

The Omega-3 Debate

Should You Get Your Omega-3s From Fish or Flax?

by Channing Dallstream

The health benefits of omega-3 oils have been newsworthy for more than 40 years. The Danish research team led by Jorn Dyerberg in the '70s discovered surprisingly low coronary heart disease rates in Greenland's Inuit population despite a diet high in lots of fatty fish (and really fatty seals!) Although fish studies came first, omega-3 essential fatty acids have since been found in flaxseed and other plant foods, as well as distilled into supplement formulations. Extensive global research links all omega-3 sources to better heart health and cognition; reduced cancer and diabetes risk; and many other health benefits. Current studies can help you decide whether to get your omega-3 from fish, flax, food or formulation.

Common ground

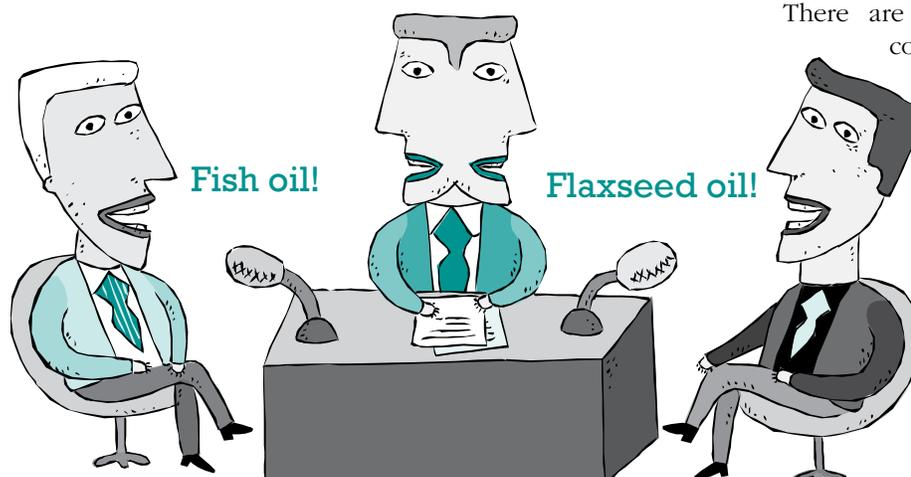
Omega-3s are excellent anti-inflammatories, provide 'brain food' and protect neurons. These essential healthy fats must be consumed because the human body does not make them. The modern American diet is heavy in omega-6 and -9s but lacking the balancing fat of omega-3. Cereal, bread, crackers and other grain-based foods are high in omega-6. Even our meats have higher than normal omega-6 because most commercially raised beef and poultry are corn fed. These meats typically have an unhealthy 40:1 fat ratio! Compare that with livestock fed grass, their natural diet, which has a 3:1 ratio of omega-6 to omega-3. Omega-9s are abundant in olive oil, nuts and nut butters – all common daily American fare.

You will even find some omega-3s in non-traditional sources. A Canadian study notes the general consensus that supplement formulations benefit overall health by pointing out the recent inclusion of omega-3s in everyday products such as eggs, yogurt and milk.¹ When analyzing the average American diet it is easy to see why we need extra omega-3 to attain the healthy 3:1 ratio of dietary fat. The National Institutes of Health recommends you eat at least 2 grams of omega-3 fats daily while most nutrition experts suggest at least 4 grams or 4% of your total daily caloric intake.²



Fish oil facts

Fish oil is made of 'long chain' omega-3s called DHA (Docosahexaenoic acid) and EPA (Eicosapentaenoic acid). The DHA and EPA are easily converted to prostaglandins, hormone-like substances that regulate all physiological bodily functions. These fats are shown to prevent irregular heart beat, reduce arterial wall plaque and decrease blood clots.³ To get an adequate amount of DHA and EPA eat 3-ounce portions of fish twice a week. Salmon, sardines, herring, canned light tuna, and mackerel are good choices. Make sure to cook fish gently to preserve the fragile omega-3s.



There are concerns over heavy metals and ocean contaminants found in some fish. However nature is a wonderful chemist. The mineral selenium, high in some cold water ocean fish, appears to protect against some of the effects of mild mercury build up allowing some fish to pass inspection. But not all fish are friends. Commonly high mercury contamination levels in mackerel (king), marlin, orange roughy, shark, swordfish, tilefish and tuna (both bigeye and Ahi) led the FDA to recommend skipping these fish and/or staying under the safety limit of 12 ounces weekly.⁴

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Joseph Maroon M.D., vice chairman of Neurological Surgery at the University of Pittsburgh Medical Center and lead author of a fish oil safety study, cautions consumers to choose “pharmaceutical grade fish oil that is free of potentially harmful heavy metals, such as mercury, PCBs and dioxins that can be found in fish.”⁵ A safe option is to look for supplements which go through the process of molecular distillation so any naturally occurring contaminants are filtered out.



When supplementing with liquid fish oil, a daily dose of 1 teaspoon contains 1.4g of omega-3. Maroon states the standard 1 gram fish oil softgel contains 3 parts EPA (180 mg) to 2 parts DPA (120 mg). Make sure you get both by checking the product information on the label.

A positive correlation between obesity and diabetes exists. A recent follow up to the original Dyerberg fish oil study finds Alaskan Inuit (native peoples) have similar obesity rates to the rest of the U.S. but less than half the rate of diabetes and heart disease. Allowing for diet, genetics and lifestyle factors “it is reasonable to ask...whether the lower prevalence of diabetes in this population might be attributed, at least in part, to their high consumption of omega-3 rich fish.”⁶

Omega-3 a la plants

For vegans and vegetarians, pregnant or nursing women, or those who simply don't like fish, plant-based omega-3s are an option. Flaxseed oil is made of ‘short chain’ omega-3s called alpha linolenic acid (ALA). Plant-based omega-3s are found in algae, kelp, olives (oil), walnuts and other foods. These sources have to convert the ALA to DHA and EPA in the body so a higher dose may be needed (1–2 tablespoons). One tablespoon of flaxseed oil contains a balance of omega-3 (7.7g), omega-6 (2.2g), omega-9 (2.5g) and 120 calories.

Flaxseed oil may contain lignans – fibers bound to the flax seed that can be added back in to the oil after processing. The lignans contain phytoestrogens and help keep arteries clear and prevent platelets from clumping together. Postmenopausal women who consumed high levels of lignans have significantly lower blood pressure. Those going through ‘the change’ can find relief from hot flashes.⁷



According to well-known author and naturopath Michael Murray, the largest benefit of lignans is the anticancer effect. “A substantial amount of research has shown that flaxseed lignans are changed by the bacteria in the human intestine to compounds which are extremely protective against cancer, particularly breast cancer.”⁸

Like fish oil, flaxseed oil is also fragile and shouldn't be heated. Quality supplements are

unfiltered, “cold-pressed” and require refrigeration after opening. Its mild, slightly nutty flavor let you know it isn't rancid and makes it easy to add to shakes or to homemade salad dressing. Supplements can be found in both softgel and liquid forms.

A growing list of health benefits

In the previously mentioned study, Dr. Maroon further notes supplements as ‘safe and effective’ for arthritis inflammation and pain. Of the 250 patients taking nonsteroidal anti-inflammatory drugs (NSAIDs) 88% were planning to replace them with fish oil supplements. He writes the “importance of this work to neurosurgeons is that now there is an agent that can take the place of the (NSAIDs) and be used with no side effects.”⁹ Mark Pellegrino M.D. specifically recommends flaxseed oil to help combat pain and mild depression that can accompany fibromyalgia.¹⁰ Chronic fatigue patients with low omega-3 omega-6 ratios were part of a Belgian study that points to increased severity of symptoms, pain and low zinc levels; and suggests patients should respond well to omega-3 treatment.¹¹

Children with attention deficit/hyperactivity disorder (ADHD) may have low levels of certain essential fatty acids (including EPA and DHA). A University of Maryland Medical Center study found boys with “lower levels of omega-3 fatty acids had more learning and behavioral problems (such as temper tantrums and sleep disturbances) than boys with normal omega-3 fatty acid levels. More research is needed, but eating foods that are high in omega-3 fatty acids is a reasonable approach for someone with ADHD.”¹²



Whether young or ‘wiser’, omnivore or vegan, looking for general health benefits or dealing with specific health concerns, studies agree that omega-3s may be what you're missing. When using omega-3s at therapeutic levels for chronic conditions such as fibromyalgia, pain or fatigue you may decide that supplements offer both convenience and safety. It may be debatable whether to use fish or flaxseed oil, but increasing your omega-3s seems to be a no-brainer.

For more information on omega-3's benefits, read these articles found in our Health Library at www.e-tyh.com

- ◆ *Omega-3 Fish Oils: If I Only Had a Brain* by Margy Squires
- ◆ *Flaxing Your Muscles* by Jade Beutler, RRT RCP

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