

XTEND-LIFE™

OMEGA 3 / DHA Esters

Introduction

Omega 3 essential fatty acids have long been recognised for their significant health benefits. Clinical studies have determined that the main benefits are derived from DHA (Docosahexaenoic Acid) and to a lesser extent EPA (Eicosapentaenoic Acid).

Although you will receive various health benefits from Omega 3's when taken from plant sources such as flax seed, you may miss out on the special benefits from DHA and EPA. This is because your body has to convert the Omega 3's into DHA and EPA. If your health is compromised in any way, or you are elderly this conversion may not take place.

Only fish oils provide DHA and EPA in a natural form that your body can easily assimilate. No conversion is required by the body. However, natural fish oils have a number of drawbacks:

High levels of contaminants in the form of PCB's, and heavy metals including mercury. As most fish oil in capsules does not come from the same country where it is encapsulated it is subject to transport in tankers, additional handling and additives to prevent it from becoming rancid.

Low levels of DHA which is the most beneficial component of fish oil.

Early in 2003 Xtend-Life recognized these drawbacks and after a year of development, perfected a pure fish oil product that addressed these problems! The result...a pure molecularly distilled fish oil ester with NO CONTAMINANTS with exceptionally high levels of DHA! This was made possible by using a cold deep water New Zealand fish called Hoki. This fish has naturally high levels of DHA which is further enhanced during the purification process. It is caught in the pristine Southern Ocean and is naturally free of contaminants.

Further, because the fish is harvested, processed, and the oil/esters encapsulated in New Zealand under the strictest controls possible there is no risk of contamination due to excessive handling. It has been refined to an 'ester' in order to further improve bio-availability.

Because of the purity of this product no additives are needed.

Cardiovascular Benefits

General heart benefits:

Heart disease is a widespread health problem in modern society. Fish oil, rich in omega-3 fatty acids (DHA and EPA) has been proven in many clinical studies to benefit heart health, also supported by the American Heart Association guidelines.

Lowers Triglycerides:

The effectiveness of Fish oil in lowering blood triglycerides (fats) known to be a risk factor for cardiovascular disease has been well established in multiple clinical studies.

Benefits Hypertension (High blood pressure):

Fish oil has been shown to lower mild hypertension when it is due to cardiovascular disease, specifically high cholesterol and atherosclerosis (hardening of the artery walls).

Anti-clotting:

Fish oil helps avoid thrombosis (blood clots) as it prevents platelets (smallest cells in the blood) to stick together and form blood clots.

Reduces Heart Irregularities: Fish oil... especially the DHA content of it has been shown to lower heart rates and also prevent arrhythmias (disturbances of the normal rhythm in the heart's beating), thus decreasing the chance of sudden death by a heart attack.

Circulatory problems:

Circulatory problems such as varicose veins and Raynaud's disease benefit from fish oil. Fish oil stimulates blood circulation and increases the breakdown of fibrin, a compound involved in clot and scar formation.

Skin disorders and skin health

Skin disorders such as psoriasis have been shown to improve from fish oils. In the skin of persons with psoriasis the amount of compounds causing inflammation is many times greater than normal. Fish oil inhibits the production of these inflammatory compounds. Fish oil improves the health of skin, nails and hair.

Brain function

Depression:

Persons with mood disorders such as depression benefit from fish oil supplementation. Lack of omega-3 fatty acids and in particular DHA has been linked by researchers to depression.

Aggression:

A new study of teenagers has found that fish oil and DHA consumption relates to lower hostility rates in teenagers. Hostility has been shown to predict the development and manifestation of heart disease.

Attention Deficit-Hyperactivity Disorder (ADHD), dyslexia and dyspraxia: Like depression and other mood disorders, persons who suffer from ADHD, dyslexia and dyspraxia (absence of ability to perform coordinated skilled movements or clumsiness) benefit from fish oil supplementation.

Memory, learning and Alzheimer's Disease:

Studies have proven that omega-3 fatty acids improve brain function and that intake of fish oil and DHA is linked to a lowered risk of developing Alzheimer's disease. Studies suggest that fish oil and DHA may protect the nervous system.

Allergies

Studies learn that omega-3 fatty acid-intake by mothers during pregnancy may protect babies against the development of allergies. Fish oil has been found to protect against symptoms of hay fever, sinus infections, asthma, food allergies and allergic skin conditions such as hives and eczema.

Arthritis and gout

Fish oil supplements have been shown to benefit in rheumatoid arthritis (RA), and other inflammatory forms of arthritis, such as occurs in some persons with psoriasis and gout. EPA and DHA in fish oil reduce the amount of compounds causing inflammation.

Diabetes

Diabetics suffering from non-insulin dependent diabetes or type II diabetes benefit from fish oil supplementation. Research show that persons who consume 5-10 percent of their dietary energy consumption in the form of fish or fish oil, have less insulin resistance.

Immune system and cancer

The intake of fish oil has been proven to be beneficial for the body's immune function. Research has linked intake of fish oil to a lowered risk of breast cancer and prostate cancer.

Women's benefits

The consumption of fish oil lowers the risk for cardiovascular disease and osteoporosis in post-menopausal women. (Pre)Menstrual symptoms such as menstrual pain are often alleviated from the use of fish oil supplementation. Omega-3 fatty acids are converted into pain relieving substances (prostaglandins type-3) that control contractions of the uterus, which cause the cramping.

Visual function

Research has shown that consumption of fish oil is linked to lowered risk of age related macular degeneration, an eye condition which is the leading cause of severe visual loss in people over age 50.

Inflammatory bowel disease

Fish oil has been proven to be beneficial in intestinal health. Fish oil has an anti-inflammatory effect in inflammatory bowel disease (Ulcerative colitis and Crohn's disease).

Reference:

1. Salonen JT, Seppanen K, Nyyssonen K, et al. Intake of mercury from fish, lipid peroxidation, and the risk of myocardial infarction and coronary, cardiovascular, and any death in eastern Finnish men. *Circulation* 1995;91:645-55.
2. Pheatt N, Ed. Nonherbal Dietary Supplements. Pharmacist's Letter Continuing Education Booklet 1998;98:1-51.
3. Shils M, Olson A, Shike M. *Modern Nutrition in Health and Disease*. 8th ed. Philadelphia, PA: Lea and Febiger, 1994.
4. Akedo I, Ishikawa H, Nakamura T, et al. Three cases with familial adenomatous polyposis diagnosed as having malignant lesions in the course of a long-term trial using docosahexanoic acid (DHA)-concentrated fish oil capsules. *Jpn J Clin Oncol* 1998;28:762-5.
5. Danno K, Sugie N. Combination therapy with low-dose etretinate and eicosapentaenoic acid for psoriasis vulgaris. *J Dermatol* 1998;25:703-5.
6. Prisco D, Paniccia R, Bandinelli B, et al. Effect of medium-term supplementation with a moderate dose of n-3 polyunsaturated fatty acids on blood pressure in mild hypertensive patients. *Thromb Res* 1998;1:105-12.
7. Gans RO, Bilo HJ, Weersink EG, et al. Fish oil supplementation in patients with stable claudication. *Am J Surg* 1990;160:490-5.
8. Vognild E, Elvevoll EO, Brox J, et al. Effects of dietary marine oils and olive oil on fatty acid composition, platelet membrane fluidity, platelet responses, and serum lipids in healthy humans. *Lipids* 1998;33:427-36.
9. Mayser P, Mrowietz U, Arenberger P, et al. Omega-3 fatty acid-based lipid infusion in patients with chronic plaque psoriasis: results of a double-blind, randomized, placebo-controlled, multicenter trial. *J Am Acad Dermatol* 1998;38:539-47.
10. Campan P, Planchand PO, Duran D. Pilot study on n-3 polyunsaturated fatty acids in the treatment of human experimental gingivitis. *J Clin Periodontol* 1997;24:907-13.
11. Singh RB, Niaz MA, Sharma JP, et al. Randomized, double-blind, placebo-controlled trial of fish oil and mustard oil in patients with suspected acute myocardial infarction: the Indian experiment of infarct survival-4. *Cardiovasc Drugs Ther* 1997;11:485-91.
12. Sagar PS, Das UN, Koratkar R, et al. Cytotoxic action of cis-unsaturated fatty acids on human cervical carcinoma (HeLa) cells: relationship to free radicals and lipid peroxidation and its modulation by calmodulin antagonists. *Cancer Lett* 1992;63:189-98.

13. Grimsgaard S, Bonna KH, Hansen JB, Nordoy A. Highly purified eicosapentaenoic acid and docosahexaenoic acid in humans have similar triacylglycerol-lowering effects but divergent effects on serum fatty acids. *Am J Clin Nutr* 1997;66:649-59.
14. Allard JP, Kurian R, Aghdassi E, Muggli R, et al. Lipid peroxidation during n-3 fatty acid and vitamin E supplementation in humans. *Lipids* 1997;32:535-41.
15. Andreassen AK, Hartmann A, Offstad J, et al. Hypertension prophylaxis with omega-3 fatty acids in heart transplant recipients. *J Am Coll Cardiol* 1997;29:1324-31.
16. Badalamenti S, Salerno F, Salmeron JM, et al. Lack of renal effects of fish oil administration in patients with advanced cirrhosis and impaired glomerular filtration. *Hepatology* 1997;25:313-6.
17. Agren JJ, Hanninen O, Julkunen A, et al. Fish diet, fish oil and docosahexaenoic acid rich oil lower fasting and postprandial plasma lipid levels. *Eur J Clin Nutr* 1996;50:765-71.
18. van der Tempel H, Tulleken JE, Limburg PC, et al. Effects of fish oil supplementation in rheumatoid arthritis. *Ann Rheum Dis* 1990;49:76-80.
19. Toft I, Bonna KH, Ingebretsen OC, et al. Effects of n-3 polyunsaturated fatty acids on glucose homeostasis and blood pressure in essential hypertension. A randomized, controlled trial. *Ann Intern Med* 1995;123:911-8.
20. Badalamenti S, Salerno F, Lorenzano E, et al. Renal effects of dietary supplementation with fish oil in cyclosporine- treated liver transplant recipients. *Hepatology* 1995;22:1695-71.
21. Sacks FM, Stone PH, Gibson CM, et al. Controlled trial of fish oil for regression of human coronary atherosclerosis. HARP Res Group. *J Am Coll Cardiol* 1995;25:1492-8.
22. Eritsland J, Arnesen H, Seljeflot I, Hostmark AT. Long-term metabolic effects of n-3 polyunsaturated fatty acids in patients with coronary artery disease. *Am J Clin Nutr* 1995;61:831-6.
23. Shimizu H, Ohtani K, Tanaka Y, et al. Long-term effect of eicosapentaenoic acid ethyl (EPA-E) on albuminuria of non-insulin dependent diabetic patients. *Diabetes Res Clin Pract* 1995;28:35-40.
24. Onwude JL, Lilford RJ, Hjartardottir H, et al. A randomised double blind placebo controlled trial of fish oil in high risk pregnancy. *Br J Obstet Gynaecol* 1995;102:95-100.
25. Bulstra-Ramakers MT, Huisjes HJ, Visser GH. The effects of 3g eicosapentaenoic acid daily on recurrence of intrauterine growth retardation and pregnancy induced hypertension. *Br J Obstet Gynaecol* 1995;102:123-6.
26. Leaf A, Jorgensen MB, Jacobs AK, et al. Do fish oils prevent restenosis after coronary angioplasty? *Circulation* 1994;90:2248-57.
27. McVeigh GE, Brennan GM, Cohn JN, et al. Fish oil improves arterial compliance in non-insulin-dependent diabetes mellitus. *Arterioscler Thromb* 1994;14:1425-9.
28. Sacks FM, Hebert P, Appel LJ, et al. Short report: the effect of fish oil on blood pressure and high-density lipoprotein-cholesterol levels in phase I of the trials of hypertension prevention. *J Hypertens* 1994;12:209-13.
29. Lau CS, Morley KD, Belch JJ. Effects of fish oil supplementation on non-steroidal anti-inflammatory drug requirement in patients with mild rheumatoid arthritis- a double-blind, placebo-controlled study. *Br J Rheumatol* 1993;32:982-9.
30. Rossi E, Costa M. Fish oil derivatives as a prophylaxis of recurrent miscarriage

associated with antiphospholipid antibodies (APL): a pilot study. *Lupus* 1993;2:319-23.

