



## Technical Editorial and Promotional Writing Sample

*WholeFoods Magazine*  
*April Issue Feature Report: Fish Oil*  
*By Vincent Annunziata*

**The processing of fish oil is key to its quality. Please describe what JFI does to ensure that our fish oil products are fresh and pure.**

Jarrow Formulas fish oil is manufactured at a pharmaceutical drug-licensed facility and meets very strict CRN (The Council for Responsible Nutrition), Prop 65 as well as European Pharmaceutical standards for purity. Highly effective purification processes, such as double molecular distillation, is used to obtain pure omega-3 fatty acids (mainly DHA and EPA) as well as protecting the “freshness” of the product. In fact, in 2005 **Jarrow Formulas® Max DHA Liquid** was given a “Best Choice” rating by the non-profit group Environmental Defense, which showed that **Jarrow Formulas®** follows strict procedures to eliminate environmental contaminants and to assure the highest purity of its fish oil supplements.

**Are there any benefits to choosing fish oil capsules versus straight fish oil (and vice versa)?**

There are really no significant differences between fish oil capsules and straight fish oil. Straight fish oils may be more concentrated and probably contain more calories. On the other hand, fish oil capsules are more convenient. Bottom line; they are equally effective, so go with the form you think you will take on a regular basis.

**New research about the benefits of fish oil is mounting by the day, it seems. In your opinion, what are the top five reasons why consumers should integrate fish oil into their diet? (Please cite any recent published studies.)**

Ever since the publication of pioneering studies demonstrating low rates of death from coronary heart disease (CHD) among Greenland Eskimos, fish has been considered a healthy food. Over the years, evidence from animal and human studies further supported this theory and identified 2 long-chain n-3 polyunsaturated fatty acids,

eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA), as the probable active components.

Besides the obvious, beneficial effect on cardiovascular health, fish oil has also been shown to alleviate some of the symptoms of other diseases, such as rheumatoid arthritis. EPA and DHA are known to display positive effects on the musculoskeletal, gastrointestinal and immune systems. Moreover, a recent review published in the journal of *Lipids in Health and Disease* indicates fish oil may hold promise as a treatment for attentional, anxiety and mood disorders.

However, the strength of fish oil research clearly lies with its ability to promote cardiovascular health. Even the FDA is somewhat convinced in that it permits the following qualified health claim: “supportive but not conclusive research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease.” Of course, the FDA was apparently more convinced when Reliant Pharmaceuticals, Inc. presented the well-known evidence of the triglyceride-lowering effect of EPA and DHA. As a result, the company’s prescription fish oil product LOVAZA™ is the “only” omega-3 medication approved for lowering high triglyceride levels (over 500 mg/dL). Needless to say, long before LOVAZA™, EPA and DHA were known to lower high triglycerides. Likewise, a meta-analysis of 36 randomized trials (22 of which were double blind) carried out between 1966 and 2001 found that consuming an average of 3.7 grams a day of fish oil reduced systolic blood pressure (BP) by 2.1 mm Hg and diastolic BP by 1.6 mm Hg. Furthermore, the BP-lowering effects were greater in people older than 45 years of age and in those whose BP was higher than 140/90 mm Hg.

So, fish oil is good for the heart but, it is also referred to as brain food for good reason. DHA is vital for normal brain development for the fetus and infant and for the preservation of normal brain function throughout life. DHA

is selectively incorporated into the nerves, retina and gray matter of the brain, that is, tissues responsible for nerve transmission. In fact, DHA makes up 60% of the lipids in the brain and nerve tissue. DHA is also a precursor to a very significant anti-inflammatory molecule, known as neuroprotectin D1. Neuroprotectin D1 made from DHA has been shown to have powerful, protective effects on the nerves, brain and eyes. Clinical research has also linked fish consumption and reduced DHA levels to dementia and Alzheimer's disease (AD). Evidence reported at the 10th International Conference on Alzheimer's disease and Related Disorders, suggested heart health and brain health are strictly connected. Researchers pointed out those treating risk factors for cardiovascular disease may ultimately slow down the progression of AD.

A recent study published in *Pediatric Research* confirmed the value of fish oil in pregnancy. Results found infants in the fish oil group were less likely to develop an allergy to eggs and that they also had improved neurodevelopment outcomes (notably in hand-eye coordination at 2.5 years of age). In spite of this, recent data indicate that pregnant women are actually likely to reduce their intake of fish in pregnancy because of the concern of methyl mercury and other contaminants. In view of the mounting evidence implicating omega-3 fatty acid deficiency as a cause of various maternal and pediatric disorders, physicians should consider recommending a purified fish oil supplement during pregnancy and lactation.

Omega-3 fatty acids from fish oil have been shown to alter the functioning of neural systems using dopamine and serotonin, both of which are thought to play an important role in mental illness and are major targets of mood-altering medications. A new meta-analysis published in the *Journal of Clinical Psychiatry* looked at ten double-blind, placebo-controlled studies from 1966 to 2006 in patients with mood disorders receiving omega-3 fatty acids. With the average treatment period lasting 4 weeks or longer, researchers discovered that omega-3 fatty acids showed significant antidepressant efficacy.

Omega-3 fatty acids have also been used successfully to treat joint pain associated with several inflammatory conditions. Actually, a recent meta-analysis of 17 randomized, controlled trials assessing the pain relieving effects of omega-3 fatty acids in patients with rheumatoid arthritis or joint pain secondary to inflammatory bowel disease and painful menstruation was reported in the journal *Pain*. The results suggested that supplementation with the omega-3's for 3-4 months reduced joint pain intensity, morning stiffness, number of painful and/or tender joints, and NSAID consumption.

It is becoming increasingly clear more Americans are using complementary and alternative medicine to manage medical conditions. Integrating fish oil into the diet has been clinically proven to promote cardiovascular health, maintain healthy brain function, enhance mood, relieve pain and support mother and child during pregnancy and lactation. Furthermore, it has been demonstrated to be beneficial in managing and treating several other health problems. Although there is no daily reference value established for fish oil, it no doubt should be a nutrient recommended for everyone.

**Here are some ways retailers can answer consumers' commonly asked questions about fish oil:**

**Q. I eat fish once a week or so. Do I need to take fish oil?**

**A.** Yes. The latest recommendations from the American Heart Association (AHA) published in a 2003 issue of *Arteriosclerosis, Thrombosis, and Vascular Biology* suggest eating fish at least **twice** a week. Furthermore, the AHA recommends at least 1 g of EPA and DHA (combined) **per day** for patients with documented coronary heart disease (CHD) and two to four grams of EPA+DHA for people with **high triglyceride levels**.

**Q. I'm pregnant and worried about mercury levels. Is fish oil safe for me?**

**A.** It depends. Research has shown that several over-the-counter brands of fish oil supplements contained negligible amounts of mercury compared with fish and suggested that the consumption of fish oils may be preferable to eating fish. Look for fish oil supplements that have been molecularly distilled and certified to be free heavy metals such as mercury and other environmental toxins.

**Q. How much DHA/EPA do I need?**

**A.** According to the American Heart Association, evidence from prospective secondary prevention studies suggests that EPA/DHA ranging from 0.5 to 1.8 grams per day (either as fatty fish or supplements) significantly reduce the number of deaths from heart disease and all causes.

**Q. I've seen fish oil sold cheaply at local discount stores. Is it just as good as the more expensive varieties?**

**A.** Not likely. Although a lot of companies are claiming molecular distillation for their fish oil products, there are still some not doing anything about purity. Furthermore, many products contain only 20-30% of EPA and DHA by capsule weight thus, requiring more capsules to meet the AHA's guidelines for EPA and DHA. In addition, many products are lacking vitamin E, rosemary or other

antioxidants to stabilize the oils and prevent them from becoming rancid. When in doubt, go with a brand that has been on the market for a while and has a reputation for high-quality supplements.

### Q. Do I need fish oil if I already take flaxseed oil?

A. Yes. Flaxseed oil is a very rich source of alpha-linolenic acid (ALA). Alpha-linolenic acid is an omega-3 fatty acid capable of being metabolized to eicosapentaenoic (EPA) and docosahexaenoic acid (DHA). However, most studies show that humans convert less than 5% of ALA to EPA or DHA. Besides, it is not clear whether all forms of omega 3 fatty acids have similar biological activity and similar effects on cardiovascular disease risk.

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