsaturated fatty acid content in blood may lower the risk of small brain infarcts and other brain abnormalities in the elderly. The study was published in *Journal of the American Heart Association*.

In the Cardiovascular Health Study in the USA, 3,660 people aged 65 and older underwent [brain scans](#) to detect so called silent brain infarcts, or small lesions in the brain that can cause loss of thinking skills, dementia and stroke. Scans were performed again five years later on 2,313 of the participants.

Research shows that silent brain infarcts, which are only detected by brain scans, are found in about 20% of otherwise healthy elderly people.

The study found that those who had high long-chain omega-3 polyunsaturated fatty [acid content](#) in blood had about 40% lower risk of having small [brain infarcts](#) compared to those with low content of these fatty acids in blood. The study also found that people who had high long-chain omega-3 polyunsaturated fatty acid content in blood also had fewer changes in the white matter in their brains.

Previously in this same study population, similar findings were observed when comparing those with high or low intake of fish. High content of long-chain omega-3 polyunsaturated fatty acids in blood is a marker for

high intake of fatty fish, so the results from the current study support the beneficial effects of fish consumption on brain health.

More information: Virtanen, J. 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 Oct 10;2(5):e000305.

Provided by University of Eastern Finland

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