

FLAXSEED SUPPLEMENTATION: AN INTEGRAL ASPECT OF VIBRANT HEALTH AND ANTI-AGING

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One of the most multi-purpose natural agents that may reduce the risk of many degenerative diseases and help optimize health and well being for both adult men and women is the daily ingestion of ground flaxseed (flaxseed powder).

Flaxseeds are an extremely rich source of a mammalian lignan precursor known as SLD (secoisolariciresinol diglycoside) that provides the body with the raw material from which the bacteria in the large bowel produce two powerful phytoestrogens. In fact, flaxseeds contain 800 times more SLD and related compounds (mammalian lignan precursors) than any other common food. Ingesting the equivalent of two heaping tablespoons of ground flaxseed (flaxseed powder), or approximately 40-50 gm of ground flaxseed, helps support the health of female reproductive organs, as well as the male prostate gland. This level of daily intake has also been shown to lower blood cholesterol levels, support liver and gallbladder function, improve large bowel health, reverse fibrocystic breast disease, help support bone density and improve the texture and smoothness of the skin (an effect that almost everyone notices within the first few weeks of use). Here is how and why flaxseed powder can provide such a multitude of health benefits:

Flaxseed and Breast Health

After oral ingestion, the SLD in flaxseeds are converted by large bowel bacteria into two estrogen-like substances known as enterolactone and enterodiols.

Enterolactone and enterodiol are classified as phytoestrogens (plant-based estrogens), which means they can bind to estrogen receptors on breast tissue, the endometrium of the uterus and cells on the cervix, toning down the over stimulation of the body's more potent estrogens on these tissues. This is important because over stimulation of these tissues by the body's endogenous estrogens (or hormone replacement therapy or the birth control pill) is linked to an increased risk of breast cancer, endometrial cancer and cancer of the cervix.

The phytoestrogens derived from flaxseed are so effective at protecting a woman's reproductive tissues from estrogen over stimulation that a recently published Toronto-based hospital study demonstrated that flaxseed supplementation greatly improved symptoms in women who suffered from cyclical mastalgia.

Other studies have demonstrated that flaxseed supplementation can help normalize estrogen production and reduce the build up of more cancer permissive estrogens (decrease synthesis of 16-alpha hydroxyestrone). Furthermore, flaxseed ingestion has been shown to directly slow down the breast cell division rate (antiproliferative), which is a factor in the prevention of breast cancer development. All indicators suggest that every adult woman (by age 16) should capitalize upon the benefits of flaxseed as it impacts the lifelong health of reproductive tissues.

Flaxseed and Prostate Health

The phytoestrogens derived from flaxseed also helps to preserve prostate health in various ways. These phytoestrogens (enterolactone and enterodiol) block the over production of estrone hormone within fat cells. With weight gain, fat cells become larger and tend to manufacture more estrone hormone, which encourages prostate cells to synthesize more dihydrotestosterone (DHT). DHT, in turn, stimulates rapid cell division of prostate cells leading to prostate enlargement. DHT also

promotes the growth of any existing prostate cancer cells. By age 50, 15 to 30 percent of men already have some cancer cells present within the prostate gland. Keeping DHT levels in check is considered an important step in preventing these cancer cells from dividing and spreading, en masse, throughout the prostate gland, and metastasizing to other parts of the body. Thus, the ingestion of flaxseed on a daily basis provides important bioactive agents that indirectly slow the rate of prostate cell replication, reducing the chances of prostate enlargement (benign prostatic hyperplasia) and may thus, hinder the promotion of cancer development. These same phytoestrogens also bind to receptors on the prostate gland helping to block the influence of other hormones, which may stimulate rapid prostate cell division. Other herbal compounds such as saw palmetto, pygeum africanum, soy isoflavonoids and beta-sitosterol can also block the build up of DHT and have been shown to improve prostate health in a number of well designed clinical studies. However, in my view, the daily ingestion of 50 gm of ground flaxseed each day should be included as a primary anti-aging, disease prevention strategy used by every adult male; as prostate cancer is the most common cancer in men and prostate enlargement problems will affect 80 percent of men if they live to old age.

Flaxseed and Cholesterol

Studies reveal that the same amount of flaxseed required to help maintain male and female reproductive tissue health (approximately 40-50 gm ground flaxseed) can also lower blood cholesterol by up to 10 percent in people with high cholesterol levels. More importantly, it lowers the bad cholesterol (LDL-cholesterol) by approximately 15 percent and concentrations of lipoprotein (a) [Lp(a)] by 7 percent. Lp(a) is now recognized as a significant risk factor for heart disease and flaxseed supplementation is the only known dietary intervention that can lower Lp(a) into a safer range, if it is elevated. As it turns out, flaxseed contains soluble dietary fiber, which has proven cholesterol-lowering effects. Soluble fiber binds to cholesterol in the intestinal tract and drags it out of the body in fecal matter. It also binds to bile acids, preventing their re-absorption back into the bloodstream and their subsequent conversion into cholesterol in the liver (bile acids are a precursor of cholesterol in the liver). All in all, daily flaxseed supplementation factors into a heart-healthy lifestyle program as well.

Flaxseed and Bowel Function

Flaxseed also contains insoluble dietary fiber, which acts as a bulking agent, or roughage, in the promotion of more regular bowel movements. Studies indicate that flaxseed supplementation provides a natural and gentle laxation effect, which is associated with relieving constipation, and promoting the health of the large bowel. Most people ingest less than half of the recommended amount of dietary fiber per day. By providing both soluble and insoluble dietary fiber, flaxseed is one of the few natural nutrition products that can help to keep cholesterol levels in check and maintain more optimal bowel function at the same time. Note that beans and peas, as well as psyllium husk fiber, also contain appreciable amounts of both soluble and insoluble fiber.

Flaxseed and Liver & Gallbladder Support

The daily ingestion of ground flaxseed has been shown to improve the flow of bile from the liver to the gallbladder, and ultimately into the intestinal tract. This effect helps to reduce the chances of gallstone formation and related gallbladder disease. Essentially, flaxseed supplementation induces a type of liver flushing effect, preventing the stagnation of bile, which can harden into stones if not eliminated in a timely fashion. Flaxseed supplementation also helps to prevent the conversion of bile into cholesterol, further facilitating a cholesterol-lowering effect by this action in the liver.

Flaxseed and Skin Texture

Although the mechanism of action remains a mystery, virtually everyone who begins using flaxseed supplementation on a daily basis comments on the improved texture and smoothness of their skin, all over their body. This is an effect that is usually noticed within the first month of using flaxseed on a daily basis. For those of us who use it, this is a wonderful additional benefit to its other premiere health-enhancing attributes. The use of flaxseed oil, rich in alpha-linolenic acid, is also known to produce this effect, likely due to its influence on prostaglandin formation within epidermal cells.

Don't Confuse Flaxseed Powder with Flaxseed Oil

Practitioners and patients are often confused about the difference between flaxseed powder and flaxseed oil. Flaxseed powder (ground flaxseed) is a rich source of phytoestrogens, soluble fiber and insoluble fiber, and thus has important application in female and male reproductive health, the lowering of cholesterol, improved liver and gallbladder function and improved function and laxation of the large bowel. Flaxseed oil, on the other hand, is a rich source of the omega-3 fat known as alpha-linolenic acid, which can be converted into prostaglandin series-3 eicosanoids. These eicosanoids help to reduce inflammation, produce vasodilation of arteries improving blood flow, reduce platelet stickiness, and improve the texture and smoothness of the skin. Omega-3 fats (including alpha-linolenic acid) have also been shown to favorably affect the growth and differentiation of breast cells, and are related to a reduced risk of breast cancer in a number of studies examining the fatty acid profile of adipocytes in the breast tissue of breast cancer patients compared to non breast cancer controls. Taken together, the evidence suggests that the concurrent use of both flaxseed powder and flaxseed oil provide synergistic and important anti-aging and disease prevention properties. Flaxseed oil is not a rich source of phytoestrogens, soluble or insoluble fiber, and flaxseed powder is not a rich source of alpha-linolenic acid (although it contains some). I personally ingest two heaping tablespoons of flaxseed powder each day and take 2,000 mg of flaxseed oil (capsule form) as well.

How to Use Flaxseed

You can purchase ground flaxseeds (often marketed as flaxseed powder) or you can grind whole flaxseeds in a coffee grinder on a daily basis to maximize freshness of the product. Make sure your flaxseeds or powder are from organic sources, as this form is easily attainable.

Studies reveal that ingesting 40-50 gm of ground flaxseed per day provides the health-promoting benefits reviewed in this article.

This is the equivalent of two heaping tablespoons of ground flaxseed (flaxseed powder).

It can be mixed into a protein shake or fruit juice (e.g., orange juice). Many people sprinkle it on to their cereal or mix it into a bowl of low-fat yogurt. It can also be baked into low-fat muffins or flax-bread. The important thing is that you consume at least 25 gm per day, but more ideally, 40-50 gm through whatever delivery system works for you. The best news is that it has a nutty, flavorful taste that is very palatable and enjoyable.

Flaxseed is truly one of nature's gifts that you should incorporate into a proactive, anti-aging, disease prevention lifestyle. Many experts recommend that you use it on a daily basis throughout your life and that you strongly recommend it to the patients you serve.

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