



## **Flax Seed Can Fight Cancer And Boost Cholesterol Health?**

Flax seed naturally contains a variety of different categories of essential fatty acids, which includes alpha linoleic acid, linoleic acid, and omega-9 oleic acid. A lot of flax seed's benefits are a function of its content of alpha linoleic acid, which is converted in the body to a longer chain of omega-3 EPA. Research has proven that supplementation with flax seed oil can help to increase the EPA concentrations in many tissues of the body. One of the main areas of research has been inflammation.

Many factors contribute to inflammatory reactions, including omega-6 linoleic acid, which can be converted into pro-inflammatory substances. Flax alpha linoleic acid can convert into EPA, which has the ability to convert into a prostaglandin that has anti-inflammatory properties. In inflammatory states, alpha linoleic acid and EPA compete with linoleic acid for enzymatic metabolism, resulting in a decreased production of pro-inflammatory substances. Many studies have found that the use of flax seed oil in domestic food preparation can reduce the production of inflammatory cytokines.

These studies have also shown the ability of omega-3 rich fish oils to inhibit inflammatory mechanisms in the autoimmune disease lupus nephritis, which lead to the investigation into flax having any abilities in this area. One trial found that 30g/d of flax seed was optimal for improving kidney function, decreasing inflammation, and reducing atherosclerotic development. Flax also contains antioxidants, which may be helpful to those who have SLE.

Research has also been conducted to investigate the hormonal modulating effects of ingesting lignans, which are antioxidant and phyto-estrogenic compounds that are found in flax seed. Clinical evidence indicates that phytoestrogens have an anti-cancer effect on the breast. Experimental studies in animals and humans have also demonstrated flax's anti-cancer effects, with a 1998 review indicating that the consumption of flax may be used as a secondary prevention method against breast cancer. Flax seed has also been shown to promote prostate health, as it plays a key role in the treatment of an enlarged prostate.

The cardiovascular system is also another area of research focus for flax seed. One study showed that three months of flax seed supplementation resulted in LDL cholesterol levels dropping significantly, while HDL cholesterol did not change. Other research has shown serum lipid level reduction, but a large amount of flax seed was required to be consumed to get the same lipid-lowering effects as fish oils. Flax lignans also possess anti-platelet activating factor activity and antioxidant activity. Animal research has shown that flax



seed reduced the development of aortic atherosclerosis' by 46 percent and suppressed oxygen-free radicals.

The research concluded that dietary flax seed supplementation could prevent hypercholesterolemia-related heart attack and strokes. Lastly, the elasticity of arteries is an important factor of circulatory function, which decreases as the cardiovascular risk increases. Research has proven that obese people consuming a diet high in ALA from flax seed oil experience a marked rise in arterial elasticity, which reflects a rapid improvement in the arterial circulation.

Although flax seed offers many potential benefits, ingesting the right form of supplemental flax is crucial to gaining these benefits. Flax oil supplements are a good source of EFAs, but they do not provide great amounts of lignans. On the other hand, whole or ground flax seed is effective, but is not especially palatable. The best option of flax seed is the liquid in capsule form, as it delivers both EFAs and lignans. The nutritional value and certain beneficial results can be gained by consuming about 3,000 mg daily.