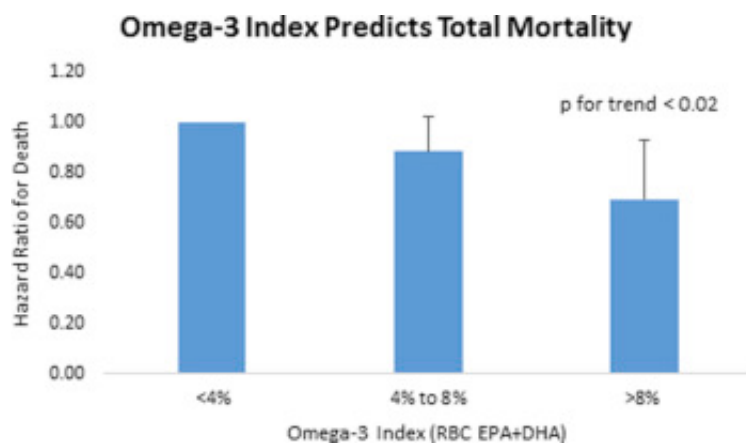


Study finds link between high EPA and DHA omega-3 blood levels and decreased risk of death

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Credit: GOED

A study published in the *Journal of Clinical Lipidology* found that higher levels of EPA and DHA omega-3 polyunsaturated fatty acids (PUFA) in red blood cells were associated with a lower risk of all-cause mortality in postmenopausal women. The study specifically examined associations with the omega-3 index, a measure of EPA and DHA levels in red blood cells. Over a 15-year period, the research found that women ages 65 to 80 with omega-3 blood levels in the highest quartile were 20 percent less likely to die from any cause than those in the lowest quartile.

The study analyzed data from more than 6,500 women aged 65-80 who

participated in the Women's Health Initiative Memory Study, which began in 1996. The women's PUFA levels were measured in 1996 and then the health outcomes were tracked through August 2014, with the primary outcome being all-cause mortality. After a median of 14.9 years of follow-up, 28.5 percent of the women had passed away. The analysis was adjusted for a wide variety of lifestyle and other factors such as smoking, physical activity and history of cardiovascular disease. This was a prospective cohort study, or a study that follows a group of similar people (a cohort) over time to observe correlations between various factors and health outcomes.

"This is the largest -but far from the only - study to confirm that blood levels of EPA and DHA omega-3 fatty acids, in this case the omega-3 index, are independent predictors of risk for death," said Dr. William Harris, lead author of the study and founder of OmegaQuant Analytics (where the samples were analyzed). "These findings support the view that higher EPA and DHA omega-3 levels are associated with better overall health."

Although this study was observational and did not analyze the effect of a specific intervention, the authors estimated that intakes of approximately 1g of EPA and DHA per day were required to increase omega-3 status from the lowest quartile observed in this study (3.6 percent) to the highest quartile (7.1percent). This approximately equals two and a half to three salmon fillets per week according to the USDA Nutrient Database, or the amount that could be obtained from 1-3 softgels or one teaspoon of a liquid omega-3 supplement daily.

"This study adds to a larger body of evidence demonstrating the positive correlation between higher omega-3 index levels and general wellness," said Adam Ismail, Executive Director of the Global Organization for EPA and DHA Omega-3s (GOED). "The results gathered over a 15-year period support the notion that adequate omega-3 intake is an important

part of a healthy lifestyle, just like exercise and following a well-balanced diet."

To put the results of this study in context, [a recent paper by Murphy et al](#) found that the omega-3 status of more than 80 percent of Americans was below the omega-3 index observed in the highest quartile in this study. [Another paper by Stark et al](#) found that very low omega-3 levels "were observed in North America, Central and South America, Europe, the Middle East, Southeast Asia, and Africa." Thirteen prior studies have also been conducted in this area, twelve of which have found statistically significant reductions in mortality risk associated with the highest levels of omega-3s. These studies can be found in the supplementary data of the Harris paper, with the addition of two studies by Miura et al published last month.

To increase omega-3 intake, it's important to consume specific fish species that contain high levels of EPA and DHA, like salmon, tuna and sardines. Depending on which other foods someone incorporates into his or her diet, a typical person might spend up to \$40 per month on these fish to reach this level of omega-3 status. It's also possible to obtain this level of EPA and DHA for about \$16 per month with supplement use.

The FDA considers dosages of EPA and DHA up to 3g per day Generally Recognized as Safe (GRAS), a higher level than the 1g per day estimated as a requirement to move from the lowest to highest quartile of omega-3 status in this study. However, consumers should always consult a healthcare provider if they have any concerns or questions before making significant changes to their diet or supplementation habits, and can ask to have their omega-3 [levels](#) tested.

More information: William S. Harris et al, Red blood cell polyunsaturated fatty acids and mortality in the Women's Health Initiative Memory Study, *Journal of Clinical Lipidology* (2017). [DOI:](#)

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