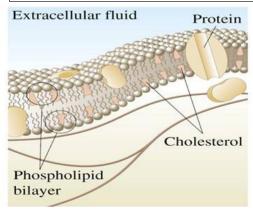
# XanthOmega™ Krill Oil



Fortified with 12 mg astaxanthin for cardiovascular protection -

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XanthOmega™ Krill Oil May Help Support:

- Delayed Speech Development
- Dyslexia and Autism
- Pregnancy and Lactation
- PMS and Menopause
- Hyperlipidemia/Cardiovascular Health
- Skin Cancer Prevention
- Osteo and Rheumatoid Arthritis
- Depression/SAD
- Inflammation
- Metabolic Syndrome

Krill oil provides a unique way to receive the benefits of omega-3 fats, EPA and DHA, while also simultaneously obtaining healthy phospholipids with powerful antioxidants. Krill are tiny crustaceans found in the sea and make up the world's largest animal biomass. The oil extracted from krill is rich in the omega-3 fatty acids EPA and DHA bound to highly unsaturated phospholipids, closely resembling human brain phospholipids. These phospholipids - phosphatidylcholine, phosphatidylinositol, and phosphatidylethanolamine - are essential to life and are a major component of cell membranes. They function as cell messengers and as wonderful carriers of EPA and DHA, providing a fast and effective delivery of these omega-3s in the body.

XanthOmega<sup>TM</sup> Krill Oil has a high phospholipid content, standardized to a minimum of 40% phospholipids, mostly as phosphatidylcholine. This version is considered to be a virgin krill oil, the purest form available, with high phospholipid bioavailability enhancing the absorption of the powerful antioxidant astaxanthin, one of krill's shining features.

## It would take 8 conventional krill softgels to equal the astaxanthin levels in just 1 XanthOmega™ Krill Oil softgel!

Astaxanthin, the carotenoid from the microalgae, haematococcus pluvialis, is a staple of krill's diet and gives them and other crustaceans their vibrant pink color. As research continues to emerge on the many health benefits of high dose astaxanthin, Designs for Health was compelled to fortify XanthOmega™ Krill Oil with 12 mg per serving AstaREAL®, a registered brand of astaxanthin, even though krill oil naturally contains astaxanthin along with other antioxidants. AstaREAL® is extracted directly from microalgae using a solvent-free technology that ensures maximum control and purity. \*AstaREAL® astaxanthin is the most studied astaxanthin in the world with over 40 clinical studies, both animal and human.

Studies suggest that this exceptionally high level of astaxanthin offers an array of therapeutic benefits, which may include:

- **Powerful and efficient antioxidant** due to its unique structure, astaxanthin is able to trap radicals both, at the phospholipid membrane surface as well as inside the membrane<sup>1</sup>
- Cardiovascular health in mild hyperlipidemia, 12 and 18 mg/day doses significantly reduced triglyceride, while 6 and 12 mg doses significantly increased HDL-cholesterol<sup>2</sup>
- **Protection against Hypertension and Stroke** inducing vasorelaxation through a nitric oxide-related mechanism<sup>3</sup>
- **Neuroprotective Benefits** through its potent antioxidant activity<sup>3</sup>
- **Sports Performance** reducing exercise-induced damage in skeletal muscle and heart<sup>4</sup>
- Eye Support reducing and preventing eye strain, at 6 mg/day <sup>5</sup>
- **Supporting Skin Health** protecting against UVA-induced aging, as in skin sagging and wrinkles <sup>6</sup>
- Anti-Inflammatory Benefits helps to inhibit the formation of pro-inflammatory mediators nitric oxide (NO), prostaglandin E2 (PGE2), and tumor necrosis factor (TNF)-alpha production <sup>7,8</sup>
- Gastric Health Support in the treatment of H. pylori, helping to reduce bacterial load, gastric inflammation, and reflux symptoms<sup>9, 10</sup> \*AstaREAL® is a registered trademark of Fuju Chemical Industry Company.

#### XanthOmega<sup>TM</sup> Krill Oil's Stellar Line-Up

In addition to its rich phospholipids, omega-3s, and astaxanthin, XanthOmega<sup>TM</sup> Krill Oil also naturally contains several other antioxidants including canthaxanthin, ß-carotene, vitamin E, and trans-retinol vitamin A. These antioxidants offer benefits of their own, while also protecting this nutrient-dense oil from oxidation. ORAC tests show that krill oil has up to 300 times the antioxidant capacity of vitamins A or E alone.

Designs for Health's XanthOmega<sup>TM</sup> Krill Oil is made using a unique cold-extraction process that converts it into stable oil. This process protects the lipids from alteration and avoids peroxidation. It is free of heavy metals and organohalide pollutants, making it extremely pure. This product does not cause reflux or regurgitation commonly experienced by those consuming regular fish oil supplements.

## Who should take XanthOmega™ Krill Oil?

This product is safe for pregnant and lactating women, although physician approval prior to taking is always suggested. The softgel is small and very easy to swallow so it should be considered for all children, including those with skin problems, as well as children with attention deficit problems and/or mood disorders, due to its ability to support cognition, mood, and behavior.<sup>11</sup> XanthOmega<sup>TM</sup> Krill Oil's powerful antioxidant team is of

**Supplement Facts** Servings Per Container 30 **Amount Per Serving** % Daily Value Calories Calories from Fat 5 2%\* **Total Fat** 1 g 90 IIJ 2% Vitamin A Krill Oil (Euphausia superba) 880 mg Phospholipids, Omega-3 rich 352 mg Eicosapentaenoic acid (EPA) 80 mg Docosahexaenoic acid (DHA) 44 mg 12 mg Asta REAL® Natural Astaxanthin (from Haematococcus pluvialis algae extract)

†Daily Value not established.

\*Percent Daily Values are based on a 2,000 calorie diet.

**Other Ingredients:** Gelatin, glycerine, water, and lemon oil (softgel ingredients).

Contains: Shellfish (krill).

great value to diabetics, as these patients have a high level of oxidative stress. Since krill oil research shows improvements in both blood glucose and hyperlipidemia<sup>12, 13</sup>, it should be considered for patients with Metabolic Syndrome. Krill oil supplementation has been shown to be effective in improving metabolic parameters in mice, leading researchers to conclude that krill oil "may be of therapeutic value in patients with the metabolic syndrome and/or nonalcoholic fatty liver disease."<sup>13</sup>

### Who should not take XanthOmega™ Krill Oil?

Patients allergic to shellfish should avoid this product. XanthOmega<sup>TM</sup> Krill Oil may have a slight blood thinning effect, so patients taking blood thinning medications should be monitored.

#### References

- 1. Goto S, Kogure K, Abe K, Kimata Y, Kitahama K, Yamashita E, Terada H. Efficient radical trapping at the surface and inside the phospholipid membrane is responsible for highly potent antiperoxidative activity of the carotenoid astaxanthin Biochim Biophys Acta. 2001 Jun 6;1512(2):251-8.
- 2. Yoshida H, Yanai H, Ito K, Tomono Y, Koikeda T, Tsukahara H, Tada N. Administration of natural astaxanthin increases serum HDL-cholesterol and adiponectin in subjects with mild hyperlipidemia. Atherosclerosis. 2010 Apr;209(2):520-3.
- 3. Hussein G, Nakamura M, Zhao Q, Iguchi T, Goto H, Sankawa U, Watanabe H. Antihypertensive and neuroprotective effects of astaxanthin in experimental animals. Biol Pharm Bull. 2005 Jan;28(1):47-52.
- 4. Aoi W, Naito Y, Sakuma K, Kuchide M, Tokuda H, Maoka T, Toyokuni S, Oka S, Yasuhara M, Yoshikawa T. Astaxanthin limits exercise-induced skeletal and cardiac muscle damage in mice. Antioxid Redox Signal. 2003 Feb;5(1):139-44.
- 5. Tsuneto I, Akihiko, T. Effects of Astaxanthin on Eyestrain Induced by Accommodative Dysfunction. J of the Eye. 2006 23(6):829-834.
- 6. Suganuma K, Nakajima H, Ohtsuki M, Imokawa G. Astaxanthin attenuates the UVA-induced up-regulation of matrix-metalloproteinase-1 and skin fibroblast elastase in human dermal fibroblasts. J Dermatol Sci. 2010 May;58(2):136-42.
- Lee SJ, Bai SK, Lee KS, Namkoong S, Na HJ, Ha KS, Han JA, Yim SV, Chang K, Kwon YG, Lee SK, Kim YM. Astaxanthin inhibits nitric oxide production and inflammatory gene expression by suppressing I(kappa)B kinase-dependent NF-kappaB activation Mol Cells. 2003 Aug 31;16(1):97-105.
- 8. Ohgami K, Shiratori K, Kotake S, Nishida T, Mizuki N, Yazawa K, Ohno S. Effects of astaxanthin on lipopolysaccharide-induced inflammation in vitro and in vivo. Invest Ophthalmol Vis Sci. 2003 Jun;44(6):2694-701.
- 9. Bennedsen M, Wang X, Willén R, Wadström T, Andersen LP. Treatment of H. pylori infected mice with antioxidant astaxanthin reduces gastric inflammation, bacterial load and modulates cytokine release by splenocytes. Immunol Lett. 1999 Dec 1;70(3):185-9.
- Kupcinskas L, Lafolie P, Lignell A, Kiudelis G, Jonaitis L, Adamonis K, Andersen LP, Wadström T. Efficacy of the natural antioxidant astaxanthin in the treatment of functional dyspepsia in patients with or without Helicobacter pylori infection: A prospective, randomized, double blind, and placebo-controlled study. Phytomedicine. 2008 Jun;15(6-7):391-9.
- 11. Kidd PM. Omega-3 DHA and EPA for cognition, behavior, and mood: clinical findings and structural-functional synergies with cell membrane phospholipids. Altern Med Rev. 2007 Sep;12(3):207-27
- 12. Bunea R, El Farrah K, Deutsch L. Evaluation of the effects of Neptune Krill Oil on the clinical course of hyperlipidemia. Altern Med Rev. 2004 Dec;9(4):420-8.
- 13. Tandy S, Chung RW, Wat E, Kamili A, Berge K, Griinari M, Cohn JS. Dietary krill oil supplementation reduces hepatic steatosis, glycemia, and hypercholesterolemia in high-fat-fed mice. J Agric Food Chem. 2009 Oct 14;57(19):9339-45.