



FLAXSEED OIL

Flaxseed oil is sometimes an effective treatment for dry eyes and posterior lid margin disease (PLMD).

There are many causes of dry eye, some of which include:

- a) *Eyelid retraction or eyelids pulled away from the center of the eye (causing greater surface area of the eye exposed and enhancing tear evaporation)*
- b) Exophthalmos or eye protrusion (causing greater eye exposure to wind and increasing tear evaporation as in thyroid eye disease)
- c) Hormonal changes (causing decreased tear production)
- d) Posterior blepharitis (causing an unstable, poor quality tear). Posterior blepharitis, or posterior lid margin disease (PLMD) is a clogging, inflammation, and scarring of the glands in the eyelid margin. These glands produce the oil component of tears. Without the smooth addition of this oil, tears evaporate very quickly and the eye dries out if it doesn't blink every few seconds. If the oil comes out in sudden "globs," then the tear film carries an oil slick that blurs the vision and creates "glare," "dazzle," and "scatter" when looking at lights, especially at night.

There are many treatment options for PLMD, and an in-depth discussion with a knowledgeable physician about each individual's situation is appropriate. However, one treatment, flaxseed oil, had recently gained some attention in the lay press. This is not a new remedy.

Flaxseed oil works for some people probably in three ways. First, it may provide nutrients otherwise lacking in the diet. Second, it appears to have an anti-inflammatory effect under some conditions. Third, it may alter the oil composition produced by the glands in the eyelids.

Some have recommended taking 1-2 Tablespoons of flaxseed oil daily by mouth. There is also a suggestion that flaxseed oil must be taken with protein (such as a soy-based shake, a spoon full of peanut butter, eggs or turkey) in order to be well absorbed, and some strongly question the efficacy of flaxseed oil capsules, preferring the bottled form of the oil instead.

Although flax oil is unsuitable for baking, ground flaxseed is rich in fat, and it can be used in place of some of the fat or oil in your recipes for baked goods. One cup of ground flaxseed can be used in place of 1/3 cup of fat.

Ground flaxseed can also be used in place of eggs in baking recipes. One tablespoon of ground flaxseed mixed with three tablespoons of water can be used instead of one egg. Let the flaxseed and water mixture sit for a couple of minutes before using it.

Here are some more tips for incorporating flaxseed into your diet:

- Sprinkle flaxseed oil onto hot or cold cereals, casseroles, cottage cheese, and salads.
- Stir flaxseed oil into soups, stews, chili, and yogurt. (Add the oil after cooking.)
- When baking, replace up to one-fifth of the flour with ground flaxseed in bread, pizza dough, muffin, cookie, or meatloaf recipes. Using more than this will make the food too dense.

Remember, flaxseed oil is probably most effective in dry eye patients who have active posterior lid margin disease, and careful examination and direction by a knowledgeable eye care provider is most appropriate.

Below are some treatment options available through most health food stores:

Flaxseed Oil – This is not a new remedy. Flaxseed oil works for some people probably in three ways. First, it may provide nutrients otherwise lacking in the diet. Second, it appears to have an anti-inflammatory effect under some conditions. Third, it may alter the oil composition produced by the glands in the eyelids. Take 1-2 Tablespoons of flaxseed oil daily by mouth with protein (such as a soy-based shake or a spoon full of peanut butter) in order for the oil to be well absorbed. The bottled form of the oil is probably much more effective than the capsules.

N-acetyl cysteine – 100 mg taken three times a day has been shown to be helpful for PLMD. Most stores only carry 1,000 mg doses. So, try 1,000 mg 1-3 times a day.

Soy Products – Try complex soy products, like tofu, soy milk, or tempeh. At least 4 servings per week. Soy isoflavone supplements (50-100 mg/day) may also be helpful.