

Stuff from the Internet

Omega 3 Oils: The Essential Nutrients



There are good fats and there are bad fats. Artificially produced trans-fatty acids are bad in any amount and saturated fats from animal products should be kept to a minimum. The best fats or oils rather, since they are liquid at room temperature, are those that contain the essential fatty acids so named because without them we die. Essential fatty acids are polyunsaturated and grouped into two families, the omega-6 EFAs and the omega-3 EFAs. Seemingly minor differences in their molecular structure make the two EFA families act very differently in the body. While the metabolic products of omega-6 acids promote inflammation, blood clotting, and tumor growth, the omega-3 acids act entirely opposite. Although we do need both omega-3s and omega-6s it is becoming increasingly clear that an **excess of omega-6 fatty acids can have dire consequences**. Many scientists believe that a major reason for the high incidence of heart disease, hypertension, diabetes, obesity, premature aging, and some forms of cancer is the profound imbalance between our intake of omega-6 and omega-3 fatty acids. Our ancestors evolved on a diet with a ratio of omega-6 to omega-3 of about 1:1. A massive change in dietary habits over the last few centuries has changed this ratio to something closer to 20:1 and this spells trouble.

Sources and requirements The main sources of omega-6 fats are vegetable oils such as corn oil and soy oil that contain a high proportion of linoleic acid. Omega-3 fats are found in flaxseed oil, walnut oil, and marine plankton, in fish and in grass-fed animals.

Grassfed Beef is higher in Omega 3 than fish. Normally a good ratio for omega 6:3 in fish is 2 or 3 to 1. The lower the better. Grassfed beef from Grassfed Organics is much higher in Omega 3 than fish, with a **6:3 ratio of 0.16 to 1**. This information is from a study done at Iowa State University in August 2001.

The most beneficial and active of these fatty acids are EPA and DHA. Alpha-linolenic acid can be converted to EPA and DHA in the body, but the conversion is quite inefficient especially in older people. Scientists were first alerted to the many benefits of EPA and DHA in the early 1970s when Danish physicians observed that Greenland Eskimos had an exceptionally low incidence of heart disease and arthritis despite the fact that they consumed a high-fat diet. Intensive research soon discovered that two of the fats (oils) they consumed in large quantities, EPA and DHA, were actually highly beneficial. More recent research has established that EPA and DHA play a crucial role in the prevention of atherosclerosis, heart attack, depression, and cancer. **Good for the brain and children too.** The human brain is one of the largest "consumers" of DHA. A normal adult human brain contains more than 20 grams of DHA. Low DHA levels have been linked to low brain serotonin levels which again are connected to an increased tendency to depression, suicide, and violence. A recent study found that Alzheimer's patients given an omega-3-rich supplement **experienced a significant improvement in their quality of life**. Several studies have established a clear association between low levels of omega-3 fatty acids and depression. Researchers at Harvard Medical School have successfully used fish oil supplementation to treat bipolar disorder (manic-depressive illness) and British researchers report encouraging results in the treatment of schizophrenia.

An adequate intake of DHA and EPA is particularly important during pregnancy and lactation. During this time the mother must supply all the baby's needs for DHA and EPA because it is unable to synthesize these essential fatty acids itself. DHA makes up 15 to 20% of the cerebral cortex and 30 to 60% of the retina so it is absolutely necessary for normal development of the fetus and baby.

There is some evidence that an insufficient intake of omega-3 fatty acids may increase the risk of premature birth and an abnormally low birth weight. There is also emerging evidence that **low levels of omega-3 acids are associated with hyperactivity in children.**

The constant drain on a mother's DHA reserves can easily lead to a deficiency and some researchers believe that preeclampsia (pregnancy-related high blood pressure) and postpartum depression could be linked to a DHA deficiency. Researchers at the University of Sydney have found that children who regularly eat fresh, oily fish have a four times lower risk of developing asthma than do children who rarely eat such fish. They speculate that EPA present in the fish may prevent the development of asthma or reduce its severity by reducing airway inflammation and responsiveness. Researchers at the University of Wyoming have found that supplementation with 3.3 grams/day of **fish oil markedly reduces breathing difficulties** and other symptoms in asthma patients. Other research has found fish oil to be beneficial in the treatment of other lung diseases such as cystic fibrosis and emphysema.

The heart's best friend. An enormous amount of medical literature testifies to the fact that fish oils prevent and may help to ameliorate or reverse atherosclerosis, angina, heart attack, congestive heart failure, arrhythmias, stroke, and peripheral vascular disease. Fish oils help maintain the elasticity of artery walls, prevent blood clotting, reduce blood pressure and stabilize heart rhythm. Danish researchers have concluded that fish oil supplementation may help prevent arrhythmias and sudden cardiac death in healthy men. An Italian study of 11,000 heart attack survivors found that patients supplementing with fish oils markedly reduced their risk of another heart attack, a stroke or death. A group of German researchers found that fish oil supplementation for 2 years caused regression of atherosclerotic deposits and American medical researchers report that men who consume fish once or more every week have a **50% lower risk** of dying from a sudden cardiac event than do men who eat fish less than once a month.

Bypass surgery and angioplasty patients reportedly also benefit from fish oils and clinical trials have shown that fish oils are safe for heart disease patients. The evidence is indeed overwhelming. An adequate daily intake (about 1 gram) of EPA and DHA is essential to maintain a healthy heart. Fish oils are especially important for diabetics who have an increased risk of heart disease. Researchers at the University of Cincinnati have found that supplementing with as little as 2 grams/day of fish oil (410 mg of EPA plus 285 mg of DHA) can lower diastolic pressure by 4.4 mm Hg and systolic pressure by 6.5 mm Hg in people with elevated blood pressure.

Reduces pain and helps prevent cancer. Fish oils are particularly effective in reducing inflammation and can be of great benefit to people suffering from rheumatoid arthritis or ulcerative colitis. Daily supplementation with as little as 2.7 grams of EPA and 1.8 grams of DHA can markedly reduce the number of tender joints and increase the time before fatigue sets in. Some studies have also noted a decrease in morning stiffness and at least two clinical trials concluded that arthritis patients who took fish oils could eliminate or sharply reduce their use of NSAIDs and other arthritis drugs.

Patients with ulcerative colitis have abnormally low blood levels of EPA.

Clinical trials have shown that supplementation with fish oil (2.7 grams of EPA and 1.8 grams of DHA daily) can reduce the severity of the condition by more than 50% and enable many patients to discontinue anti-inflammatory medication and steroids. There is now also considerable evidence that fish oil consumption can delay or reduce tumor development in breast cancer. Studies have also shown that a high blood level of omega-3 fatty acids combined with a low level of omega-6 acids reduces the risk of developing breast cancer.

Safe and easily available

It is estimated that 85% or more of people in the Western world are deficient in omega-3 fatty acids and most get **far too much of the omega-6 fatty acids.** Vegetarian diets, for example, tend to be very high in omega-6.