

# FLAX SEED OIL



## CLINICAL APPLICATIONS

- Supports Healthy Fatty Acid Intake and Eicosanoid Balance
- Maintains Normal Inflammatory Balance
- Supports Cardiovascular and Neurological Health
- Promotes Healthy Skin

## ESSENTIAL OILS

Flax seed oil is derived from the seeds of the flax plant, *Linum usitatissimum*, and is known to be a source of the omega-3 fatty acid, alpha-linolenic acid (ALA). Omega-3 fatty acids are required for a variety of essential body functions, from proper blood flow to brain development. These long chain fatty acids are integral components of tissues and organ systems throughout the body, including the heart, skin, joints, eyes and immune system. Research has shown flax seed oil maintains normal inflammatory balance and promotes cardiovascular and neurological wellness, as well as skin health. Each Flax Seed Oil soft gel includes 1,000 mg of organic flax seed oil, providing high-concentration ALA.

### Overview

Flax seed oil has a diverse and healthy profile of omega fatty acids, including omega-3 fatty acids from ALA, omega-6 fatty acids from linoleic acid and omega-9 fatty acids from oleic acid. This blend of oil is unique in that it contains both alpha linolenic acid and linoleic acid in generous amounts. Both alpha linolenic acid and linoleic acid are considered essential fatty acids because they are required for human health, but cannot be synthesized by the body. However, changes in the modern diet over the last century have led to a decrease in the general consumption of omega-3 fats and a dramatic increase in the dietary ratio of omega-6 to omega-3. Since omega-3 fatty acids are known to benefit cardiovascular health, support a healthy brain, and are proven to maintain normal inflammatory balance, achieving the proper balance of omega-3s is important health strategy, requiring supplementation for most people.<sup>1</sup> Flax seed oil provides unique health benefits and supports individuals who need to increase their omega-3 intake.

### Omega-3 Depletion<sup>†</sup>

An accumulating body of research shows that the typical Western diet does not provide sufficient amounts of omega-3s required to support optimal health. As the modern diet has shifted to a processed, pre-packaged food supply, omega-6 oil usage has increased substantially. Currently, four oils (soybean, cottonseed, corn, and canola) account for 96% of vegetable oil use in the United States. This dramatic shift toward omega-6 oil consumption, in combination with the modification of dietary fats via hydrogenation and oxidation, is thought to be one of the leading factors in the rise of inflammatory conditions worldwide. Omega-3 fatty acid deficiency is common and often overlooked. Signs of omega-3 fatty acid deficiency may include dry, itchy or flaky skin, poor sleep quality, poor circulation, eye discomfort, as well as mood and cognitive imbalance.<sup>2</sup>

### Inflammatory Balance<sup>†</sup>

Flax seed oil has been shown in various studies to maintain normal inflammatory balance throughout the body. In animal studies, ALA from vegetable sources has been shown to soothe the inner lining of the intestines and support the health of intestinal cells.<sup>3,4</sup> A randomized, controlled, crossover trial (36 subjects consuming three isocaloric diets for 28 days, each containing approximately 36% energy from fat, of which 70% was provided by either canola, flax seed or a typical Western diet) found that after 28 days, the flax seed diet maintained healthy blood fats and supported normal inflammatory markers better than canola or a typical Western diet.<sup>5</sup> In another randomized, double-blind, placebo-controlled trial of 160 patients, C-reactive protein (CRP) levels were shown to decrease significantly over time in the group that received flaxseed oil, compared to the placebo group.<sup>6</sup>

<sup>†</sup> These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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## Cardiovascular Health†

A 2009 meta-analysis of 28 studies showed that flax seed oil was able to promote and balance blood fats, supporting cardiovascular health markers.<sup>7,8</sup> Consumption of ALA has also been shown to help improve platelet aggregation and the ability of erythrocyte cells to change shape when under stress, resulting in improved circulation throughout the cardiovascular system.<sup>9,10</sup>

## Skin Health†

Research has also shown flax seed oil to support various aspects of skin health. A randomized, double-blind, 12-week intervention with two groups of females found that supplementation with flaxseed oil led to significant decreases in sensitivity, water loss, skin roughness and scaling, and increased smoothness and hydration in the patient's skin.<sup>11</sup> In a second study, among two groups of women given flax seed (2.2 g) or borage oil for 12 weeks, skin reddening was diminished in both groups and hydration was significantly increased in both the flax seed and borage oil groups. However, a larger decrease was seen in the flax seed oil group, indicating flax seed oil's comprehensive support for skin health and rejuvenation.<sup>12</sup>

## Directions

1-2 soft gel capsules three times per day or as recommended by your health care professional.

## Does Not Contain

Gluten, corn, yeast, artificial colors and flavors.

## Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts <sup>V1</sup>		
Serving Size 2 Soft Gel Capsules		
Servings Per Container 45		
2 soft gel capsules contain	Amount Per Serving	% Daily Value
Calories	20	
Total Fat	2 g	3%*
Flax Seed Oil (Organic)	2 g	**
* Percent Daily Values are based on a 2,000 calorie diet		
** Daily Value not established		

ID# 431090 90 Soft Gel Capsules

## References

1. Connor WE. Importance of n-3 fatty acids in health and disease. *Am J Clin Nutr.* 2000 Jan;71(1 Suppl):171S-5S.
2. University of Maryland (UMM).
3. Shoda R, Matsueda K, Yamato S, et al. Therapeutic efficacy of N-3 polyunsaturated fatty acid in experimental Crohn's disease. *J Gastroenterol.* 1995 Nov;30 Suppl 8:98-101.
4. Narisawa T, Fukaura Y, Yazawa K, et al. Colon cancer prevention with a small amount of dietary perilla oil high in alpha-linolenic acid in an animal model. *Cancer.* 1994 Apr 15;73(8):2069-75.
5. Gillingham LG1, Gustafson JA, Han SY, Jassal DS, Jones PJ. High-oleic rapeseed (canola) and flaxseed oils modulate serum lipids and inflammatory biomarkers in hypercholesterolaemic subjects. *Br J Nutr.* 2011 Feb;105(3):417-27.
6. Lemos JR1, Alencastro MG, Konrath AV, Cargnin M, Manfro RC. Flaxseed oil supplementation decreases C-reactive protein levels in chronic hemodialysis patients. *Nutr Res.* 2012 Dec;32(12):921-7.
7. Bassett CM1, Rodriguez-Leyva D, Pierce GN. Experimental and clinical research findings on the cardiovascular benefits of consuming flaxseed. *Appl Physiol Nutr Metab.* 2009 Oct;34(5):965-74.
8. Pan A1, Yu D, Demark-Wahnefried W, Franco OH, Lin X. Meta-analysis of the effects of flaxseed interventions on blood lipids. *Am J Clin Nutr.* 2009 Aug;90(2):288-97.
9. Iso H, Sato S, Umemura U, et al. Linoleic acid, other fatty acids, and the risk of stroke. *Stroke.* 2002 Aug;33(8):2086-93.
10. Ascherio A, Rimm EB, Giovannucci EL, et al. Dietary fat and risk of coronary heart disease in men: cohort follow up study in the United States. *BMJ.* 1996 Jul 13;313(7049):84-90.
11. Neukam K1, De Spirt S, Stahl W, Bejot M, Maurette JM, Tronnier H, Heinrich U. Supplementation of flaxseed oil diminishes skin sensitivity and improves skin barrier function and condition. *Skin Pharmacol Physiol.* 2011;24(2):67-74.
12. De Spirt S1, Stahl W, Tronnier H, Sies H, Bejot M, Maurette JM, Heinrich U. Intervention with flaxseed and borage oil supplements modulates skin condition in women. *Br J Nutr.* 2009 Feb;101(3):440-5.