



Fish or Krill

WHICH PILL PUTS
THE MEGA IN OMEGA-3?

BY MICHAEL A. MILLER

The American fallacy that all fat is evil is being challenged by more than 28,000 studies on omega-3 essential fatty acids, which improve heart, brain, eye, and joint health, among other benefits.

Aimee Shunney, ND, a naturopathic physician and advisory board member at Nordic Naturals, swears by fish oil as a supplier of the heart-healthy fats—claiming it to be one of the few supplements that *everyone* needs.

However, fish oil is not the only source in the sea for EPA and DHA. The duo of nutritious fats also abounds in krill—miniature crustaceans that look like shrimp and weigh about 1/30 of an ounce. But is one source better than the other? We compared the two to find out.

The main difference is that fish and krill oil are accepted by your cell membranes through completely different **absorption mechanisms**. Omega-3s in fish oil are bound to triglycerides, fats that must be processed by the liver before being incorporated into the body's cellular membranes. Krill-based omega-3s are bound to phospholipids, the very same that make up the cellular membrane. Therefore, they are said to be more available for use at the cellular level.

Ellen Schutt, communications manager for the Global Organization of EPA and DHA (GOED) believes further research is imperative to confirm the increased bioavailability of krill oil.

Then there's the prospect of **rancidity**. Fish oil, and any lipid, degrades due to oxygen exposure and produces unfavorable smells and tastes. Fish and krill oil each have different but valid defenses for this threat. For krill, its astaxanthin, a potent antioxidant carotenoid found naturally in the tiny crustaceans that stabilizes the lipids and acts as a natural preservative.

Some fish oils are fortified with vitamin E to provide a similar benefit. "While there are issues with contract manufacturers not handling the oil properly, the amount of oxidized products on the market is much smaller than the media would lead you to believe," said Schutt. Reading up on your fish oil brand of choice can reveal whether the supplements are subject to

rancidity or manufactured in oxygen-free, nitrogen-rich manufacturing facilities.

The rooted-for crustacean also avoids **contamination**, as they are so low on the food chain—only phytoplankton are beneath them—and sourced from Antarctic waters where there is very little commercial activity. "Its ability to accumulate contaminants is very limited, versus, say a fish, that lives higher up the food chain," said Becky Wright, marketing director for krill harvester Aker Biomarine.

According to Schutt, contamination isn't a concern for either supplement. Indeed, fish are susceptible to contaminants such as heavy metals, PCBs, and dioxins, but reputable companies employ extensive purifying processes that reduce these contaminants to undetectable levels.

Just 4 percent of the global commercial fishing catch is devoted to fish oil production according to GOED, making it a reliably sustainable choice. However, the **sustainability** of krill harvesting has been called into question. To set the record straight, krill harvesters lift just 1/3 of one percent of the krill biomass from the Antarctic waters of Area 48. This is well short of regulations, which allow for 9 percent to be harvested. This leaves close to 60 million metric tons of krill untouched, so whales, fish, penguins, and other creatures can dine luxuriously. Aker's gentle eco-harvest method also reduces by-catch and leaves ocean inhabitants undisturbed.

Our answer is clear—it matters not where you get your EPA and DHA, only that you do get it. "They're just different. I don't believe one is superior to the other," Wright agrees. **NS**

SAY "NO" TO FISHY BURPS

Not much is worse than doing favors for your health and being repaid with the aftertaste of fishy burps. Contrary to what you may think, fishy reflux is not caused by rancidity of the supplement and is not a safety issue. Rather, it's the effect of its absorption mechanism. Triglyceride-bound omega-3s sit atop the stomach acid like oil on water. Any escaping air headed mouth-ward must breach the oily film, taking displeasing flavors and aromas with it. Phospholipid-bound omega-3s, however, mix and emulsify in the stomach, allowing for a crisp, clean pill-swallowing experience! It also depends on the individual, so if you're one to suffer the dreaded fish burps, that alone may put you on the krill side of the debate.