OMEGA-3
Support a Healthy Heart with Omega-3s

What are Omega-3 Fatty Acids?
Omega-3 fatty acids are a sub-category of polyunsaturated fats that exist under the larger umbrella of dietary fats. Although the term “fat” is usually discussed within a negative context, omega-3 fatty acids are not only good, they are essential fats that should be included and encouraged in the diet.

From a nutritional and overall health perspective, research has demonstrated beneficial roles in the body for three omega-3 fatty acids: eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) and alpha-linolenic acid (ALA). EPA and DHA are long-chain omega-3 polyunsaturated fatty acids that are mainly supplied to the diet from marine-based sources such as salmon, tuna and sardines; those fish incorporate EPA and DHA into their fatty tissue by consuming algae.

In contrast, ALA is a relatively short-chain omega-3 polyunsaturated fatty acid that is naturally found in certain plant sources like flaxseeds, walnuts, olive oil and tofu. ALA is considered an essential fatty acid because it cannot be synthesized in the body and must be obtained through the diet. Although ALA can be converted to EPA and DHA, this conversion process is very inefficient. Since the average American consumes inadequate levels of EPA & DHA, supplements containing fish oil and/or regularly consuming fish in your diet are important for your health.

Why Do I Need Omega-3 Fatty Acids?
Omega-3s are critical to human health and support the structural integrity and fluidity of all cell membranes. EPA, DHA and ALA are incorporated into cell membranes and are necessary for effective cellular function and communication. Improving intake of omega-3s is important because these critical fats are lacking in the average American diet. Most people do not consume the recommended 1-2 servings of oily fish per week, and even the plant-based sources of ALA are not a widespread staple. In contrast, omega-6 fatty acids—found in safflower oil, corn oil, and other vegetable oils that are commonly used in cooking foods—are consumed in abundance. This imbalanced intake ratio of omega-6s to omega-3s may be as high as 20:1 for some and is associated with an increased state of inflammation.

How Do We know Omega-3s are Good for Our Health?
To date, a considerable amount of research consistently supports the beneficial effects of the EPA and DHA from fish and fish oil for cardiovascular health. In fact, the relationship between omega-3s and heart health is so strong that the FDA approved a qualified health claim, which states that “supportive but not conclusive research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease.” While the role that these omega-3s play in heart health is by far the most extensively studied, DHA has also been shown to be essential for perinatal health (pregnancy, lactation and infancy), as DHA is involved in the normal eye and brain development. Ongoing research is also elucidating the potential role of omega-3s in skin, joint, cognitive and eye health.

How Much Omega-3s Do I Need?
Currently, a Dietary Reference Intake (DRI) exists for ALA (1.6 grams/day for males; 1.1 grams/day for females), and the development of DRIs for EPA and DHA is under discussion and will likely occur in the near future. To provide guidance for consumers and practitioners, many experts have spent time vetting the decades of fish oil research in order to propose intake guidelines for EPA and DHA. As a result, national and international guidelines have converged on the following evidence-based recommendations: a total of 250-500 mg of EPA and DHA per day for the general adult population and 1000 mg or more per day for individuals with heart health concerns. Greater fish oil amounts, up to 4 grams/day of EPA and DHA, are recommended for individuals with high triglycerides in conjunction with a healthcare professional. While it is useful to learn about these recommendations, all patients are encouraged to consult their primary healthcare professional regarding proper dosing.
Omega-3 Supplements

Fish oil, krill oil, algal oil and flaxseed oil are the four main omega-3 supplements available on the market. Below is a description of all four:

**Fish Oil**: Fish oil is a source of the omega-3s EPA and DHA. Fish oil formulas are available in a variety of strengths and can be enteric-coated to reduce a fishy flavor or aftertaste ("fish burp") that some people experience. Salmon, mackerel, anchovies and sardines are among the most common sources used for fish oil. Fish oil goes through a rigorous purification process to reduce the levels of contaminants which may be present in the fish themselves.

**Krill Oil**: Krill oil, which is extracted from the small crustacean, is also a source of EPA and DHA, although at significantly lower levels than fish oil. At best, on a gram per gram basis, krill oil will have 67% content of EPA and DHA of fish oil due to it being in the phospholipid, rather than the triglyceride, form.13-14 Additionally, krill oil contains a small amount of astaxanthin and is recognized for having no fishy aftertaste or odor.

**Algal Oil**: Also known for having no fishy aftertaste or odor, algal oil, made from algae, is one of nature’s original sources of DHA and EPA. Unlike other sources of DHA and EPA, algal oil is a fish-free source of omega-3s, making it a wonderful option for vegetarians, vegans and those who avoid fish in their diet.

**Flaxseed Oil**: Flaxseed oil is a plant-based source of the omega-3 fatty acid ALA, and is especially convenient for people who avoid fish and shellfish in their regular diet.

**Triglyceride vs. Ethyl Ester Fish Oil**

Fish oil supplements are available in either the triglyceride or ethyl ester form depending on the molecular structure of the oil. Fish oil in the triglyceride form is the form found in nature and is composed of three fatty acids bonded to a glycerol backbone. Fish oil products in the natural triglyceride form will deliver at or around 300 mg EPA plus DHA per capsule.

Ethyl ester fish oil is a derived form in which the glycerol backbone is chemically removed in order to concentrate the fatty acids, which supports the inclusion of higher amounts of EPA plus DHA per capsule of reasonable size. Along with some fish oil supplements, prescription forms of fish oil also utilize the ethyl ester form. Ethyl ester fish oil products should be consumed with meal of adequate fat content for optimal absorption.15-16

**Omega-3 Safety**

Omega-3 supplements like fish oil, krill oil, algal oil and flaxseed oil should be used with caution among pregnant or nursing women. Due to the slight blood thinning effect seen with such oils (particularly at levels ≥ 2000 mg per day), individuals taking blood thinning medication, facing surgery, with bleeding problems or undergoing any other treatment which may affect the ability of blood to clot should consult their healthcare professional before supplementing.

**ABOUT PHARMAVITE LLC**

For more than 40 years, Pharmavite has been a trusted leader in the wellness industry, recognized for providing high-quality vitamins, mineral and herbal supplements and all-natural foods under its Nature Made® and SOYJOY® brand names. Nature Made is the number one selling national vitamin and mineral supplement brand in traditional retail scanning outlets. SOYJOY is an all-natural, delicious baked bar made with real fruit and ground whole soybeans.

The dietary supplement industry is regulated by the U.S. Food and Drug Administration and the Federal Trade Commission, as well as by government agencies in each of the 50 states.

FOR MORE INFORMATION

Douglas Jones
Corporate Communications Manager
PHARMAVITE LLC

DJones@pharmavite.net
Direct: 818-221-6249

www.pharmavite.com

REFERENCES


