

**Keep krill, vegetable oils, and all food oils in the fridge, to stop them going rancid (bad).**

Krill are shrimp-like crustaceans that are approximately 1 to 6 centimetres long. They feed on phytoplankton in the ocean. They are eaten by whales, seals, penguins, squid and fish. Some fear that humans consuming krill could deprive the whales, but there were a hundred times more whales a hundred years ago. The Mediterranean alone used to have hundreds of whales, now there are none there. Small wooden sailing ships could go from Christchurch and catch a dozen whales in a day, now they seldom even see any.

Much of the following information is from two of the best open forward minded doctors in the world, Dr Joseph Mercola and Dr Al Sears both from USA. Get their newsletters, or Google for Krill oil.

Both recommend eating krill and not fish oil because of fishes high mercury levels. The fish oil industry tries to promote their products, but the facts are against them. Today's fish oil has heavy metals so avoid it.

Krill oil contains more omega-3 which is the main reason it is so popular as a nutritional supplement.

Antioxidants protect our body cells from damage from free radicals (unstable substances that contribute to disease). Unlike many other antioxidants, astaxanthin protects the eyes, brain and central nervous system from free radical damage, and supports your heart and skin and joints' health, memory, mood, brain and immune function.

Those taking krill oil had their omega-3s increase by 178%, so less need be taken. Krill oil can supply every cell in your body with the world's most penetrating omega-3 that we all need. Also, krill oil doesn't cause fish oil burps or bad after-taste. When compared to fish oil, researches found krill oil was forty-eight times more potent, due to its high amount of **astaxanthin** (See below). Krill is 300 times stronger than vitamin A & E. It is super-rich in essential DHA & EPA Omega-3 and it beats fish oils hands down.

Auriel and I take a Good Health Red Super Krill capsule each day with a meal. We keep it in the fridge which is essential for all oils to stop rancidity.

### **Astaxanthin benefits**

- Protects the heart.
- Supports a healthy brain function and development.
- Lowers cholesterol.
- Fights premenstrual syndrome (PMS) symptoms.
- Boosts liver function.
- Promotes flexible joints with more joint comfort.
- Regulates blood sugar.
- Increases concentration, faster learning and improved memory.
- Boosts immune system and overall well-being.
- Fights common ageing symptoms.
- Reduces wrinkles.
- Promotes smooth, silky skin.
- Protects from cataracts and age related macular degeneration.
- Reduces arthritis symptoms and inflammation.

When purchasing krill oil, read the label and check the amount of astaxanthin it contains. The more the better, but anything above 0.2 mg per gram of krill oil will help protect it from rancidity.

### **Research**

Krill oil has been studied as a natural remedy for high cholesterol. In one study, 120 people were given krill oil, fish oil or a placebo. Krill oil reduced LDL ("bad") cholesterol by 34% and increased HDL ("good") cholesterol by 43% compared to the placebo. In comparison, fish oil reduced LDL cholesterol by 5% and increased HDL cholesterol by 4%. krill also lowered triglycerides.

### **Possible side effects**

To date there are very few negative side effects associated with krill oil. The biggest precaution is issued to persons suffering from shell-fish allergies. Remember that krill are a crustacean, and those that suffer allergies should definitely consult with their physician before taking krill oil.

Side effects of krill oil may include loose stools, diarrhoea or indigestion.

As with fish oils, people taking blood thinners (anticoagulant or anti-platelet medication), such as aspirin, warfarin (Coumadin), heparin, clopidogrel (Plavix), non-steroidal anti-inflammatory medications (NSAIDs) such as ibuprofen (Motrin, Advil), naproxen (Naprosyn, Aleve) should only use krill oil under their physician's supervision.

Krill oil should also be used with caution by people taking herbs and supplements that are thought to increase the risk of bleeding, such as ginkgo biloba and garlic.

### **Buying krill oil**

“Every time any oil is subjected to contact with oxygen, it starts going rancid and oxidising. Omega-3 fats are extremely fragile and easily damaged by oxygen. This is true for all omega-3 sources, whether animal-based or plant-based.”

However, this is where krill oil stands out as a clear winner. Krill oil contains the antioxidant astaxanthin, which keeps it safe from oxidative damage. In tests, the krill oil remained undamaged after being exposed to a steady flow of oxygen for 190 hours. Compare that to fish oil, which went rancid after just one hour. That makes krill oil nearly 200 times more resistant to oxidative damage, compared to fish oil.

Another primary concern that is not widely recognised is that many of the fish oils on the market are contaminated with relatively large amounts of mercury and other heavy metals and toxic chemicals. Toxins like mercury are typically screened for, at least in higher quality brands. In krill oil, this is less of a problem as krill are at the bottom of the food chain. Read Human Health Minerals > Mercury in Humans.

A lawsuit filed earlier this year brought the issue of contaminated fish oil to the forefront. Environmentalists in California claim that popular brands of fish oil supplements contain unsafe and illegal levels of carcinogenic chemicals. Smaller fish, such as herring, sardines, and anchovies fare better than larger fish since they don't have time to bio-accumulate metals and other toxins in their tissues.

You should store all Omega-3 oils, krill included, in your refrigerator. Also, use muscle testing (read Human Health > Muscle Testing) when purchasing any krill or fish oils. If buying fish oil in a bottle, make sure it is brown glass, as clear glass will let ultraviolet and fluorescent light in that will oxidise the oil, turning it bad more quickly.

### **Krill harvesting is safe**

This is carefully regulated, using strict international precautionary catch limit regulations that are reviewed and reassessed regularly to assure sustainability.

Many studies show the biomass of Antarctic krill range anywhere from 170 million to 740 million tons, averaging around 420 million tons, with an annual reproduction rate of several hundred million tons. This ensures a very large standing stock of renewable krill for both natural consumers and human use.

From 1990 until today, the annual krill harvest is approximately a modest 1/10th of one million tons. This is a very small fraction of the total amount of krill in the ocean. There are 4,000 times more krill than is harvested.

Krill is in all oceans, but Antarctic krill is by far the most abundant and least likely to be polluted.

All oils (fish, linseed, sunflower and all fats) should be refrigerated on arrival. Don't eat any linseed or sunflower seeds because they get damaged at harvest so start going rancid and give Auriel and some others nausea.

Research into the fish oil problem shows most fish oils from local grocery stores or health-food stores come from European waters, which are highly industrialized, so highly polluted.

Even the “farm-raised” fish are polluted.

Some fish oils have levels of heavy metals that are up to 70 times higher than other brands, with no way of knowing just by looking at the bottle.

Vaughan Jones, ONZM Queen's Honour 2013, for services to the farming industry. NZ M.Mkt.I. Dairying 99% Honours Award 1948. Waikato Most Improved Dairy Farm Award 1959. International Agricultural Consultant & Journalist. Represented NZ in Agricultural Journalist Congresses in USA in 1992 & Austria 1994. Managing Director of the website GrazingInfo Ltd, compiled since 1970.