



RXOMEGA-3 FACTORS®

Supports cardiovascular health

An omega-3 fatty acid deficiency is creating an imbalance that undermines the health of millions and may be a root cause of your maladies as well.

While most North Americans eat way too much of the omega-6 oils found in meats and most vegetable oils, they suffer a relative deficiency of the omega-3 oils – a situation that is associated with an increase risk for heart disease and about 60 other conditions, including cancer, arthritis, stroke, high blood pressure, skin diseases, and diabetes. Particularly important to good health are the longer chain omega-3 fatty acids such as eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) found in fish, especially cold-water fish, such as salmon, mackerel, herring, and halibut. Although the body can convert alpha-linolenic acid, a short-chain omega-3 fatty acid, from flaxseed oil it is much more efficient to get them from fish oils. Furthermore, there is evidence that many people have a difficult time converting alpha-linolenic acid to EPA and DHA.

WHY ARE THE LONG-CHAIN OMEGA-3 FATTY ACIDS SO IMPORTANT

The answer has to do with the function of these fatty substances in cellular membranes. A diet that is deficient in omega-3 fatty acids, particularly EPA and DHA, results in altered cell membranes. Without a healthy membrane, cells lose their ability to hold water, vital nutrients, and electrolytes. They also lose their ability to communicate with other cells and be controlled by regulating hormones. They simply do not function properly. Cell membrane dysfunction is a critical factor in the development of virtually every chronic disease, especially cancer, diabetes, arthritis, and heart disease. Not surprisingly, long-chain omega-3 fatty acids have shown tremendous protective effects against all of these diseases.

Long-chain omega-3 fatty acids, but not alpha-linolenic acid, are also transformed into regulatory hormones, compounds known as prostaglandins. These compounds carry out many important tasks in the body. They regulate inflammation, pain, and swelling; they play a role in maintaining blood pressure; and they regulate heart, digestive, and kidney function. Prostaglandins also participate in the response to allergies, help control transmission of signals along the nerves, and help regulate the production of steroids and other hormones. Through their effects on prostaglandins and related compounds, long-chain omega-3 fatty acids can mediate many physiological processes making them useful in virtually every disease state as well.

SOME CONDITIONS BENEFITED MORE BY LONG-CHAIN OMEGA-3 FATTY ACIDS THAN FLAXSEED OIL

- Aging (are you over 50?)
- Allergies
- Arthritis
- Asthma
- Attention deficit disorder, autoimmune diseases (e.g. rheumatoid arthritis, lupus, MS, etc.)
- Cancer (prevention and treatment adjunct)
- Depression
- Diabetes
- Eczema
- Elevated cholesterol or triglyceride levels
- Heart disease (prevention and treatment)
- Inflammatory conditions (e.g. ulcerative colitis, Crohn's disease)
- Menopause
- Pregnancy
- Psoriasis

WHAT HAS CHANGED YOUR OPINION ON LONGER-CHAIN OMEGA-3 FATTY ACIDS

My opinion on the superiority of longer-chain omega-3 fatty acids over alpha-linolenic acid is not new. I have always held that if manufacturers could solve some of the problems with commercial sources of EPA and DHA that I would wholeheartedly recommend them over flaxseed oil. The reason that I favoured flaxseed oil over fish oils in some of my books (e.g. *Encyclopedia of Natural Medicine*) was because at the time those books were written there were major problems with fish oil supplements. These problems still persist in that most encapsulated fish oil products have been shown to contain very high levels of lipid peroxides, harmful contaminants, and heavy metals. Furthermore, because of the relatively low concentration of EPA and DHA in these products in order to produce therapeutic benefits people would have to consume 10 or more 1,000 mg softgels daily. Because of these factors, it simply made more sense to recommend flaxseed oil. However, a development has changed my perspective a bit although I still think it makes great sense to utilize flaxseed oil on a daily basis as well.

WHAT IS THE DEVELOPMENT

The ability to produce a highly-concentrated form of long-chain omega-3 fatty acids that is free from lipid peroxides, heavy metals, environmental contaminants, and other harm-

ful compounds. These “pharmaceutical grade” marine lipid concentrates are so superior to earlier fish oil products that they are literally revolutionizing nutritional medicine. Natural Factors RxOmega-3 Factors from is an example of this revolutionary source of long-chain fatty acids. The key features of this product over regular fish oil products include:

- More than twice the level of EPA and DHA per softgel than any other brand
- Each softgel provides 600 mg of long-chain omega-3 fatty acids (400 mg EPA/200 mg DHA)*
- Quality control steps to insure the product is free from lipid peroxides, heavy metals, environmental contaminants, and other harmful compounds
- Ratio of omega-3 fatty acids to arachidonic acid > 50:1
- Contains the optimal amount of natural vitamin E as a preservative

DO FISH OIL SUPPLEMENTS REALLY PREVENT HEART DISEASE

Based upon results from two highly-publicized studies in 2002, the answer is a dramatic yes. The first article, published in the *JAMA (Journal of the American Medical Association)* showed that there was a clear relationship between dietary intake of fish and omega-3 fatty acids and the likelihood of developing coronary heart disease – the higher the omega-3 fatty acid intake, the lower the likelihood of coronary heart disease. This relationship was even stronger for coronary deaths. The second article, published in the *New England Journal of Medicine*, looked at omega-3 fatty acid levels in blood as opposed to diet. The investigators found a striking relationship between the blood level of omega-3 fatty acids present and the follow-up likelihood of dying from coronary heart disease.

The use of fish oil supplements may reduce overall cardiovascular mortality by as much as 45%. This effect is not related to a change in blood cholesterol levels. The favourable effect is seen very rapidly, usually by three months into the study. In contrast, cholesterol-lowering drugs do not usually show benefit until after a year or more of therapy. As compared to drug therapy, omega-3

fatty acids provide remarkable benefits, are entirely safe, and are inexpensive.

WHY HASN'T MY DOCTOR TOLD ME TO TAKE LONG-CHAIN OMEGA-3 FATTY ACIDS

Conventional health care practitioners have been slow to recommend nutritional interventions. The evidence for long-chain omega-3 fatty acids providing exceptional health benefits is overwhelming and beyond dispute. One of the reasons that health care practitioners have not felt comfortable with recommending fish oil supplements may be lack of quality control in these products. That issue has been resolved.

DOSAGE

For general health, 1 softgel on a daily basis provides more than the level of omega-3 fatty acids shown to be protective against heart disease mortality in well-designed clinical studies including those published in the *JAMA* and *New England Journal of Medicine* – the two most respected medical journals in the world. For more therapeutic purposes, the recommended dosage is 1 softgel, 2 to 3 times daily.

WHY NOT JUST EAT MORE FISH

Numerous studies indicate that fish consumption offers significant protection against many diseases, especially heart disease and cancer. However, nearly all fish contain trace amounts of mercury. In most cases this is of little concern because the level is so low, but if you are eating a lot of fish it could pose a problem. Two to four servings per week is a good goal, but going above that may be counter productive. The fish most likely to have the lowest level of methyl mercury are salmon, cod, mackerel, cold-water tuna, farm raised catfish, and herring. Swordfish, shark, and other large predatory fish usually contain the highest levels of mercury. The bottom line is that taking a pharmaceutical grade marine lipid concentrate offers the best assurance that you are meeting your requirements for these valuable long-chain omega-3 fatty acids without the fear of mercury poisoning.

OTHER SUPPLEMENTS TO TAKE WITH RXOMEGA-3 FACTORS

Absolutely. Everyone needs a strong nutritional foundation for good health. In addition to a high-quality product containing the long-chain omega-3 fatty acids product, I recommend the appropriate MultiFactors multiple vitamin and mineral supplement based upon a person's age and gender along with other trace nutrients provided in Natural Factors Enriching Greens.

Don't let imbalances, especially an easily-corrected omega-3 deficiency, undermine your health and enjoyment of life.

KEY REFERENCES

- Albert C.M., Campos H., Stampfer M.J., et al., “Blood levels of long-chain N-3 fatty acids and the risk of sudden death”, *N Engl J Med*, 346: 1113-8; 2002
- Bougnoux P., “N-3 polyunsaturated fatty acids and cancer”, *Curr Opin Clin Nutr Metab Care*, 2: 121-6; 1999
- Broughton K.S., Johnson C.S., Pace B.K., Liebman M., Kleppinger K.M., “Reduced asthma symptoms with N-3 fatty acid ingestion are related to 5 series leukotriene production”, *Am J Clin Nutr*, 65: 1011-1017; 1997
- Bucher H.C., Hengstler P., Schindler C., Meier G., “N-3 polyunsaturated fatty acids in coronary heart disease: a meta-analysis of randomized controlled trials”, *Am J Med*, 112: 298-304; 2002
- Burgess J.R., Stevens L., Zhang W., Peck L., “Long-chain polyunsaturated fatty acids in children with attention-deficit hyperactivity disorder”, *Am J Clin Nutr*, 71 (Suppl 1): 327S-30S; 2000
- Calder P.C., “Omega-3 polyunsaturated fatty acids, inflammation and immunity”, *World Rev Nutr Diet*, 88: 109-16; 2001
- Hu F.B., Bronner L., Willett W.C., et al., “Fish and omega-3 fatty acid intake and risk of coronary heart disease in women”, *JAMA*, 287: 1815-21; 2002
- Nordvik I., Myhr K.M., Nyland H., Bjerpe K.S., “Effect of dietary advice and N-3 supplementation in newly diagnosed MS patients”, *Acta Neurol Scand*, 102: 143-149; 2000
- Stark K.D., Park E.J., Maines V.A., Holub B.J., “Effect of a fish-oil concentrate on serum lipids in postmenopausal women receiving and not receiving hormone replacement therapy in a placebo-controlled, double-blind trial”, *Am J Clin Nutr*, 72: 389-94; 2000
- Volker D., Fitzgerald P., Major G., Garg M., “Efficacy of fish oil concentrate in the treatment of rheumatoid arthritis”, *J Rheumatol*, 27: 2343-6; 2000
- * The 2:1 ratio of EPA and DHA in RxOmega-3 Factors has been the dominant ratio in most of the scientific studies conducted with pharmaceutical-grade fish oil products that reported clinical benefits.