

Analysis predicts purified fish oil could prevent thousands of cardiovascular events

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Researchers from the University of California, Irvine have conducted a statistical analysis that predicts more than 70,000 heart attacks, strokes and other adverse cardiovascular events could be prevented each year in the U.S. through the use of a highly purified fish oil therapy.

Led by Nathan D. Wong, Ph.D., professor and director of the Heart Disease Prevention Program in the Division of Cardiology at the UCI School of Medicine, the [abstract of the statistical analysis](#) was accepted by the American College of Cardiology and is slated to be presented at the upcoming [ACC.20/World Congress of Cardiology](#) virtual conference taking place March 28-30. The analysis utilizes data from the Centers for Disease Control and Prevention's National Health and Nutrition Examination Survey (NHANES), and inclusion criteria from a multinational clinical trial led by investigators from Harvard University called [REDUCE-IT](#), which was published in the *New England Journal of Medicine* in January of 2019.

The REDUCE-IT trial showed patients with known cardiovascular disease or diabetes and multiple

risk factors who have elevated triglyceride levels and are at increased risk for ischemic events benefitted substantially from icosapent ethyl, a highly purified fish oil therapy, which lowered cardiovascular events, including heart attacks and strokes, by 25 percent. Positive results were not found in other trials, possibly due to mixtures with other omega-3 [fatty acids](#) such as DHA, or inadequate dosages according to Wong.

"Our analysis extends the findings of the REDUCE-IT trial by estimating its potential impact on the U.S. population," said Wong. "By using inclusion criteria and cardiovascular disease event rates from the REDUCE-IT trial and applying it to data on US adults from NHANES, we were able to estimate the beneficial impact icosapent ethyl could have on preventing initial and total cardiovascular events in eligible U.S. adults with [cardiovascular disease](#) or diabetes and multiple [risk factors](#)."

Wong's analysis is the first to project the findings of REDUCE-IT to the overall U.S. population.

"When you consider that for every 21 patients treated with icosapent ethyl you can spare a cardiovascular event, you begin to see the implications of our results," said Wong.

Icosapent ethyl is a purified stable eicosapentaenoic acid (EPA) which was recently approved by the Federal Drug Administration (FDA) in conjunction with maximally tolerated statin therapy to reduce the risk of cardiovascular events in certain adults with elevated triglyceride levels. The only drug of its kind to show such an effect, icosapent ethyl, is currently marketed under the name Vascepa by Amarin Pharma. The EPA therapy has also gained the support of several major societies, which have incorporated it in various guidelines, scientific statements and advisories, including the American Diabetes Association, American Heart Association, National Lipid Association, and the European Society of

Cardiology/European Atherosclerosis Society.

More information: Funding for Wong's work was supported by Amarin Pharma.

Provided by University of California, Irvine

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