

## Krill oil – It's fish oil... with a difference!

By Marcus Webb

Fish oils are making regular headlines but not many people are aware of the health benefits of krill oil. Krill are small shrimp-like creatures that live in the cold Arctic waters. Its largely thanks to the very high levels of long-chain polyunsaturated fatty acids (LCPFAs) contained in the krill's body that they thrive so well in the icy waters of the Arctic. Two fatty acids that belong to the LCPFA group found in especially high concentrations in krill oil are also found in regular fish oils; eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). In addition to this, the EPA and DHA found in krill oil are attached to another special compound called phospholipid (PL) These fatty acids protect cell membranes and maximize their flexibility and fluidity and, being attached to PL, are readily taken up by the brain. Unlike fish oils, krill oil also contains a rich source of potent antioxidants. Studies into the use of krill oil in humans have indicated that the oil may have superior properties in reducing the symptoms of premenstrual syndrome and easing the inflammatory aspects of many other conditions.



If you follow the health press or health pages in most news papers I think we all agree that the oils derived from fish offer some great benefits. The fatty compounds are known to deliver a ready supply of health promoting unsaturated fatty acids such as EPA and DHA that are known to protect the heart, brain and ease inflammation. If, however, you are not a big fish eater then a daily fish oil supplement may be a good idea. For some people the problem with fish oil supplements is an unfortunate fishy odour repeating on the breath. The good news is krill oil can deliver all

the fatty acids of fish oil but none of the fishy smell. Analysis of the oil derived from krill shows that the potent antioxidant known as astaxanthin predominates. Astaxanthin helps protect against fatty acid oxidation, one of the processes associated with heart disease.

Studies involving krill oil in human health show that in addition to the established heart and brain functions krill oil appears to offer superior help and protection in cases of premenstrual syndrome (PMS). In a 90 day trial involving 70 women, Krill oil (KO) was compared to fish oil (FO) for its ability to ease many of the commonly reported PMS-related symptoms. In the study, 2,000 mg of KO or FO were used for the first 30 days and thereafter (for the remaining 60 days) just to use the oils over the 8 days before and first 2 days of their period. One key finding was that none of the KO users had gut upset where as 64% of the FO users complained of an unpleasant fishy after taste or reflux. Other results indicated that KO & FO eased joint pains and stiffness, breast tenderness, bloating and eased depression and irritability. KO did result in a 50% reduction in overall pain killer use compared to that of a 33% reduction in the FO group. Although 2,000 mg is a large intake of oil it only lasted for one month, after which its use over the menstrual period would appear to be a practical use. Studies have not been performed on a maintenance daily dose of 500 mg which would appear to be a reasonable compromise.

Krill oil has also demonstrated some promise in the ongoing battle against high cholesterol levels. Animal studies have shown that krill oil intake is associated with a reduction in both cholesterol and glucose levels. Investigations into the effects of krill oil on inflammation have shown that after just 7 days of using krill oil supplements key markers for inflammation (C-reactive protein) was reduced by almost 20% and by day 30 of the trial this level had dropped by 30%.

In general, intakes of krill oil can range from 1000-3000mg per day with a maintenance level of intake at the 500mg level. Krill is a safe supplement with no known toxicity. Some people have reported flatulence and diarrhoea but this may simply reflect intake levels and can be managed with simple dose adjustments. Like all oil based supplements those on anticoagulants need to take care when using Krill oil and should seek the advice of their doctor before starting it.