



OMEGAFACTORS® CERTIFIED ORGANIC FLAXSEED OIL

A source of omega-3-6 essential fatty acids

FLAXSEED AND HEALTH

Flaxseed and the oil derived from it have been used medicinally for centuries. The species name for flaxseed, *Linum usitatissimum*, means “most useful.” That would definitely describe the versatility and nutritional value of this tiny seed. Flaxseed oil is a particularly rich source of alpha-linolenic acid (ALA), containing about 50-57% of this important omega-3 essential fatty acid (EFA). ALA is necessary for good health and cannot be made by the body, thus it must be consumed in the diet. The beneficial effects of ALA were uncovered as early as 1929, when EFAs were first discovered. The relationship of long chain fatty acids, such as ALA, to human health and disease is now firmly established. The North American diet typically contains high amounts of detrimental saturated fatty acids, which contribute to an increase of inflammatory mediators in the body, and lower-than-recommended levels of healthy omega-3s. The Council for Responsible Nutrition has recommended total daily intakes of 1.5 to 3 g of ALA. OmegaFactors Certified Organic Flaxseed Oil from Natural Factors provides a minimum of 530 mg of ALA in each 1000 mg softgel. It also contains 17-22% linoleic acid (LA), an important omega-6 EFA. LA helps maintain the health of cell membranes, improve nutrient use, and establish and control cellular metabolism. LA also helps in the regulation of blood pressure, blood clotting, inflammation, body temperature, and other body functions. It is particularly important for the growth and development of infants. The body also needs LA to manufacture gamma-linolenic acid (GLA), another important omega-6 EFA.

HOW FLAXSEED OIL WORKS

ALA is the only member of the omega-3 fatty acid family which is truly “essential”, since a portion of ALA is converted by the body to eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). ALA, EPA and DHA all play important and unique roles in many physiological functions. There is a complex physiological relationship between ALA, EPA and DHA; each delivers important health benefits. ALA has important effects of its own, including reducing the risk of heart disease and cancer. It is also needed for conversion to EPA and DHA, especially for people who are unable or unwilling to consume sources of EPA and DHA such as fish or fish oil.

RICH IN ALA AND LIGNANS

Flaxseed oil is an ideal supplement for every individual, especially those who prefer to obtain their omega-3s from

plant-based sources. OmegaFactors Certified Organic Flaxseed Oil is a high quality, certified organic oil, which contains high amounts of ALA and lignans. The oil is made from cold-pressed (expeller-pressed) fresh flaxseed, processed in the absence of external heat, light, or oxygen, and encapsulated under ideal conditions to prevent degradation and oxidation of the oil. The softgel is made from natural ingredients, including carob, which acts as a natural colorant to protect the oil inside the softgel from light. An optimal amount of vitamin E is added to protect the oil from oxidation and maintain freshness. The oil is certified organic; free from pesticides, herbicides, heavy metals, and other contaminants.

Lignans are fibre compounds found naturally in flaxseed. When flax oil is intended for softgel encapsulation, the lignans are usually removed during the oil extraction process. We ensure that the oil we use has a high lignan content. Lignans act as phytoestrogens that can bind to estrogen receptors and interfere with the cancer-promoting effects of estrogen on breast tissue. Lignans also increase the production of a compound known as sex hormone-binding globulin, or SHBG. This protein regulates estrogen levels by escorting excess estrogen from the body. Lignans have been shown to relieve the symptoms of menopause and improve cardiovascular health, and are known to exhibit antioxidant, anticancer, antibacterial and antiviral effects.

THE BENEFITS OF ALA

Higher dietary levels of ALA decrease the risk of developing numerous diseases, including (Stark, *et al*):

- Heart disease
- Inflammatory conditions such as arthritis and IBS
- Immune system disorders such as cancer
- Neurological degeneration
- Diabetes
- Allergic disorders
- Osteoporosis

FIGHTING HEART DISEASE

In clinical trials and epidemiological studies, ALA has been shown to reduce the risk of developing coronary heart disease. In population studies, high dietary ALA is associated with a lower risk of heart attack and death due to cardiac events. In large population studies and clinical trials, high dietary intake of ALA (1.1 g to 3 g per day) has been associated with 40-45% fewer cardiac deaths in the general population compared to the groups with low

dietary intake (about 0.5 to 0.7 g of ALA per day). In one study, a Mediterranean ALA-rich diet (with an average daily intake of 1.5 g of ALA), resulted in 70% fewer cardiac deaths in patients who had already experienced a heart attack, compared to the control group (de Lorgeril, *et al*). In a Multiple Risk Factor Intervention Trial, increased dietary ALA was significantly associated with lowered mortality from coronary heart disease as well as lowered mortality due to all causes (Dolecek). The cardioprotective effects of ALA may be due to several beneficial effects such as stabilization of heart rhythm, and decreasing factors that promote heart disease including inflammation, thrombosis and total and LDL (“bad”) cholesterol. ALA has been shown to be cardioprotective in doses of 1.2 g to 6.8 g per day. Improvements in the vascular profile and other beneficial effects are clinically noticeable within four weeks of starting flax oil supplementation, and the beneficial effects may increase with continued use.

CEREBRAL AND COGNITIVE DEVELOPMENT

Sufficient omega-3s are required for optimal cerebral and cognitive development of infants and children, and for mental functioning in adults. The developing fetus requires large amounts of omega-3s, particularly DHA, for the developing brain and nervous system. In order for the mother to increase omega-3 levels, particularly DHA, during pregnancy and breast feeding, increased dietary consumption of flaxseed, flaxseed oil, fish, or fish oil supplements, is necessary. Maintaining adequate nutrition for the mother before, during, and after pregnancy is essential, since body stores of DHA are used (and often depleted) during pregnancy and lactation.

INFLAMMATION AND CHRONIC DISEASE

Several studies have shown that ALA reduces inflammatory markers such as C-reactive protein (CRP), interleukin-6, and soluble cellular adhesion molecules. Diets high in ALA have been found to decrease CRP levels by 75%. CRP is a protein found in blood, whose concentration increases with the onset of widespread inflammation in the

body. The anti-inflammatory effects of ALA appear to be much more pronounced in patients whose diet is high in saturated fatty acids and low in unsaturated fats. Inflammation plays a major role in cardiovascular disease, many skin diseases, and rheumatoid arthritis, and is involved to varying degrees in the development of numerous other chronic diseases.

HEALTHY SKIN

A variety of lipids and fatty acids play an essential role in the formation and maintenance of the skin as a barrier against water loss and the entry of foreign matter and microbes. A deficit of EFAs in particular may be connected to increased water loss and a reduction in anti-inflammatory mediators that may be associated with the development of inflammatory skin conditions. ALA accumulates in the skin and evidence suggests that it may be involved with skin structure and function.

DOSAGE

1-3 softgels, 3 times daily or as directed by a health care practitioner. Vegetarians may wish to take higher doses of flaxseed oil as they must rely on ALA as their only source of EPA and DHA.

SAFETY

Flaxseed oil is well-tolerated. Doses of more than 60 g per day (equivalent to 60 softgels) have been used safely in adults.

Pregnancy and lactation: Flaxseed oil is considered safe during pregnancy and lactation.

Children: Suitable for children at one quarter to one half the adult dose.

Drug interactions: Flaxseed oil may increase the blood thinning and anti-platelet effects of drugs like Warfarin or Aspirin. Individuals taking anticoagulants, antiplatelet or anti-aggregatory drugs such as Warfarin, acetylsalicylic acid (ASA), and Clopidrogel should contact their health care practitioner.

Contraindications: Some people may experience mild gastrointestinal symptoms, such as flatulence and bloating, when they first begin to incorporate flaxseed or flaxseed oil into their diet. Starting with a small amount and slowly building up to the full dose is

recommended. When increasing fibre intake, it is a good idea to increase water intake as well. Individuals with a known allergy to flaxseed or flaxseed oil should avoid flaxseed oil products.

ALA's role in promoting vibrant health and preventing many chronic diseases makes it an important factor in human nutrition. OmegaFactors Certified Organic Flaxseed Oil is the richest plant source of ALA and contains health-promoting lignans.

KEY REFERENCES

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