

Study Identifies Dose Threshold for Omega-3's Heart Benefits

By Stephen Daniells, NutraIngredients-USA

Daily doses of omega-3s of at least 250 milligrams are required to reduce the risk of sudden cardiac death and other heart conditions, says a new review and meta-analysis.

According to findings published in the *British Journal of Nutrition*, at least 250 mg of the long-chain omega-3 fatty acids (LCFA), eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), was associated with a 35 percent reduction in the risk of sudden cardiac death.

In addition, such doses were associated with a 'near-significant' 17 percent decrease in the risk of 'total fatal coronary events', according to a team of researchers from academia and industry.

"Thus, the intake of 250 mg omega-3 LCFA per day may, indeed, be a minimum target to be achieved by the general population for the promotion of cardiovascular health," wrote authors led by Kathy Musa-Veloso from Cantox Health Sciences International.

The study's authors were affiliated with Cantox, the University of Toronto, the Global Organization for EPA and DHA Omega-3s (GOED), Denomega Nutritional Oils AS, Ocean Nutrition Canada, and Monsanto.

Current recommendations

The European Food Safety Authority (EFSA) concluded in 2009 that 250mg should be the labeling reference intake value for long-chain omega-3 fatty acids.

In the US, the recently released 2010 Dietary Guidelines for Americans did not include specific EPA/DHA recommendations, but instead recommended consumption levels of seafood of 8-12 ounces per week, *"which provide an average consumption of 250 mg per day of EPA and DHA"*.

The new meta-analysis and review sought to test such recommendations. The reviewers identified 8 prospective studies to include, and these indicated that consuming at least 250 mg was associated with a significant reduction in sudden cardiac death and near-significant reductions in the risk of total fatal coronary events.

"In several meta-analyses, which were based on US studies, risk of [coronary heart disease] death was found to be dose-dependently reduced by the omega-3 LCFA, with further risk reductions observed with intakes in excess of 250 mg/d," they added.

Minimum, not optimum

Co-author of the paper, Harry Rice, PhD, VP of regulatory & scientific affairs for GOED, told NutraIngredients-USA that the results "suggest that 250mg/day EPA+DHA should be

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considered a minimum, not an optimum, level of consumption.

“What is really novel about this meta-analysis is that the data used were from subjects previously free of known coronary heart disease; thus, the positive results provide further evidence of the need for establishing a dietary reference intake (DRI) for the long-chain omega-3 fatty acids.

“Study after study, the cardioprotective benefits of EPA and DHA are demonstrated. In the interest of public health, the Institute of Medicine (IOM) should assess the current data on health outcomes associated with the long-chain omega-3s.

“GOED is confident that the evidence would support a cardioprotective role for EPA and DHA,” he added.

Source: *British Journal of Nutrition*

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“Impact of low v. moderate intakes of long-chain n-3 fatty acids on risk of coronary heart disease”

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