ALIVE!

PRECIOUS SEED

ONE OF MY FAVORITE flowers possesses delicate blue petals that drop off before evening, only to open a new bouquet every morning. The flower is delicate, yet tenacious, resilient, and beautiful. Science has found that of even greater significance in this plant are its seeds, which have powerful therapeutic properties. Studies conducted with animals and humans have revealed the impact these seeds can have on multiple aspects of health, even on cardiovascular disease, the number one cause of death.

The most commonly measured blood markers indicating risk of heart attack and stroke are blood lipids. These include total cholesterol, LDL and HDL cholesterol, and triglycerides, essentially the fatty content of the blood. Blood is drawn and sent to the lab where clinicians assess the levels. Elevated total cholesterol, LDL cholesterol, and triglycerides with corresponding low HDL cholesterol is indicative of risk. LDL is the form of cholesterol that is denser and damaging, and therefore referred to as lousy.

A common group of pharmaceuticals that is prescribed when cholesterol levels are high is statins. Statin medications reduce cholesterol levels by blocking the production of cholesterol by the liver. It is an effective medication but not without its side effects, including an increased risk of type-2 diabetes. Lifestyle intervention combined with statin therapy has been shown to be more effective than medication alone. Even without medication, lifestyle intervention is very effective. To understand just how effective, science likes to break lifestyle components down and administer them individually so they can be studied and measured. Take for instance the beautiful blue-flowered plant with precious seeds and what research has revealed in their ability to lower cholesterol levels.

Seventy patients with hyperlipidemia were chosen. Hyperlipidemia is a state of elevated lipids in the blood. The cholesterol and triglyceride levels of these individuals were higher than what is considered normal. The group was divided in half. Thirty-five of the group received 30 grams, about 4 tablespoons, of flaxseed powder per day for 40 days. At the end of the 40 days, total cholesterol, LDL-cholesterol, and triglycerides were significantly lowered. The researchers concluded that flaxseed has great potential as therapy for reducing hyperlipidemia.[1]

In a double-blind, randomized, placebo-controlled trial, 30 grams, about 4 tablespoons, of milled flaxseed were given to 58 individuals with cardiovascular disease for 12 months. A control group was given 30 grams of whole wheat. Blood lipids were measured at 1, 6, and 12 months through the trial. In just one month a 15 percent reduction was seen in LDL cholesterol.[2]

Flaxseed is the richest source of a lignan substance called secoisolariciresinol diglucoside. No need to try and pronounce that, we will refer to it as SDG. “SDG possesses

antioxidant, antihypertensive, antidiabetic, hypolipidemic, anti-inflammatory and antiatherogenic activities."[3] In other words, SDG is active in the body to prevent diabetes, reduce inflammation and hypertension, and reverse atherosclerosis in the blood vessels. Doses of 15 mg/kg a day has been observed to suppress the development of hypercholesterolemic atherosclerosis by 73 percent, where high cholesterol levels promote the development of plaque buildup in the arteries. That is amazing! It was also associated with a reduction in serum total cholesterol and LDL-cholesterol, and found to inhibit the progression as well as cause regression of atherosclerosis.

> The risk of CVD mortality increased exponentially with increasing usual percentage of calories from added sugar.

Yes, SDG is a powerful lignan, but other constituents of flax—fiber, omega-3 fats, and other lignans—are bioactive as well. It is estimated that flaxseed contains 800 times more lignans than other food plants. These components of flax are active in the body in ways that have been studied in relation to prostate and breast cancer and in stabilizing blood sugar levels, in addition to lowering cholesterol.

Flaxseed contains protein, B vitamins (except vitamin B_{12}), vitamin C, iron, magnesium, calcium, potassium, manganese, copper, and zinc. Flaxseeds come either brown or golden. Both varieties of the seeds are relatively nutritionally equivalent. Due to its high fiber content, ground flaxseed can be used to promote healthy bowel function and is therapeutic for constipation.

When it comes to cardiovascular disease it's easy to want to find the one enemy that can be knocked out to minimize our anxiety. Cholesterol may appear like THE bad guy, but it isn't. The body produces far more cholesterol than what we obtain from food. Cholesterol is a vital ingredient the body uses to make hormones and cell membranes. The problem is imbalance, which often occurs as a result of lifestyle. It therefore makes sense to alter the lifestyle to restore balance.

One lifestyle change worth making is reducing sugar in the diet. Research from NHANES III, involving 11,733 participants, revealed that, "The risk of CVD mortality [cardiovascular disease death] increased exponentially with increasing usual percentage of calories from added sugar."[4] This association between increased sugar consumption and increased death from cardiovascular disease was largely consistent across age groups, sex, and nationalities. Brown or yellow, black or white, male or female, it makes no difference. The more sugar you eat the greater danger you are in. Excess sugar in the diet creates imbalance in blood lipids.

Consuming a few tablespoons of flaxseed a day can be taken like a medication, and may have some great benefits. Or it can be part of a package, a lifestyle package, in which multiple components are available for the body to draw upon to restore good health.

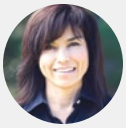
I do not know how the dainty blue petals of the flax flower are regenerated every morning, but I've seen it. I've experienced it as I had flax growing wild on our property when we lived in the mountains of Washington State. They drop off only to make a spectacular, fresh comeback. Scripture says, "He that goeth forth and weepeth, bearing precious seed, shall doubtless come again with rejoicing" (Psalms 126:6).

1. M. Torkan, M. Entezari, M. Siavash, "Effect of Flaxseed on Blood Lipid Level in Hyperlipidemic Patients," *Reviews on Recent Clinical Trials,* 10(1):61-67, http://www.eurekaselect.com/127924/article#sthash.yW5LrVbk.dpuf.

2. A.L. Edel, et al., "Dietary flaxseed independently lowers circulating cholesterol and lowers it beyond the effects of cholesterol-lowering medications alone in patients with peripheral artery disease," *J Nutr.,* 2015 Apr; 145(4):749-57, http://www.ncbi.nlm.nih.gov/pubmed/25694068.

3. K. Prasad, A. Jadhav, "Prevention and treatment of atherosclerosis with flaxseed-derived compound secoisolariciresinol diglucoside," *Curr Pharm Des.*, 2015; 22(2):214-20, https://www.researchgate.net/publication/283729404_Prevention_and_treatment_of_atherosclerosis_with_flaxseed_-derived_compound_secoisolariciresinol_diglucoside.

4. Quanhe Yang, et al., "Added Sugar Intake and Cardiovascular Disease Mortality Among US Adults," *JAMA Intern Med.,* 2014; 174(4):516-524, http://archinte.jamanetwork.com/article.aspx?articleid=1819573.



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