



Dietary Fats And Your Health: Part 2 All About Omega 3 Essential Fatty Acids



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In the last issue we ended by describing the polyunsaturated fats. These Omega 3 and 6 fats are considered essential because they cannot be made by the human body from other sources – they must be ingested as food. We also said that Americans get an abundance of Omega 6 fats in their diet as compared to Omega 3's and that imbalance has health consequences. Many people believe that consumption of certain Omega 6 essential fatty acids (e.g., flaxseed oil...) will convert to Omega 3's in the body and while that is true, it is a very inefficient process. The beneficial preventive and therapeutic effects of Omega 3 essential fatty acids are gained by direct consumption of dietary fish and/or fish oil supplements.

In the early 1970's researchers were curious as to why the Greenland Eskimos (whose extremely high fat diet consisted mainly of marine mammals) had fewer cardiovascular events than our modern Western population. They found 2 important molecules from fish fat (Omega 3s): EPA which was anti-inflammatory and DHA which was important for brain and nerve function. Since then, many studies have been done on health outcomes associated with these Omega 3 fats from fish. Studies compare people who

eat more fatty fish vs. people who eat less. Other studies look at the amount of Omega 3 fats in peoples' red blood cell membranes. Comparisons are made among people who take fish oil supplements and those that don't. A summary of what we know now includes that Omega 3 fats:

- Reduce the rate of heart attacks and strokes
- Prevent the cells from generating erratic electrical signals thus decreasing irregular heart beats and sudden death
- Slow the buildup of harmful plaque in the arteries
- Lower the levels of potentially harmful blood fats called triglycerides
- Cause a mild decrease in blood pressure
- Decrease arterial stiffness
- Decrease inflammation in rheumatoid arthritis and Crohn's disease
- Decrease the risk of depression and post partum depression

Newer research shows that Omega 3 fats also appear to:

- Decrease the risk of developing macular degeneration
- Decrease the risk of developing Alzheimer's disease
- Improve diabetic neuropathy (pain/numbness in extremities)
- Improve the ability of the brain to handle sensory overload

When women take fish oil in the third trimester of pregnancy and while breast feeding, it is associated with:

- Decreased premature delivery and pregnancy related high blood pressure
- Improved cognitive development/ increased IQ scores in the children
- Improved sleep patterns of infants
- Decreased risk of allergy

in allergy prone children

How does fish oil do all this? In summary, Omega 3 fats are anti-inflammatory and help cells communicate better – two functions that can have a wide range of beneficial effects as seen in the research studies.

In our office, we identify essential fatty acid deficiency in several ways. We can indirectly measure it through bioimpedance. This electrical test (like an EKG) measures the phase angle – a measure of cell membrane integrity. We regularly see that the phase angle increases when patients add high dose fish oil to their diets. A blood test can also measure the amounts and types of fats in the red blood cell membrane including: saturated, trans, Omega 3's, 6's, 7's and 9's and others. Not surprisingly, Omega 3's are deficient in people not taking fish oil or eating fish and in those who are getting their essential fats primarily through Omega 6's (com. canola, flax).

I highly recommend taking fish oils. Since inflammation is the common denominator in most, if not all, chronic disease, why not decrease inflammation with fish oil as part of a preventive or therapeutic strategy? To my mind, balancing the essential fatty acids to gain better cell communication and an anti-inflammatory advantage is good medicine!!!

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For information about appointments or our upcoming group programs, call the office at 609-818-9700.

To get adequate and safe EPA and DHA from fish:

- ✱ Highest sources: salmon, anchovies, mackerel, tuna, halibut. These fish supply approximately 1 gram Omega 3s per serving
- ✱ The largest fatty fish may bioaccumulate higher levels of toxins like mercury, DDT, DDE, PCBs and should be avoided or eaten minimally (www.ewg.org). Includes king mackerel, marlin, shark, swordfish, tilefish, orange roughy, tuna
- ✱ Farmed fish have minimal Omega 3s because they don't eat plankton. They also may have high toxins (farmed salmon, catfish – PCBs)
- ✱ Pregnant women, nursing mothers, infants and young children need to limit their fish intake per FDA and chose those lowest in mercury. Mercury is a neurotoxin and even small amounts can be harmful to developing brains.

To get adequate and safe EPA and DHA from supplements:

- ✱ Fish oil supplements (gelcaps or liquids) are manufactured from a multi-species fish meal. The raw oil is purified as the toxins and various oil types are separated out. They are concentrated (each product will have different amounts of EPA and DHA per serving), stabilized and packaged.
- ✱ The re-esterified triglyceride form (rTG) may be more available in the body than the ethyl ester forms (EE).
- ✱ Levels of toxins are extremely low in higher quality products.
- ✱ Keep them in a dark, cool place (refrigerator) as these oils are extremely sensitive to oxidation. Take an extra antioxidant (Vitamin E) if consuming more than 3 grams per day or if you live in a sunny climate.
- ✱ Look for the amount of EPA and DHA on the label – not the total Omega 3s. Aim for 1 – 4 grams of EPA/DHA per day for increased health benefits
- ✱ Burping and allergy are usually from fish proteins. If burping or fishy aftertaste is a problem: try another brand, freeze the gelcaps, take with meals, and avoid taking with carbonated beverages.

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