

In major meta-analysis, omega-3 fish oil supplements linked with lower cardiovasc

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People who received omega-3 fish oil supplements in randomized clinical trials had lower risks of heart attack and other cardiovascular disease (CVD) events compared with those who were given placebo,

according to a new meta-analysis from Harvard T.H. Chan School of Public Health and Brigham and Women's Hospital. Researchers found an association between daily omega-3 supplementation and reduced risk of most CVD outcomes, including heart attack, death from coronary heart disease, and death from CVD, but did not see benefit for stroke. In addition, higher doses of omega-3 fish oil supplements appeared to provide even greater risk reduction.

The study will be published online September 30, 2019 in the *Journal of the American Heart Association*.

"This meta-analysis provides the most up-to-date evidence regarding the effects of omega-3 supplementation on risk of multiple CVD outcomes. We found significant protective effects of daily omega-3 supplementation against most CVD outcome risks and the associations appeared to be in a dose-response manner," said first author Yang Hu, a postdoctoral fellow in the Department of Nutrition at Harvard Chan School.

While [observational studies](#) have shown an association between fish consumption and lower heart disease risk, results from randomized controlled trials (RCTs) have been inconsistent. Two reviews published last year did not find clear evidence for benefit.

In this new analysis, the researchers did an updated meta-analysis that included three recently completed large-scale trials, which increased the sample size by 64%. The [total population](#) analyzed by Hu and colleagues included more than 120,000 adults in 13 randomized trials worldwide. The analysis included the VITAL trial, the largest randomized trial of omega-3s to date.

The findings showed that people who took daily omega-3 fish oil supplements, compared with those who took a placebo, lowered their

risk for most CVD outcomes except stroke, including an 8% reduced risk for [heart attack](#) and [coronary heart disease](#) (CHD) death. The association was particularly evident at higher doses of omega-3 fish oil supplementation. This finding may suggest that marine omega-3 supplementation dosage above the 840 mg/day used in most randomized [clinical trials](#) may provide greater reductions in CVD risk. Given that several million people experience these CVD events worldwide each year, even small reductions in risk can translate into hundreds of thousands of heart attacks and CVD deaths avoided, according to the researchers.

"Although public health recommendations should focus on increasing fish consumption, having an overall heart-healthy diet, being physically active, and having other healthy lifestyle practices, this study suggests that omega-3 supplementation may have a role in appropriate patients," said senior author JoAnn Manson, chief of the Division of Preventive Medicine at Brigham and Women's Hospital and professor in the Department of Epidemiology at Harvard Chan School. Manson is also the Director of the large-scale VITAL trial of omega-3s.

More information: *Journal of the American Heart Association* (2019). [DOI: 10.1161/JAHA.119.013543](https://doi.org/10.1161/JAHA.119.013543)

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