

HALPERIN CHIROPRACTIC

Keith Halperin, DC



Krill Oil and Astaxanthin

Krill are small reddish-color crustaceans, similar to shrimp, that abound in cold Arctic waters. They survive in such cold, frigid temperatures because of their natural anti-freeze, the polyunsaturated fatty acids EPA and DHA. EPA and DHA are bound to molecules

called phospholipids (especially phosphatidyl choline) that act to help transport nutrients into cells and change the structure of animal cell membranes.

Studies show that these combined fatty acids have better absorption into the cell membranes throughout the body, especially the brain, as compared to other types of fish oils. Although it has less EPA/DHA content than most fish oils, krill oil seems to be almost twice as absorbable.

Unlike fish oil, krill oil also contains a very potent antioxidant, astaxanthin, which helps prevent krill oil from oxidizing (turning rancid). Astaxanthin is a red pigment found in different types of algae and phytoplankton. It is astaxanthin that gives salmon and trout their reddish color. It is considered to be one of the most potent natural antioxidants, almost 50 times stronger than beta-carotenes found in fruits and vegetables and 65 times better as an anti-oxidant than vitamin C.

Krill oil is composed of 40% phospholipids, 30% EPA and DHA, astaxanthin, vitamin A, vitamin C, various other fatty acids, and flavanoids (anti-oxidant compounds)

Human studies indicate krill oil is powerful at decreasing inflammation throughout the body, especially in the brain. It reduces C-reactive protein, a marker for heart disease. Tests indicate it has a powerful anti-inflammatory remedy for rheumatoid as well as osteoarthritis. I use it regularly for autistic patients and those with ADHD for the calming affect it has on the brain. It has been proven to significantly decrease premenstrual syndrome symptoms of pain, swelling, bloating, feelings of stress, irritability, and depression.

Perhaps some of the most important clinical trial results are found in a Canadian study with patients with high LDL's, low HDL's, high CRP (C-reactive protein), and high triglycerides. They were divided into 3 groups. One group received placebo, one was given a dosage of 1-3 grams krill oil per day, and one group was given a dosage of 3 grams per day of fish oil. After 90 days results of these blood parameters were compared in the 3 groups. Here are the results:

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	Krill Oil	Fish oil	Placebo
LDL	Decrease 35%	Decrease 4%	Increase 13%
Total Cholesterol	Decrease 15%	Decrease 6%	Increase 9%
Triglycerides	Decrease 20%	Not significant	Not significant
HDL	Increase 50%	Increase 4%	Not significant
C-reactive protein	Decrease 20%	Not significant	Not significant
Glucose	Decrease 6%	0%	

During the 12 week follow-up, when the subjects using krill oil were given 500 mg of krill oil per day all results held steady except for glucose.

Dosage for krill oil are 1-3 grams per day for 1-2 months, followed by a daily maintenance dose of 500 mg. per day

Side-effects: None reported. Those with shellfish allergy should avoid krill

Summary: of krill oil with astaxanthin results from various studies-

- Decreases ADHD in children and adults
- Important for cardiovascular health
- Decrease depression
- Potent anti-inflammatory
- Effective anti-oxidant
- Protects against hypertension and stroke
- Neuroprotective benefits
- Sports performance-reduces exercise induced damage to muscle
- Reduces PMS symptoms