

# Omega-3: Fishing Out the Recent Evidence

JoAnn E. Manson, MD, DrPH

Jun 04, 2013

Hello. This is Dr. JoAnn Manson, Professor of Medicine at Brigham and Women's Hospital and Harvard Medical School. I'd like to talk today about the recent confusing reports on omega-3 fish oil. Is there a way for us to make sense of these recent studies that seem to be at odds with earlier evidence that suggested cardioprotection from omega-3 fatty acids? Have omegas-3 fatty acids lost their luster, or are there other explanations for these recent findings?

There are several mechanisms through which omega-3 fatty acids may protect against cardiovascular disease, including reducing inflammation, lowering clotting risk, reducing triglyceride levels, and lowering the risk for irregular heart rhythms. However, the recent randomized trials<sup>[1-3]</sup> in high-risk populations (those with either multiple risk factors or a history of cardiovascular disease) have suggested very little benefit from omega-3 fatty acids.

## Disappointing Results From Omega-3 Fatty Acids Trials

A recent report was published in the *New England Journal of Medicine*<sup>[1]</sup> in early May. Patients with multiple cardiovascular risk factors were given 1 gram of fish oil per day vs placebo, and it showed no benefit. Also, other meta-analyses have been published in the past year<sup>[2,3]</sup> that looked at all of the randomized trials in aggregate. These are secondary-prevention, randomized trials with high-risk populations. In general, these meta-analyses have shown disappointing results.

It is very important to keep in mind that these high-risk populations -- secondary-prevention populations -- include many individuals who are already taking multiple heart medications such as statins, aspirin, and ACE inhibitors, which may obscure the effect of omega-3 fatty acids. There may be very little incremental benefit from omega-3 fatty acids in that setting. What can we conclude from these recent findings?

## What Should We Recommend to Our Patients?

First, these randomized trials of fish oil do not cast out on the recommendation to have at least 2 servings of dietary fish per week. That is a recommendation from the American Heart Association and many other professional societies, and many studies suggest benefit. Some of the benefit may be because dietary fish is replacing other foods that could increase risk, such as red meat or foods high in saturated fat. Do recommend at least 2 servings of fish per week, particularly the darker fatty fish such as salmon and mackerel.

Second, in patients who are candidates for prescription omega-3 fatty acids, those who have very high triglyceride levels, these findings do not cast doubt on that indication for use. That would still be an appropriate use. In patients who are taking fish oil and are doing very well on it and feel strongly that the fish oil is helping their symptoms or are a benefit to them, there is no strong basis from these studies for encouraging them to stop, because there were no major risks associated with fish oil found in the studies.

## Trials in Primary Prevention and Other Outcomes

We need primary-prevention trials of omega-3 fatty acids in usual-risk general populations. We are doing such a trial, the VITAL (VITamin D and OmegA-3 Trial) trial, at Brigham and Women's Hospital.<sup>[4]</sup> It is a nationwide trial with more than 20,000 men and women, testing omega-3 fatty acids in primary prevention. We also need to look at other health outcomes where omega-3 fatty acids may be promising. Many of these outcomes will be looked at in the VITAL trial, including prevention of cognitive decline, depression, autoimmune diseases, diabetes, and eye diseases such as macular degeneration and dry eye syndrome.

But at present, the focus should be on increasing dietary fish intake. Thank you very much for your attention. This is JoAnn Manson.

#### References

1. Risk and Prevention Study Collaborative Group, Roncaglioni MC, Tombesi M, et al. n-3 fatty acids in patients with multiple cardiovascular risk factors. *N Engl J Med*. 2013;368:1800-1808. [Abstract](#)
2. Kotwal S, Jun M, Sullivan D, Perkovic V, Neal B. Omega 3 fatty acids and cardiovascular outcomes: systematic review and meta-analysis. *Circ Cardiovasc Qual Outcomes*. 2012;5:808-818. [Abstract](#)
3. Rizos EC, Ntzani EE, Bika E, Kostapanos MS, Elisaf MS. Association between omega-3 fatty acid supplementation and risk of major cardiovascular disease events: a systematic review and meta-analysis. *JAMA*. 2012;308:1024-1033. [Abstract](#)
4. Manson JE, Bassuk SS, Lee IM, et al. The VITamin D and OmegA-3 Trial (VITAL): rationale and design of a large randomized controlled trial of vitamin D and marine omega-3 fatty acid supplements for the primary prevention of cancer and cardiovascular disease. *Contemp Clin Trials*. 2012;33:159-171. [Abstract](#)

Medscape Ob/Gyn © 2013 WebMD, LLC

Cite this article: Omega-3: Fishing Out the Recent Evidence. *Medscape*. Jun 04, 2013.