



REGENERLIFE™

OMEGA-3+D ULTRA STRENGTH

NPN 80118315

RESEARCH INFORMATION

Feature summary

Natural Factors RegenerLife Omega-3+D Ultra Strength provides high-potency omega-3 daily support for cardiovascular, cognitive, and cellular health, alongside vitamin D3 for immune function, mood, bones, and teeth. Two softgels daily provide 1000 IU of vitamin D3 and more than 2 g of omega-3 fatty acids. This includes 1360 mg of EPA, 670 mg of DHA, and 190 mg of standardized DPA, without any fishy aftertaste thanks to Enteripure® technology.

Eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), and docosapentaenoic acid (DPA) are long-chain omega-3 fatty acids necessary for brain health, healthy function of muscles including the heart, and joint and immune function. Omega-3 helps support blood lipid management and promote mood balance and brain health. Preliminary evidence suggests that DPA may be even better than EPA and DHA at helping the body manage inflammation.

Despite all the known health benefits of long-chain omega-3, most adults don't get enough in their diet and may be wary of eating fish potentially contaminated with heavy metals. RegenerLife Omega-3+D Ultra Strength provides molecularly distilled, ultra-purified omega-3 screened by ISURA® for purity and safety, and encapsulated in Canada. It is an ideal fish oil for anyone looking to support healthy aging. This ultra-pure, highly concentrated omega-3 plus vitamin D3 formula is part of the RegenerLife anti-aging line of supplements formulated for whole-body health and longevity.

How it works

Long-chain omega-3 fatty acids help support cardiovascular health and brain function and reduce inflammatory processes in the body. The human body cannot efficiently produce long-chain omega-3 fatty acids, making dietary or supplemental sources essential for good health. These fatty acids help reduce serum triglycerides, increase the synthesis of anti-inflammatory substances, and reduce the synthesis of proinflammatory substances, which helps regulate pain, swelling, nerve transmission, and many other functions (Reimers & Ljung, 2019).

Omega-3 and vitamin D both play a role in mood balance and cognitive health. Vitamin D regulates serotonin synthesis, EPA influences serotonin release, and DHA is a basic building block of neurons. DHA is also used to fuel brain metabolism, affects the activity of serotonin receptors, and is the predominant structural fatty acid in the cerebral cortex, membranes of synaptic communication centres, mitochondria, and photoreceptors of the retina (Patrick & Ames, 2015; Singh, 2005).

DPA is increasingly recognized for its contribution to the many benefits of omega-3 fish oil. DPA is an elongated version of EPA that can act as a storage reservoir, providing EPA or the building blocks of DHA when needed, while also offering benefits itself (Guo et al., 2020).

Vitamin D plays a key role in innate immunity and is essential for the proper absorption and use of calcium and phosphorus to increase bone mineralization (Barnard & Colón-Emeric, 2010).

Research

A large body of evidence supports the benefits of omega-3 for heart health, brain function, healthy cell membranes, and the health of mitochondria that power the body's cells.

Long-chain omega-3 fatty acids help maintain cardiovascular health by lowering plasma triglycerides and helping the body manage inflammation and blood clotting processes (Burri & Berge, 2013). Elevated triglycerides (at or above 150 mg/dL) are considered a risk factor for cardiovascular disease, but research suggests that consistent omega-3 intake can help reduce triglyceride levels (Kim et al., 2018). In one study, DHA was associated with a 6.8% net decrease in triglycerides and a 5.9% net increase in beneficial high-density lipoprotein (HDL) (Jacobson et al., 2012). A meta-analysis of randomized, controlled clinical trials concluded that regular consumption of higher levels of EPA and DHA reduced the risk of cardiovascular disease events by 18% (Alexander et al., 2017). Large multicentre studies have also found that high-dose omega-3 supplementation, especially EPA, can be used to lower residual high triglyceride levels in patients undergoing statin therapy (Mason et al., 2020).

To meet the body's need for omega-3 and support cardiovascular health, the American Heart Association recommends eating two servings of fish (particularly fatty fish) per week (AHA, 2021). Despite these recommendations and the documented benefits of omega-3 fatty acids, 95.7% of North Americans lack sufficient intake of omega-3 required to support a healthy heart (Murphy et al., 2015).

DHA and EPA are well known for supporting cognitive and emotional health. EPA plays a central role in controlling inflammation in the brain, while DHA makes up 30–40% of the polyunsaturated fatty acids within the grey matter of the cerebral cortex (Tanaka et al., 2012; Burri & Berge, 2013). DHA is believed to help support cognitive health in older adults by improving cerebral blood flow, reducing inflammation, and mitigating amyloid plaque formation (Fotuhi et al., 2009). A meta-analysis of 12 studies concluded that older adults with declining memory could improve their memory function by increasing their omega-3 intake to more than 1000 mg of total EPA/DHA per day (Yurko-Mauro et al., 2015).

Higher DPA levels have also been linked to cognitive and cardiovascular health, including greater neuronal plasticity and insulin sensitivity, and reduced markers for cardiovascular and metabolic disease risk markers, especially plasma lipid parameters and platelet aggregation (Drouin et al., 2019). Two studies looked at the association among DPA in red blood cells, fasting triglyceride levels, and several markers of inflammation in adults. In both studies, higher levels of DPA in red blood cells were associated with lower levels of the inflammatory marker C-reactive protein and with fasting triglyceride levels (Skulas-Ray et al., 2015).

Omega-3 fatty acids may also support telomere length by inhibiting the activity of the enzyme telomerase, which shortens telomeres. Shorter telomeres are associated with age-related diseases and early mortality. In one randomized, controlled trial, adults taking 1.5 g or 2.5 g of omega-3 daily for four months had 15% lower oxidative stress, lower concentrations of proinflammatory cytokines, and increased telomere length, suggesting that omega-3 could reduce cellular aging (Kiecolt-Glaser et al., 2013).

Research suggests that exposure to sunlight or vitamin D supplementation helps promote mood balance and cognition in older adults, but that vitamin D insufficiency affects an estimated 40–100% of community-dwelling older adults (Barnard & Colón-Emeric, 2010).

Ingredients

Each softgel contains:	1 softgel	2 softgels
Fish oil (molecularly distilled, ultra purified) (anchovy, sardine, herring, and/or mackerel)	1600 mg	3200 mg
Omega-3 fatty acids.....	1100 mg	2200 mg
Eicosapentaenoic acid (EPA)	680 mg	1360 mg
Docosahexaenoic acid (DHA)	335 mg	670 mg
Docosapentaenoic acid (DPA) and other naturally occurring omega-3 fatty acids	95 mg	190 mg
Vitamin D3 (cholecalciferol)	500 IU (12.5 mcg)	1000 IU (25 mcg)

Dosage

Recommended adult dose: 1–2 softgels daily or as directed by a health care practitioner. **For mood balance:** 2 softgels 1 time daily or as directed by a health care practitioner. **For prevention of vitamin D deficiency (adults over 70):** 2 softgels 1 time daily or as directed by a health care practitioner.

Cautions

Keep out of the reach of children.

References

- Alexander, D.D., Miller, P.E., Van Elswyk, M.E., et al. (2017). A meta-analysis of randomized controlled trials and prospective cohort studies of eicosapentaenoic and docosahexaenoic long-chain omega-3 fatty acids and coronary heart disease risk. *Mayo Clin Proc*, 92(1), 15-29.
- American Heart Association. (2021). Fish and omega-3 fatty acids. Retrieved from <https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/fats/fish-and-omega-3-fatty-acids>
- Barnard, K., & Colón-Emeric, C. (2010). Extraskeletal effects of vitamin D in older adults: Cardiovascular disease, mortality, mood, and cognition. *Am J Geriatr Pharmacother*, 8(1), 4-33.
- Burri, L., & Berge, K. (2013). Recent findings on cardiovascular and mental health effects of krill oil and omega-3 phospholipids. In: De Meester, F., Watson, R., Zibadi, S. (eds.) *Omega-6/3 Fatty Acids. Nutrition and Health* (pp. 179-91). Humana Press.
- Drouin, G., Rioux, V., & Legrand, P. (2019). The n-3 docosapentaenoic acid (DPA): A new player in the n-3 long chain polyunsaturated fatty acid family. *Biochimie*, 159, 36-48.
- Fotuhi, M., Mohassel, P., & Yaffe, K. (2009). Fish consumption, long-chain omega-3 fatty acids and risk of cognitive decline or Alzheimer disease. A complex association. *Nat Clin Pract Neurol*, 5(3), 140-52.
- Jacobson, T.A., Glickstein, S.B., Rowe, J.D., et al. (2012). Effects of eicosapentaenoic acid and docosahexaenoic acid on low-density lipoprotein cholesterol and other lipids: A review. *J Clin Lipidol*, 6(1), 5-18.
- Kiecolt-Glaser, J.K., Epel, E.S., Belury, M.A., et al. (2013). Omega-3 fatty acids, oxidative stress, and leukocyte telomere length: A randomized controlled trial. *Brain Behav Immun*, 28, 16-24.
- Mason, P.R., Libby, P., & Bhatt, D.L. (2020). Emerging mechanisms of cardiovascular protection for the omega-3 fatty acid eicosapentaenoic acid. *ATVB*, 40(5), 1135-47.
- Murphy, R.A., Yu, E.A., Ciappio, E.D., et al. (2015). Suboptimal plasma long chain n-3 concentrations are common among adults in the United States, NHANES 2003–2004. *Nutrients*, 7(12), 10282-9.
- Patrick, R.P., & Ames, B.N. (2015). Vitamin D and the omega-3 fatty acids control serotonin synthesis and action, part 2: Relevance for ADHD, bipolar, schizophrenia, and impulsive behavior. *FASEB J*, 29(6), 2207-22.
- Reimers, A., & Ljung, H. (2019). The emerging role of omega-3 fatty acids as a therapeutic option in neuropsychiatric disorders. *Ther Adv Psychopharmacol*, 9, 2045125319858901.
- Singh, M. (2005). Essential fatty acids, DHA and human brain. *Indian J Pediatr*, 72(3), 239-42.
- Skulas-Ray, A.C., Flock, M.R., Richter, C.K., et al. (2015). Red blood cell docosapentaenoic acid (DPA n-3) is inversely associated with triglycerides and C-reactive protein (CRP) in healthy adults and dose-dependently increases following n-3 fatty acid supplementation. *Nutrients*, 7(8), 6390-404.
- Tanaka, K., Farooqui, A.A., Siddiqi, N.J., et al. (2012). Effects of docosahexaenoic acid on neurotransmission. *Biomol Ther*, 20(2), 152-7.
- Yurko-Mauro, K., Alexander, D.D., & Van Elswyk, M.E. (2015). Docosahexaenoic acid and adult memory: A systematic review and meta-analysis. *PLoS One*, 10(3), e0120391.