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Practical Insights into the World of Natural Healing

Flaxseed Oil and Fish Oil Values of the Omega-3 Family

by Herb Joiner-Bey, N.D.

One of the hottest debates among health-conscious consumers and healthcare professionals is whether flaxseed oil or fish oil is more beneficial to human nutrition. The tendency to fall into the habit of thinking in terms “either/or,” rather than “both/and,” causes us to miss the value that two related but distinct nutritional products can bring into our lives. So it is with fish and flaxseed oils: both have their appropriate places in health maintenance. Let's discuss some of the factors that distinguish these two important tools in natural medicine and wellness.

There are two main types of Omega fatty acids: Omega-3s and Omega-6s. The kinds of foods Americans typically eat are heavily laden with fatty acids of the Omega-6 family. The sources of Omega-6 fats are the common vegetable oils (corn, sunflower, safflower, etc.) used in cooking, hydrogenated versions of these oils used to make margarine and vegetable shortening, and animal foods from livestock raised on a grain-based diet, rather than green vegetation.

The need for supplemental Omega-3 Fatty Acids

The volume of Omega-6 sources in the average diet completely overwhelms the volume of sources of Omega-3 – namely green vegetables, wild ocean fish, flaxseed, walnuts, and animals raised on green vegetation. As a result, the ratio of Omega-6 to Omega-3 fatty acids typically found in Americans' tissues is 10:1 to 20:1, when most experts agree it should be no more than 4:1. With this kind of staggering preponderance of Omega-6s, it's no wonder why people suffer from the consequences of Omega-6 excess. By balancing our Omega-6 intake with supplemental Omega-3s, we can support the health of our arteries, and thereby protect our hearts and brains as we age.

What's the difference between flaxseed and fish oils?

Consider the following comparison of constituents:

ALA, the parent compound of the Omega-3 family, is found naturally in the chloroplasts (chlorophyll-containing structures) of phytoplankton cells in the ocean and the green leaves of plants on land. When herbivores (plant-eating fish and land animals) consume these plants, some ALA is converted by bodily enzymes into the daughter compound EPA and the granddaughter compound DHA. Each of the members of the Omega-3 family – ALA, EPA, and DHA

– has its own valuable role to play in human nutrition.

The human body is also equipped with enzymes that can convert ALA into both EPA and DHA. One often-cited drawback of flaxseed oil, however, is that conversion in the human body is slow and inefficient. Recent research is dispelling this misconception. For example, women of reproductive age convert 21 percent of ALA into EPA and 9 percent of ALA into DHA. This means that, from one tablespoon of flaxseed oil, containing 6600 – 7700 mg of ALA, the conversion enzymes will produce 1386 – 1617 mg of EPA and 594 – 693 mg of DHA. These quantities are well above the dosages of EPA and DHA recommended for general health maintenance – yet they pose no safety issues.

In addition, there is little mention of the fact that several factors which interfere with the activity of enzymes in converting ALA to EPA and DHA can easily be controlled:

- High intake of Omega-6 fats
- Significant alcohol consumption
- Deficiency of nutritional enzyme co-factors such as the vitamins B3, B6, and C and the minerals zinc and magnesium
- Trans-fats from fried foods and hydrogenated oils

By controlling these interfering factors, we can optimize the natural conversion of ALA into its daughter Omega-3 fatty acids.

Must ALA be converted to EPA and DHA to be of value? The answer is “not necessarily.” In a number of studies examining breast health, researchers found that the higher the ALA concentration in breast tissue, the more likely the breast was to be healthy – and the lower the ALA concentration in breast tissue, the less likely the breast was to be healthy.

Are flaxseed and fish oils equally natural, safe and renewable?

Here we find a major controversial difference between flax and fish oils. Consider the following:

| Flaxseed Oil | Fish Oil |
|---|--|
| Un-processed | Highly processed |
| Organic | |
| Pollutant-free | Must be purified of pollutants and then lab tested to rule out dangerous levels of pollutant residues. |
| Plant source | Animal source |
| Renewable, sustainable source | Dwindling source that is difficult to renew. |
| ALA is subject to oxidation and rancidity. For this reason, prefer the freshest flaxseed oil you can get. | EPA and DHA are more vulnerable to oxidation than ALA. |

Organic flaxseed oil is made by simply squeezing the oil out of organic seeds. Fish oil is made by separating the oil from the fish and then cleansing and deodorizing the extracted oil. Thus, fish oil is a much more processed product than flax oil. In addition, fish oil sources suffer from the presence of ocean water pollutants. Batch testing by competent laboratories is critical to protection of consumers. Although all companies claim good manufacturing practices, some fail to test all batches of raw materials or use labs qualified to test accurately. The consequences of these shortcomings were demonstrated in a recent Irish study revealing that many fish oil products analyzed had 3 to 5 times the dioxin levels allowed by the European Union.

How well does flaxseed ALA work compared to fish oil EPA and DHA?

This question goes to the heart of the issue of the judicious design of healing protocols for specific ailments. The answer depends on the health problem being addressed. In addition, we must be mindful that it takes a considerable amount of time for the normal turnover of cell membrane fatty acids to allow the seating of sufficient amounts of Omega-3s to provide a palpable difference in signs and symptoms. Omega-3 fatty acids provide long-term support for chronic conditions, not rapid symptom relief. Patience is required, sometimes up to 3 to 6 months, with reduced Omega-6 intake, to see the full potential of any Omega-3 nutritional source.

ALA and EPA/DHA have demonstrated the ability to be of dramatic benefit for cardiovascular risk (including high blood fats, high blood pressure, and risk for heart attack and stroke), mood disorders (depression), attention deficit, inflammatory conditions, diabetes, and a host of other complaints. In fact, the U.S. Food and Drug Administration

(FDA) now allows manufacturers of products containing ALA, EPA, and DHA to make claims relative to protection against cardiovascular disease due to the overwhelming evidence that the entire Omega-3 family is beneficial. Substituting measured amounts of flaxseed oil for measured amounts of olive and corn oils can produce effects virtually equivalent to those of fish oil in terms of favorably reducing synthesis of blood flow-impairing local hormones made from Omega-6 fatty acids.

For pregnant women and nursing mothers, it may be prudent to use fish oil (that is verified to be free from detectable contaminants) as a supplement, in addition to flaxseed oil as a food ingredient, to ensure the ideal structural development of brain and retinal tissues of the fetus and nursing infant. Likewise, if you have a condition that causes major enzymatic dysfunction and malabsorption of nutrients, such as inflammatory bowel disease (Crohn's disease or ulcerative colitis), use fish oil in addition to flaxseed oil in cooking, until your health state is stabilized. For most people, however, flax oil and fish oil can provide comparable benefits. Some studies even indicate that flax ALA can resolve certain problems that fish oil cannot – for example in the area of supporting male fertility and sperm cell viability.

How do flaxseed oil and fish oil compare relative to cost?

Flaxseed oil provides a significant cost saving compared to fish oil. The purification and testing of fish oil, extracted from an already expensive source (wild ocean fish), elevates the cost of production, which must be passed on to consumers.

Which one is easier to incorporate into our modern busy lifestyles?

The answer to this question depends on your lifestyle. Both oils are available in capsules. Of course, encapsulation is an additional processing step that costs money, increasing the price you pay. Liquid flaxseed oil and fish oil are available in pleasantly flavored versions. But flax oil has the advantage of being more easily included as an ingredient in delicious food preparations. (Consult the book *The Healing Power of Flax* by Herb Joiner-Bey, ND, published by Freedom Press, sponsored by Barlean's Organic Oils, and available at health food stores and book retailers nationwide.)

A valued place for flax and fish

Both flaxseed oil and fish oil have a highly valued place in the vast treasure chest of health-sustaining natural products. If you decide to take flaxseed oil, choose a product that is lignan-rich, unprocessed, unfiltered, and organic. If you decide to take fish oil, make sure the brand you buy is laboratory bio-assayed to be free of harmful contaminants. However, before you make any changes to your dietary or supplement regimen, always consult your healthcare professional.

Use by Children

It is especially important for children to consume adequate levels of Omega-3 fatty acids, particularly DHA, to support balanced mood, focus and concentration. In fact, research demonstrates that children who have difficulty concentrating tend to be deficient in DHA and other essential fatty acids. Maintaining the proper ratio of DHA to EPA is also essential in supporting the cognitive function in children.

These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure or prevent any disease.

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