



# The Fish Oil Files II: EPA/DHA in Cardiovascular Health

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March 2016

Following up on our introductory discussion on EFAs (Essential Fatty Acids that we must consume as they can't be synthesized by our bodies), we now turn to the evidence for supplementation of the classic "fish oils" EicosaPentaenoic Acid (EPA) and DocosaHexaenoic Acid (DHA) as it pertains to cardiovascular health. Because the world's fish supply comes under the attack of climate change, pollution and pesticides, and heavy metal toxicity, one has to take concern regarding the safety of most people trying to consume 2-3 servings of wild caught fatty fish per week. Enjoy fish, just most people can't or won't eat this much consistently.

Thusly we focus on supplementation with high quality fish oil supplements, absolutely not the kind found/recommended by the pharmacist on TV or at big box stores. My patients have heard me say innumerable times, if cost becomes your primary concern when it comes to supplements, save yourself the most money by buying nothing. Most fish oil supplements are "rancid fat pellets of death", and the worst usage of my articles would be for you to take the mass-market fish oil capsules out there. The majority of my patients do this and this saddens me. Sometimes they buy "good brands" but fail to correct to the dosage of EPA/DHA prescribed, failing to get the benefits, this too saddens me. Or they fall for the krill oil is better line (it is not even comparable) or that flax oil is the same (it is not) or they take a "3-6-9" supplement that makes consuming the right level of EPA/DHA highly impractical, all these, too, sadden me. Some people take specific advice, clearly not understanding that quality counts, and use my advice while choosing cheap supplements that actively violate their own health. Please don't do this! Unlike the majority of the media, I am trying to help you.

What does science say? As you know I focus on Pub Med articles, referenced by their PMID number so you can go to Pub Med and search by the article #. A British Journal of Nutrition meta-analysis from 2012 ( PMID:22591894 ) looked at 21 wildly different clinical trials with fish oil dosages ranging from 300mg to 10,000 mg, and trial lengths from 6 to 108 months! Despite the difficulties in comparing these trials the conclusion: a 9% reduction in cardiovascular death, an 18% reduction in cardiovascular events, and a 7% reduction in overall mortality. The primary mechanism of action comes from

lowering serum levels of triglycerides, as a review from June of 2015 in “Lipids in Health and Disease” ( PMID:26048287 ) shows how important dosage is as EPA/DHA dosages ranged from 1000mg to 5000mg per day, triglyceride reductions ranged from 4-51%! Elevated levels of circulating triglycerides (TG) have been identified as an independent risk factor for developing cardiovascular disease (CVD); evidence from Hokanson *et al.* indicates that an 88 mg/dL increase in fasting TG levels elevates the risk of developing CVD by 14 % and 37 %, in males and females, respectively. High TGs and low HDL have far surpassed the LDL as our most important lipid biomarkers of cardiovascular disease. Hopefully now you can also see how important dosage is!

What hundreds of randomized clinical trials have documented is that when high-quality, “pharmaceutical-grade” fish oils are consumed at sufficient dosages for years, profound cardiovascular and overall mortality benefits accrue. They must be balanced with Vitamin D<sub>3</sub> and K<sub>2</sub>, a healthy multivitamin with balanced antioxidants, and, of course a healthy Primal diet. For those of you who read about a concern regarding fish oils being immunosuppressive, I will deal with that misperception in upcoming articles. We will also discuss the potential balancing role of the omega 6 GLA and the many other roles for fish oils in the prevention and treatment of other conditions.

My recommendations are to consume fish oils in the triglyceride form (this has nothing to do with serum triglycerides) which have a 30-40% improved bioavailability versus the ethyl ester form and fewer side-effects (fish burps). My favorites include OrthOmega from OrthoMolecular and OmegaGenics from Metagenics. Shoot for 1600-1700 mg per day of the triglyceride form which translates to approximately 2500 mg per day of the ethyl ester form. Most of you know I still take a swig (tablespoon) of Carlson Cod Liver Oil daily! For those of you with persisting elevations of triglycerides on your fasting lipid panel or elevations of CRP or fibrinogen, higher doses for cardiovascular health can be utilized. Utilizing the Omega-3 Index on your blood tests ensures adequate levels, and I shoot for a level of 10-12%.

The health benefits of fish oils are unquestioned by those of us who understand what we read and the importance of dosage. If you take fish oils and personally don't feel well, please stop. If you run across controversies in the media, go directly to Pub Med and look at the article being referenced. I know I only referenced 2 articles today and purposely avoided those showing dramatically better results than the meta-analysis, as that would be “cherry-picking” the studies that document what I feel is the profound potential for fish oil supplements to vastly out-perform the clinical trials when you are guided by your integrative health practitioner!

Your Journey to Health and Healing,  
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