WildOmega 3

EPA 660 mg/ DHA 330 mg

Code FE1253 – 60 softgels

WILD OMEGA-3 is a combination of concentrated marine oils extracted from different species of wild fish. These marine oils are very rich in the omega-3 essential fatty acids: eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA).

These species of small fish have been chosen because they are less likely to accumulate heavy metals and other pollutants, which are abundant in large fish species.

Additionally, during the elaboration process of the fish oil, molecular distillation is used, which separates and purifies the substances. This, as well as rigorous analyses, ensure the oil is highly pure, with minimal or non-existent amounts of saturated fat, heavy metals, PCBs and other pollutants, and is therefore a pharmaceutical grade oil.

The high concentration of EPA and DHA in the product WILD OMEGA-3 make it a rich source of these fatty acids and a good dietary supplement. These essential fatty acids have proven to be very important for the body's proper function. At times, diet doesn't provide adequate amounts and supplementation is necessary.

Eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) are precursors of series 3 prostaglandins. These prostaglandins are hormone-like substances which upon blood vessel filling favour blood circulation and lower arterial pressure, therefore decreasing the risk of stroke and heart attack.

EPA maintains the balance between prostaglandins, thromboxanes and leukotrienes. An imbalance of these substances causes allergic reactions and inflammation.

Ingredients: Fish oil (anchovie, *Engraulis encrasicolus*), D-*alpha*-tocopherol (vitamin E) (from sunflower *Helianthus annuus*), softgel (glacing agent: gelatin; humectants: glycerol and purified water).

Nutritional Information:		**2 softgels (3 260 mg)**
Concentrated marine lipids (wild anchovie)		2 640 mg
Providing essential fatty acids omega-3:		
EPA (eicosapentaenoic acid)	1 320 mg	
DHA (docosahexaenoic acid)	660 mg	
Vitamin E (D-*alpha* tocopherol, 20 IU)	13,4 mg α-TE (112%*)	

NRV: Nutrient Reference Value in %

Oils of pharmaceutical grade, molecular distillation.

Contains no: Preservatives, artificial flavour or colour, sugar, milk or milk products, starch, wheat, corn, or yeast.

Size and format:
60 softgels

Recommended daily dose:
1 softgel twice daily with food.

Do not exceed the stated recommended daily dose.

Cautions:
Consult a health-care practitioner if you are pregnant or breast-feeding, if you are taking medication, or if you have a special medical condition.

Indications and uses:
Different studies have shown that the ingredients in WILD OMEGA-3 can be of help for the following:
Reducing cholesterol, high blood pressure and cardiovascular problems.
Omega-3 essential fatty acids are found in large amounts in the brain, and help with the transmission of nerve impulses, necessary for normal brain function.

OMEGA-3 FATTY ACIDS: These represent a group of essential fats the body needs, just as much as it needs vitamins or any other dietary nutrient. Unlike many critical compounds the body needs for proper function that it can make itself, such as many of the B vitamins and cholesterol, omega-3 fatty acids can only be acquired through diet.

The importance of omega-3 fatty acid intake for normal growth and health in general has been recognized since the 1930s, with the popularity of products like codfish liver oil. It was only with the observation of the Inuit people of Greenland in the 1970s that the real benefits of omega-3 supplementation were discovered. The Inuit live mainly off a diet high in fat from fish

and cold water mammals, rich in omega-3. Their significantly lower rate of heart attack and rheumatoid arthritis led to extensive research on the benefits of omega-3 fatty acids[1,2].

WILD OMEGA-3 is the ideal supplement for reaping the benefits of the omega-3 fatty acids found in many species of cold water fish, difficult to reach though consumption alone.

The presence of these two fatty acids has a broad range of therapeutic benefits.

EPA acts as a precursor to the production of prostaglandins that control the inflammatory response to prevent joint ailments such as arthritis. It also helps with improving the health of arterial walls and in the prevention of arterial clotting that can cause heart attacks and strokes.[2-5]. EPA maintains the balance between prostaglandins, thromboxanes, and leukotrienes. An imbalance between these substances can cause allergic reactions and inflammation[6].
Doses of 1,000 mg / day of EPA have been effective in treating depression[7-9]. The antidepressant effect of EPA against DHA seems to be related to the activation of the cytosolic phospholipase A2 (cPLA2) and ciliacoxygenase-2 (COX-2) genes, and is independent of the monoamine neurotransmitter system[10]. The cPLA2 gene has been linked to major depressive disorders[11]. The efficacy of EPA against DHA seen in various studies[12-15] seems to be related to its anti-inflammatory action at the brain[10]. It is also related to the ability of EPA to regulate dysfunction of the hypothalamic-pituitary axis -adrenal (HPA) associated with depression by reducing the expression of corticotropin-releasing factor and corticosterone secretion[16].

DHA is essential for the development of the brain and nerves, and improves the quality of the myelin sheath that insulates nerves. DHA has been shown to regulate the function of neurotransmitters, including serotonin, norepinephrine, and dopamine[17-19]. The body benefits from its incorporation into cell walls, unlike saturated fats, and it makes them more resistant to possible damage from free radicals[20-25].

The general benefits of omega-3 fatty acids include improved cardiovascular function, better mental health (depression, ADHD and bipolar disorder), strengthened immune function, arthritis relief and the prevention of macular degeneration. Research continues to discover additional benefits of supplementation with EPA and DHA[22-28].

References:
1) Noori, N., Dukkipati, R., Kovesdy, C. P., Sim, J. J., Feroze, U., Murali, S. B., ... & Kalantar-Zadeh, K. (2011). Dietary omega-3 fatty acid, ratio of omega-6 to omega-3 intake, inflammation, and survival in long-term hemodialysis patients. *American Journal of Kidney Diseases*, *58*(2), 248-256.
2) Goldberg, R. J., & Katz, J. (2007). A meta-analysis of the analgesic effects of omega-3 polyunsaturated fatty acid supplementation for inflammatory joint pain. *Pain*, *129*(1), 210-223.
3) Morin, Caroline, Pierre U. Blier, and Samuel Fortin. "Eicosapentaenoic acid and docosapentaenoic acid monoglycerides are more potent than docosahexaenoic acid monoglyceride to resolve inflammation in a rheumatoid arthritis model." Arthritis research & therapy 17.1 (2015): 142.
4) Calder, P. C., Albers, R., Antoine, J. M., Blum, S., Bourdet-Sicard, R., Ferns, G. A., ... & Løvik, M. (2009). Inflammatory disease processes and interactions with nutrition. *British Journal of Nutrition*, *101*(S1), 1-45.
5) Park, Y., Lee, A., Shim, S. C., Lee, J. H., Choe, J. Y., Ahn, H., ... & Bae, S. C. (2013). Effect of n-3 polyunsaturated fatty acid supplementation in patients with rheumatoid arthritis: a 16-week randomized, double-blind, placebo-controlled, parallel-design multicenter study in Korea. *The Journal of nutritional biochemistry*, *24*(7), 1367-1372.
6) Terano, Takashi, et al. "Eicosapentaenoic acid as a modulator of inflammation: Effect on prostaglandin and leukotriene synthesis." Biochemical pharmacology 35.5 (1986): 779-785.
7) Peet, Malcolm, and David F. Horrobin. "A dose-ranging study of the effects of ethyl-eicosapentaenoate in patients with ongoing depression despite apparently adequate treatment with standard drugs." Archives of general psychiatry 59.10 (2002): 913-919.
8) Martins, J. G., H. Bentsen, and B. K. Puri. "Eicosapentaenoic acid appears to be the key omega-3 fatty acid component associated with efficacy in major depressive disorder: a critique of Bloch and Hannestad and updated meta-analysis." (2012): 1144.
9) Su, Kuan-Pin, et al. "Eicosapentaenoic and docosahexaenoic acids have different effects on peripheral phospholipase A2 gene expressions in acute depressed patients." Progress in Neuro-Psychopharmacology and Biological Psychiatry 80 (2018): 227-233.
10) Pae, Chi-Un, et al. "BanI polymorphism of the cytosolic phospholipase A2 gene may confer susceptibility to the development of schizophrenia." Progress in Neuro-Psychopharmacology and Biological Psychiatry 28.4 (2004): 739-741.
11) Mozaffari-Khosravi, Hassan, et al. "Eicosapentaenoic acid versus docosahexaenoic acid in mild-to-moderate depression: a randomized, double-blind, placebo-controlled trial." European Neuropsychopharmacology 23.7 (2013): 636-644.
12) Martins, Julian G. "EPA but not DHA appears to be responsible for the efficacy of omega-3 long chain polyunsaturated fatty acid supplementation in depression: evidence from a meta-analysis of randomized controlled trials." Journal of the American College of Nutrition 28.5 (2009): 525-542.
13) Martins, J. G. "EPA but not DHA appears to be responsible for the efficacy of omega-3 LC-PUFA supplementation in depression: evidence from an updated meta-analysis of randomized controlled trials." Oleagineux Corps Gras Lipides 18 (2011): 188-98.
14) Sublette, M. Elizabeth, et al. "Meta-analysis: effects of eicosapentaenoic acid in clinical trials in depression." The Journal of clinical psychiatry 72.12 (2011): 1577.
15) Schiepers, Olga JG, Marieke C. Wichers, and Michael Maes. "Cytokines and major depression." Progress in Neuro-Psychopharmacology and Biological Psychiatry 29.2 (2005): 201-217.
16) Chalon, Sylvie. "Omega-3 fatty acids and monoamine neurotransmission." Prostaglandins, Leukotrienes and Essential Fatty Acids 75.4-5 (2006): 259-269.
17) Kodas, Ercem, et al. "Serotoninergic neurotransmission is affected by n-3 polyunsaturated fatty acids in the rat." Journal of neurochemistry 89.3 (2004): 695-702.
18) Zimmer, Luc, et al. "The dopamine mesocorticolimbic pathway is affected by deficiency in n− 3 polyunsaturated fatty acids." The American journal of clinical nutrition 75.4 (2002): 662-667.
19) Yazdi, P. G. (2012). A review of the biologic and pharmacological role of docosapentaenoic acid. *F1000Research*, *2*, 256-256.
20) Amminger, G. P., Schäfer, M. R., Papageorgiou, K., Klier, C. M., Cotton, S. M., Harrigan, S. M., ... & Berger, G. E. (2010). Long-chain ω-3 fatty acids for indicated prevention of psychotic disorders: a randomized, placebo-controlled trial. *Archives of general psychiatry*, *67*(2), 146-154.

21) Assies, J., Lieverse, R., Vreken, P., Wanders, R. J., Dingemans, P. M., & Linszen, D. H. (2001). Significantly reduced docosahexaenoic and docosapentaenoic acid concentrations in erythrocyte membranes from schizophrenic patients compared with a carefully matched control group. *Biological psychiatry*, *49*(6), 510-522.
22) Lin, P. Y., & Su, K. P. (2007). A meta-analytic review of double-blind, placebo-controlled trials of antidepressant efficacy of omega-3 fatty acids. *Journal of Clinical Psychiatry*, *68*(7), 1056-1061.
23) Rosenzweig, E. S., & Barnes, C. A. (2003). Impact of aging on hippocampal function: plasticity, network dynamics, and cognition. *Progress in neurobiology*, *69*(3), 143-179.
24) Miller, E., Kaur, G., Larsen, A., Loh, S. P., Linderborg, K., Weisinger, H. S., ... & Sinclair, A. J. (2013). A short-term n-3 DPA supplementation study in humans. *European journal of nutrition*, *52*(3), 895-904.
25) Hooper, L., Harrison, R. A., Summerbell, C. D., Moore, H., Worthington, H. V., Ness, A., ... & Ebrahim, S. (2004). Omega 3 fatty acids for prevention and treatment of cardiovascular disease. *The Cochrane Library*.
26) Bowen, K. J., Harris, W. S., & Kris-Etherton, P. M. (2016). Omega-3 Fatty Acids and Cardiovascular Disease: Are There Benefits?. *Current Treatment Options in Cardiovascular Medicine*, *18*(11), 69.
27) Kromhout, D., Giltay, E. J., & Geleijnse, J. M. (2010). n–3 Fatty acids and cardiovascular events after myocardial infarction. *N Engl J Med*, *2010*(363), 2015-2026.
28) Galan, P., Kesse-Guyot, E., Czernichow, S., Briancon, S., Blacher, J., & Hercberg, S. (2010). Effects of B vitamins and omega 3 fatty acids on cardiovascular diseases: a randomised placebo controlled trial. *Bmj*, *341*, c6273.