



## *Observations*

### **The False Promise of Fish Oil Supplements**

After decades of promises that they “may work” to reduce cardiovascular disease, the lack of a demonstrated benefit leads me to conclude that consumers are wasting their money

By R. Preston Mason on August 22, 2019



Credit: Getty Images

Every 38 seconds, someone in the U.S. dies from cardiovascular disease. Even more worrisome: deaths from cardiovascular disease have been rising dramatically since

2011 following years of decline. Strokes, heart attacks and other cardiovascular events cause great suffering and are an enormous health care burden.

These statistics are particularly troubling because each month, approximately 19 million people in the U.S. take fish oil supplements, many in the hopes of preventing heart disease—despite the absence of reliable evidence that such supplements (also called omega-3 fatty acid supplements) prevent cardiovascular disease and its serious consequences. To the contrary, all studies of fish oil supplements conducted to date have failed to show any significant clinical benefits beyond those of standard-of-care therapy.

Consumers have been told so many times that dietary fish oil supplements promote heart health that it seems to be accepted as factual. But this conventional thinking is not supported by the science. After decades of promises that fish oil “may work,” the lack of demonstrated benefit leads me to conclude that consumers are wasting their money on supplements in an effort to reduce cardiovascular risk.

A summary of all the evidence was recently published in the prestigious medical publication *Annals of Internal Medicine*. This review, published July 9, 2019, examined the effectiveness of 24 supplements and diets in preventing cardiovascular disease. The authors evaluated nine systematic reviews and four randomized controlled trials, which encompassed 277 trials and 992,129 participants. Findings indicated that few nutritional supplements or dietary interventions offered any protection against cardiovascular disease or death and that some may actually cause harm. Omega-3 products, in particular, yielded “low-certainty” evidence that they were associated with reduced risk for myocardial infarction and coronary heart disease.

Because the US Food and Drug Administration (FDA) classification for dietary supplements such as fish oil is different from that of prescription drugs, these supplements are not manufactured or reviewed by the FDA in as stringent a manner. Most found on the market—unlike prescription medications and certain over-the-counter (OTC) drugs—have not demonstrated effectiveness and safety in placebo-controlled clinical trials. This can be confusing: fish oil supplements, for example, are

readily available to patients and often have labels that imply a benefit to cardiovascular health, yet they are not intended to treat any medical condition.

This study is just the latest in a growing body of evidence demonstrating the absence of benefit of fish oil supplements for heart health. Other studies looking into what common fish oil supplements actually contain have found that they have lower amounts of omega-3 than specified on the label, variable content and unregulated purity, and potentially significant levels of saturated fat and rancid oils.

It's not just patients who are confused about the tested efficacy and safety of fish oil supplements. A survey conducted by Fairleigh Dickinson University's PublicMind found that among those physicians and pharmacists who had recommended a nonprescription omega-3 product to patients, more than four in five (85 percent) believed incorrectly that they had recommended an FDA-approved OTC product. Thirty percent of pharmacists and 22 percent of physicians stated, incorrectly, that prescription and dietary supplement omega-3 products are similar in strength and content. This is an example of the adage that if something is said often enough, people will believe it to be true.

To help stop the alarming increase in deaths from heart disease, patients at risk for cardiovascular disease, as well as their health care providers, need to have an evidence-based rationale for what they use and recommend for heart health. Fish oil supplements should be treated with the same scrutiny as a prescription medication, particularly if patients or consumers are taking them for the specific purpose of preventing or treating cardiovascular disease.

As Amitabh C. Pandey and Eric J. Topol of Scripps Research Translational Institute, Scripps Research, and Scripps Clinic said in their editorial regarding the review published in the *Annals of Internal Medicine*, "it would be reasonable to hold off on any supplement . . . in all guidelines and recommendations."

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