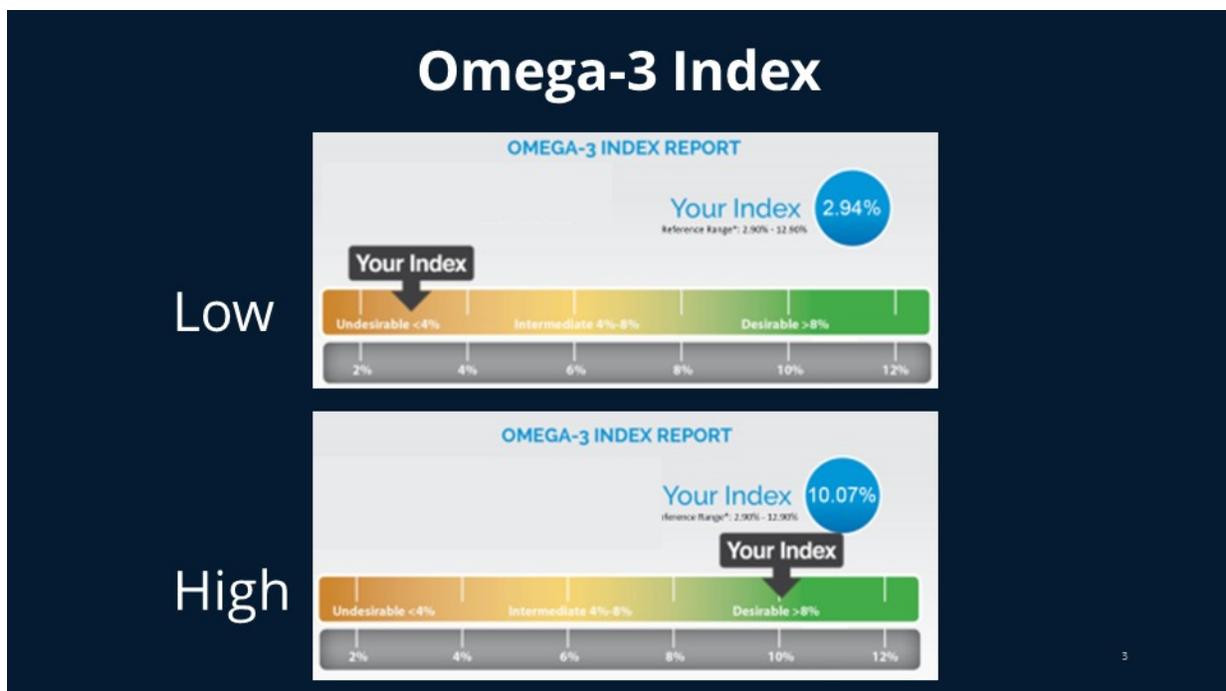


Can omega-3 help prevent Alzheimer's disease? Brain SPECT imaging shows possible link

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An example of the Omega-3 Index, the method utilized in this study for measuring omega-3 fatty acid levels in red blood cell membranes in the study. Credit: William S. Harris, PHD

The incidence of Alzheimer's disease (AD) is expected to triple in the coming decades and no cure has been found. Recently, interest in dietary

approaches for prevention of cognitive decline has increased. In particular, the omega-3 fatty acids have shown anti-amyloid, anti-tau and anti-inflammatory actions in the brains of animals. In a new article published in the *Journal of Alzheimer's Disease*, researchers have found that for patients with high omega-3 levels, blood flow in specific areas of the brain is increased.

"This study is a major advance in demonstrating the value of nutritional intervention for brain health by using the latest brain imaging," commented George Perry, PhD, Dean and Professor of Biology, The University of Texas at San Antonio, and Editor-in-Chief of the *Journal of Alzheimer's Disease*.

Single photon emission computed tomography, or SPECT, can measure [blood](#) perfusion in the brain. Images acquired from subjects performing various cognitive tasks will show higher blood flow in specific brain regions. When these images were compared to the Omega-3 Index, a measure of the blood concentration of two [omega-3 fatty acids](#), eicosapentaenoic [acid](#) (EPA) and docosahexaenoic acid (DHA), investigators found a statistically significant correlation between higher blood flow and higher Omega-3 Index. In addition, they evaluated the neuropsychological functions of the subjects and found that omega-3 levels also correlated with various psychological feelings using a standardized test battery (WebNeuro).

This study drew from a random sample of 166 participants from a psychiatric referral clinic for which Omega-3 Index results were available. The participants were categorized into two groups of higher EPA+DHA concentrations (>50th percentile) and lower concentrations (

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