



What's the Skinny About Fatty Acids?

By John Mamana, M.D.

Most people are generally aware of what's "good for them" – whole foods, fresh fruits and vegetables, more fish, and exercise. However, many of us don't understand the science behind these choices – which can make the difference between a good diet, and a great diet – a diet that leads to a longer, healthier life. One nutrient most people know is good for them is Omega-3 fatty acids (FAs) found in fish. What most people don't know are the importance of long-chain Omega-3 FAs and the impact of Omega-6 FAs. The two long-chain Omega-3 FAs that are most important are docosahexanoic acid (DHA) and eicosapentaenoic acid (EPA). Essential FAs are made up of mainly Omega-3 and Omega-6 FAs, and essential FAs are polyunsaturated. Our body needs Omega FAs for normal metabolic function but cannot produce this nutrient, and unlike other nutrients in our diet, the long-chain Omega-3 FAs are not found in many foods.

To make matters worse, dietary experts have found that most Americans are not getting enough of these key nutrients. The typical American consumes far too many Omega-6 FAs while consuming very low levels of Omega-3 FAs. The ideal ratio of Omega-6 to Omega-3 FAs to promote good health is anywhere from 3:1 to 1:1. Today the ratio of the abundant Omega-6 fats to the scarce Omega-3 FAs averages from 20:1 to 50:1! *To learn how to change this imbalance in your diet, click our website here...*

So how can the average busy person change this imbalance? Well, a great deal of the problem is due to the overabundance of Omega-6 FAs in our diet. The primary sources of Omega-6 FAs are vegetable oils like corn, soy, canola, safflower, and sunflower. Heating Omega-6 oils to high temperatures creates Trans fat. This process known as hydrogenation solidifies oils to increase shelf-life. Trans fats are found in shortenings, some margarines, commercial pastries, fried foods, crackers, cookies, and snack foods.

The healthier Omega-3 FAs come in two groups, short-chain and long-chain. Short-chain Omega-3 FAs are found in flaxseed oil, walnuts, and some green vegetables. A small amount of these fats (between 1 and 9 percent) are converted to long-chain Omega-3 FAs by the body. The rest are used primarily for energy.



Uniquely, long-chain Omega-3 FAs are only produced by marine algae and are the source of DHA and EPA in fish. The fish feed on the algae and thus bring the Omega-3 FAs into their systems. Eating coldwater fish is the only substantial source of DHA and EPA in our diets today. The most highly recommended fish are tuna, sardines, salmon, mackerel, and herring. Sadly, tuna is becoming increasingly contaminated with mercury and other organic pollutants that have found their way into the marine food chain. For a variety of reasons, most Americans do not eat the recommended two meals of fish per week. In fact, experts conclude that the average adult consumes less than 100 mg of DHA per day, while our bodies need at least 3 to 4 times that amount for proper nutrition.

So why is all this science and balance so critical? From the earliest weeks of pregnancy to adulthood, the heart, brain and eyes depend on DHA and EPA for healthy development and function. Literally, 100% of these nutrients are used to protect the body and promote good health. Long-chain Omega-3 FAs have significant anti-inflammatory properties and counteract the inflammatory properties found in Omega-6 FAs. DHA and EPA inhibit platelet function causing blood to clot less readily. The Omega-6 FAs do just the opposite, so again the long-chain Omega-3 FAs keep the body in the proper balance. The importance of balance between Omega-3 FAs simply in regards to the excess of Omega-6 FAs is more significant than ever.

In addition to proper physical development, additional health benefits of DHA and EPA are much more extensive. The direct evidence that they reduce coronary heart disease and reduce sudden cardiac death is so compelling that the American Heart Association recommends 1 gram of long-chain Omega-3 FAs per day for those with known coronary heart disease. This is the first time AHA has ever recommended a nutritional supplement.

There is a great deal of scientific evidence that DHA and EPA also protect the brain. The long-chain Omega-3 FAs appear to reduce Alzheimer's disease, post-partum depression, bi-polar disease and depression. Long-chain Omega-3 FAs are currently used as alternative therapies in a wide range of illnesses including Crohn's disease, diabetes, Rheumatoid and Osteoarthritis, hypertriglyceridemia, eczema, Lupus, and ADD.



The good news is that while the long-chain Omega-3 FAs are naturally found only in fish, we can extract them easily from the fish and leave the mercury and organic pollutants behind. Mercury (actually methyl mercury, the toxic form) is water-soluble, not oil-soluble, and properly manufactured fish oil capsules contain no mercury, plus by further refining the fish oil, the possibility of organic pollutant contamination is removed. The result is a safe and effective remedy for increasing Omega-3 FAs in our diets. The use of Omega-3 fatty acid supplements is becoming an increasingly significant wellness strategy. A supplement that consists of a high concentration of EPA and DHA is recommended - an EPA/DHA ratio of 2:1 is best. The long-chain Omega-3 FAs are already being added to infant formula and food products, but for now, a pure fish oil supplement is the best and safest option. See your doctor for more information about balancing your diet with food and supplements such as Omega-3.

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