

Wild Salmon and Fish Oils 1000 mg Softgels



Product Summary:

Salmon oil and other cold ocean fish oils are used as sources of the omega-3 fatty acids, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). These fatty acids cannot be manufactured in the body and must be consumed in our diets, which is why they are called “essential” fatty acids. Supplementing with fish oil ensures the dietary supply of these two central fatty acids, which help maintain cardiovascular health, support cognitive health and brain function, and play a role in normal growth and development.

Properties/Uses:

The claim approved by the *Natural Health Products Directorate* (NHPD): A source of EPA, DHA, and omega-3 fatty acids for the maintenance of good health. Omega-3 fatty acids help promote cardiovascular health, cognitive health and/or brain



CARDIOVASCULAR



Pharmacology:

As early as the 1960s Danish and British scientists pursued the question of how the Eskimos of Greenland could consume up to 60% of their calories in fat and remain virtually free of any heart disease. Despite the huge intake of fat, their blood clotting time was very long, compared to European standards and their levels of blood triglycerides and cholesterol were found to be normal. As a people, they were found to be virtually free of heart attack and stroke. The scientists found their answer in the discovery of the high dietary intake of EPA and DHA from fish and marine mammals.

As a result of these findings, cold ocean fish oils became popular as a source of the omega-3 fatty acid precursors for the “good” Series 3 eicosanoids (see flow chart below). At first the interest was in preventing heart disease, but now fish oils are used for a variety of health reasons surrounding an omega-3 deficiency. EPA and DHA enhance the health of all other body systems as well. DHA is very important to the brain, retina, testes, and adrenal glands for facilitating optimal functioning. Both EPA and DHA are important in brain tissue and function exclusively via cell membranes, in which they are anchored by phospholipid molecules. DHA is proven essential to pre- and postnatal brain development, whereas EPA seems more influential on behavior and mood.¹

Inadequate DHA in the brain is thought to be an important contributing factor in many neurological functional problems. Intriguing brain research has drawn a possible connection between DHA and arachidonic acid (AA) and some of the childhood learning and behavioural problems including *dyslexia*, *attention deficit disorder* (ADD), and *attention deficit hyperactivity disorder* (ADHD). Parents and teachers are challenged to provide effective learning and to shape appropriate behaviour. This brain research is pointing to new nutritional ways to address these difficult learning and behavioural problems with neurologically active DHA and omega-6 gamma-linolenic acid (GLA) and arachidonic acid (AA).²

British researcher Jacqueline Stordy, PhD, found that supplying DHA to young adults with dyslexia improved learning disabilities.³ Parents can use brain-active DHA, and AA from food sources (such as egg yolks), to address learning and behavioural problem.

Researchers have found that the fatty acids DHA and AA are highly concentrated in the synaptic membranes, the juncture where neurons exchange and process information, and where learning and behaviour are forged.⁴ Researcher Laura J. Stevens, PhD, and her fellow scientists at Purdue University have shown that DHA levels in the blood of 53 boys suffering from ADHD was significantly lower than DHA levels found in 43 matched boys without ADHD. This has been interpreted to mean that ADHD sufferers may not make DHA well enough to facilitate optimal construction of synaptic membranes, thereby impairing the brain's control over responses to environmental stimuli, leading to hyperactivity, inattentive, and impulsive behaviour. The researchers concluded that supplementing with DHA and AA may be useful in treating or managing





ADHD. However, there is also the possibility that a genetic defect exists in the synthesis of incorporation enzymes; so cascade-derived DHA cannot be adequately incorporated. Increasing the available amount of DHA may facilitate better incorporation.

Some of the learning and behavioral problems of children is thought to stem from a lack of prenatal DHA and/or AA. These should be acquired during the pregnancy by eating salmon or other ocean fish three times per week, or supplementing with 3 grams of salmon oil daily, particularly during the third trimester. (Do not supplement with fish or shark liver oils, because they supply too much vitamin A for a pregnancy, which can cause birth defects!) Human breast milk contains adequate DHA to complement the prenatal supply of DHA following birth, if the mother diligently continues to consume ocean fish or supplements with salmon oil capsules. Breast milk DHA is so important to early newborn brain development and subsequent educational outcomes, that nursing should be faithfully pursued, and adequate DHA content assured if formula feeding is necessary.⁵

The metabolic relationship between omega-3 and omega-6:

The optimal ratio between omega-6 and omega-3 is thought to be 4:1, in favour of omega-6.⁶ Omega-6 is supplied in all of the common oils consumed in North America, while omega-3 is supplied only in canola, soy and flaxseed oils. Unfortunately, the ratio for most people is closer to 10-20:1 in favour of omega-6, a situation now recognized to be a major contributing factor in the leading health problems that plague North America. Such health problems as heart disease and diabetes arise in part by virtue of eicosanoid imbalance in favour of the Series 2 Eicosanoids, the so called "bad" prostaglandins, leukotrienes, and thromboxanes.^{6,7} In many cases, omega-6 Evening Primrose oil is being used when there is already a dietary omega-6 overload.⁷ Flaxseed oil or salmon oil are able to adjust imbalance over time, especially when excessive omega-6 use is curtailed by making the household oil Extra Virgin Olive oil, which has only 8 to 10 percent omega-6 content.⁶⁻⁸

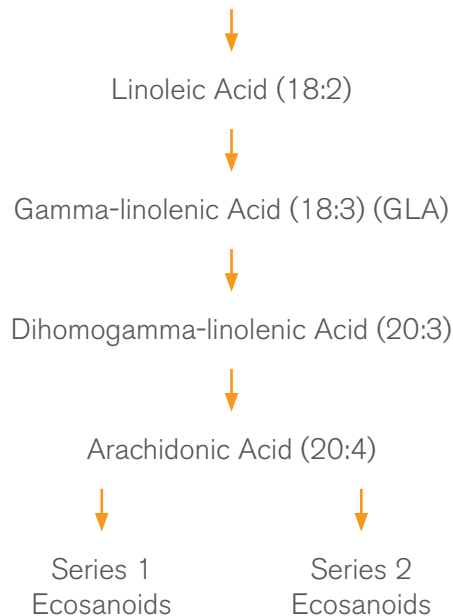
The flow chart below illustrates how the dietary intake of the two essential fatty acids controls the relative concentrations of the eicosanoid metabolic regulators, the prostaglandins, leukotrienes, and thromboxanes.



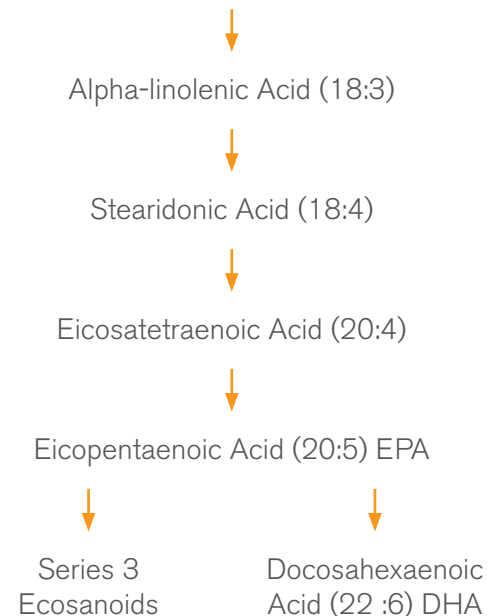


diem

OMEGA-6 FAMILY



OMEGA-3 FAMILY



The Series 2 eicosanoids are referred to as “bad” because they are associated with inducing metabolic conditions that can ultimately cause tissue damage when overly expressed, such as inflammation or blood clotting. Obviously, the Series 2 eicosanoids are not bad, because there are times when inflammation or blood clotting are required. The “badness” is in the eicosanoid imbalance that allows an over expression of Series 2 eicosanoids. Salmon oil has a reputation of health enhancement because it provides eicosanoid balance by providing ready-made EPA that is metabolized into the “good” Series 3 eicosanoids, providing balance. Series 1 eicosanoids also are known as “good” eicosanoids because they also balance Series 2. The right concentration of Series 1 eicosanoids is favoured over Series 2 when the dietary omega-6 content is not constantly in excess of the ideal ratio between omega-6 and omega-3.

Some people in general seem unable to begin with dietary linolenic acid and arrive at sufficient EPA and DHA. These same people likely will have problems in converting linoleic acid to arachidonic acid, which is also important in phospholipid composition on the omega-6 side. This presents a possible lifetime struggle to obtain adequate EPA, DHA, and AA, and the health enhancement tied to these fatty acids. This situation in particular may characterize the older person who suffers from age-related metabolic decline. The problem arises from a compromised ability to form the first metabolic derivatives past the linoleic acid and linolenic acid starting points. For these people, salmon oil will make a greater difference than just supplementing with flaxseed oil as an omega-3 source. Similarly, using omega-6 Evening Primrose oil as a source of gamma-linolenic acid may give better results than just increasing more linoleic acid sources.



Manufactured product information:

Manufacturer:

WN Pharmaceuticals® Ltd.

Size/UPC:

150's 7 77747 10281 5

NPN:

80004542

Expiry Date:

36 months from date of manufacture

Active Ingredient:

Each softgel contains:

Wild Salmon & Fish Oils (salmon, anchovy, sardine and/or mackerel) 1000 mg
Eicosapentaenoic Acid (EPA) 180 mg
Docosahexaenoic Acid (DHA) 120 mg

Non-Medicinal Ingredients (in descending order):

Softgel capsule (gelatin, glycerin, purified water), vitamin E

Appearance:

Clear yellowish to reddish coloured oil encapsulated in a size 22 oblong clear soft gelatin shell.

Packaging:

500 cc white round bottle with safety seal under a 45 mm white induction sealed cap with vented interior seal and a label applied to the bottle. Lot number and expiry date are printed on the label applied to the exterior of the bottle.

Storage:

Store in tight light resistant container in a cool, dry place at temperature between 15 and 25°C.





Dose:

As per the NHPD Monograph for fish oils, the daily dose of combined EPA and DHA for children 1-8 years old is 100 – 1500 mg; for adolescents 9-13 years old is 100 – 2000 mg; for adolescents 14-18 years old is 100 – 2500 mg; and for adults (>18 yrs) is 100 – 3000 mg.⁹

Fish oils have Generally Recognized As Safe (GRAS) in the United States.¹⁰

Directions:

(Adults): 3 softgels daily with meals or as recommended by a physician.

Caution:

The caution as approved by the *Natural Health Products Directorate* (NHPD): KEEP OUT OF THE REACH OF CHILDREN. STORE AT ROOM TEMPERATURE IN A DARK, DRY PLACE. DO NOT USE IF SEAL UNDER CAP IS BROKEN OR MISSING.

Fish oils can reduce vitamin E levels. Those taking fish oils should also be supplementing with natural vitamin E at 200 IUs to 400 IUs to protect against fatty acid peroxidation.

Deficiency Symptoms:

It is recognized that the human body requires a large variety of nutritional substances necessary for optimal growth and development. Among these crucial elements, omega-3 fatty acids are termed 'essential' because they are necessary for good health. Since the human body cannot make them on its own, omega-3 essential fatty acids must be supplied in the diet.

A deficiency in omega-3 can lead to a host of health issues including cardiac and circulatory disorders, disorders of the skin (eczema), disorders of the kidneys and liver, with various inflammatory problems, arthritis, weight disorder and failure of the immune system.



Drug Interactions/Contraindications:

Consult a physician prior to use if you are pregnant or breastfeeding.

Warfarin (Coumadin): Fish oil (EPA) can increase the prothrombin time (PT) in certain people on warfarin. However, Bender et al found that fish oil supplementation in doses of 3-6 grams per day does not seem to create a statistically significant affect on the anticoagulation status of patients receiving chronic warfarin.¹¹

Anticoagulant/Antiplatelet Drugs: Fish oils may increase the risk of bleeding. Monitor patients.

Antihypertensive Drugs: Fish oils can lower blood pressure and might have additive effects in patients taking antihypertensive drugs.

Blood thinners: EPA in a high dose range may present an additive effect with other natural products known to be blood thinners. Other common mild natural blood thinners include garlic, MSM, grape seed extract, cayenne, Ginkgo biloba, and perhaps vitamin E >400 IUs.


Diabetes: Fish oil at low doses does not affect blood glucose levels. In doses greater than 3 grams per day, however, it can increase blood glucose levels.¹⁰

Surgery: Ocean fish oils may predispose a person to post-surgical bleeding problems. Supplementation of fish oil should be discontinued for at least one week before surgery

Toxicity/Adverse Reactions:

Orally, fish oils are generally well tolerated at doses of 3 grams or less per day. Fish oils sometimes have a fishy taste and can cause belching, halitosis, heartburn and gastrointestinal upset. High doses can cause nausea and loose stools. Some gastrointestinal side effects can be minimized if fish oils are taken with meals and if doses are started low and gradually increased.¹⁰

The food oils contained in this product are extremely safe and adverse side effects are rarely associated with them. Allergies are known to occur with some food oils.





Allergen Content/Ingredient Sensitivity:

NO	YES
Artificial Colors	Fish
Artificial Flavors	Sulphites (<10 ppm)
Artificial Sweeteners	
Corn Products	
Egg Products	
Gluten	
Hydrolyzed Plant Protein	
Lecithin	
Milk Products	
Peanuts	
Preservatives	
Sesame Products	
Shellfish	
Soy Products	
Starch/Modified Starch	
Tartrazine	
Tree Nuts	
Wheat Products	
Yeast	

NOT ACCEPTABLE FOR THE FOLLOWING DIETARY RESTRICTIONS:

Free of animal products

Kosher





References:

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4. Stevens LJ, *et al*. Essential fatty acid metabolism in boys with attention-deficit hyperactivity disorder. *Amer J Clin Nutr*. 1995; 62(2): 761-768.
5. Horwood LJ, Fergusson, DM. Breastfeeding and later cognitive and academic outcomes. *Pediatrics*. 1998; 101(1):e9.
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8. Murray, Michael T. *Encyclopedia of Nutritional Supplementation*, Prima Publishing, Rocklin, CA, 1996.
9. Health Canada, Fish Oil Monograph, Accessed October 14, 2009 [Available from: <http://www.hc-sc.gc.ca>]
10. Natural Medicine Comprehensive Database (NMCD), Fish Oil Monograph, Accessed July 8, 2009 [Available from: <http://www.naturaldatabase.com/>]
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