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The Story on Omega 3's

The verdict is in: omega 3 fatty acids (fish oil) can help prevent cardiovascular disease. But to think the advantages of omega 3's stop there would be ignoring the rest of the story. Evidence is mounting that these nutrients are essential for healthy skin, joints, and even eyes. In fact the Age Related Eye Disease Study, Phase II (AREDS II), has already shown that omega 3 supplements can help prevent vision loss from macular degeneration, but there is more to the story: not all omegas are created equally.

In the US, omega 3 supplements are processed mainly from fish, mackerel and anchovies, and can leave us with “fish breath” or that gassy feeling. Why? Because most mass production processes only go part way.

The brands of omega 3 available over-the-counter in the US are processed to what is called the “ethyl ester (EE)” form because it is economical to stop there. Manufacturers then flavor the capsules to hide the bad taste, but the gas and bad breath still result as we digest them. In Asia and Europe, producers are required to reconstitute the product back to its “triglyceride (TG)” form as found in nature. Though a more costly process, the product is far superior. The TG form of omega 3 is better absorbed by our digestive system so higher blood levels are achieved. This enhances the healthy benefits of the supplement, the reason we take them in the first place. Fish oil brands reconstituted to the TG form will state as much on the label because they want you to know that; if it does not say TG on the label, you have the EE variety.

In addition to understanding the production process, distinctions in omegas go beyond TG and EE. The fat in our diet, for example, falls into two basic categories, omega 6 and omega 3. The omega 6 fatty acids are the bad fats we get in fast food, pizza, and donuts. These cause inflammation in the blood vessels, leading to vascular disease, but also cause inflammation throughout the body, contributing to a variety of medical conditions. Interestingly, omega 3 fatty acids have an anti-inflammatory effect and can counteract those nasty omega 6's if we consume enough to balance out the

scale. The problem, however, is obvious; fish is our best source of omega 3 and Big Macs are much more tempting.

The problem gets even more complicated when we consider that, in reality, all omega 3's are not created equally. Fish is a great source of omega 3, but nuts and flaxseed are another source. In fact, we can identify three distinct kinds of omega 3 fatty acids: ALA, EPA, and DHA. ALA is the variety in nuts and flaxseeds and has actually been found to cause inflammation much like the omega 6's. Interestingly, AREDS II found high levels of ALA like those found in flaxseed actually increase the risk of developing macular degeneration by nearly 50%.

The other two varieties of omega 3 (EPA and DHA) are found in fish like salmon, mackerel, and anchovies and have tremendous anti-inflammatory effects. EPA seems to be the more potent of the two and helps with arthritis and cardiovascular disease. Additionally, we have now discovered EPA is very effective in reducing symptoms of dry eye by reducing inflammation in tear producing glands, further evidence that dry eye is an inflammatory disease.

DHA is the anti-inflammatory omega 3 that appears to penetrate best into the brain and the eyes and is likely the reason that omega 3 is beneficial in macular degeneration. Some studies now suggest that it may even help with problems like Alzheimer's disease, but much more study is needed to confirm this.

In summary, read the label to find the TG version of omega 3 (fish oil) supplements but be wary of those derived from nuts and flaxseed; high levels of ALA omega 3 have been shown to worsen macular degeneration. Higher concentrations of EPA have good anti-inflammatory properties and can help dry eyes, while higher DHA concentrations can help prevent vision loss associated with macular degeneration.