Concerned About Cholesterol?

The cardiovascular health of more than 64 million Americans is currently endangered. Cardiovascular disease (CVD) is the cause of nearly 1.4 million deaths in the US each year, and has been the leading cause of death in this country since 1900. In 2004, nearly $386 billion was spent treating this ailment. CVD has a number of causes, but high blood cholesterol is one of the major risk factors. Proper management of cholesterol levels can help lower the risk of developing this serious ailment.

Common treatment for the prevention of CVD includes lifestyle changes like increasing daily exercise and eating a reduced-fat diet in addition to cholesterol-lowering drugs.

The class of drugs commonly prescribed for lowering cholesterol is called statins. Although the effectiveness of these drugs in maintaining healthy cholesterol levels has been proven, a number of known negative side effects exist as well. Increases in liver problems and rhabdomyolysis (severe muscle pain and weakness) are being attributed to the use of statins, as well as minor muscle pain, weakness, and general tiredness. In fact, many patients prescribed statins by their physicians discontinue their use in the first year.

Cholesterol is a natural, fat-like substance that is manufactured by the liver and present in certain foods, such as diary products, red meats, and animal organs (liver and brain). It is used to help build cell membranes, make some hormones, synthesize vitamin D, and form bile secretions that aid in digestion. Since lipids (the largest component of blood) are insoluble in water, cholesterol’s most important job is to help carry fat through the blood vessels. Before cholesterol can enter the bloodstream to be transported to and from cells, it is coated with a protein. These cholesterol-protein packages are referred to as lipoproteins.

Lipoproteins are transport vehicles in the circulation that are composed of various lipids including cholesterol, triglycerides, and proteins known as apoproteins. The major classes of lipoproteins are chylomicrons, very low-density lipoprotein cholesterol (VLDL-C), low-density lipoprotein cholesterol (LDL-C), and high-density lipoprotein cholesterol (HDL-C).

HDL-C, referred to as “good” cholesterol, has an inverse relationship with coronary heart disease, offering protection against atherosclerosis; HDL-C contains more protein than any of the other lipoproteins. Its primary function is to transport cholesterol from the tissues and blood to the liver for excretion from the body or synthesis into bile acids. HDL-C also prevents the uptake of LDL-C at receptor sites in the body and participates in the metabolism of other lipoproteins.

On the other hand, low-density lipoproteins are the primary transporters of cholesterol in the blood.

Elevated LDL cholesterol is a risk factor for coronary heart disease as it directly contributes to cellular alterations of the inner walls of arteries including plaque buildup and atherosclerosis. For these reasons, LDL-C is called “bad” cholesterol. LDL-C is often the primary target of cholesterol-lowering therapies.

In addition to the pharmaceutical options, there are natural ingredients such as citrus-derived polymethoxylated flavones (PMFs) and palm-derived tocotrienols that provide meaningful benefits for heart health. The two major PMFs are nobiletin and tangeretin.

Health Benefits

Pharmaceutical treatments used to lower cholesterol sometimes cause a number of side effects that can be worse than the condition the drugs were meant to treat. Polymethoxylated flavones (PMFs) and tocotrienols appear to provide an effective natural solution for reducing cholesterol and triglyceride levels, without the negative side effects associated with other treatments.

Initial research conducted at the University of Western Ontario on PMFs focused on their role in cell proliferation, immune function, and chemo-protective effects. Further research, in conjunction with the U.S. Department of Agriculture, has suggested that PMFs exhibit strong antioxidant and anti-inflammatory effects, and positively affects hypercholesterolemic (excessive quantity of cholesterol) levels in the blood.

Tangeretin and nobiletin are the predominant PMFs. Tangeretin has been shown to decrease apoprotein B, a structured protein needed for the endogenous synthesis of LDL cholesterol. These low-density lipoproteins transport about 75% of the total cholesterol circulating in the blood. Nobiletin has been shown to decrease plasma concentrations of LDL cholesterol and inhibit the metabolism of modified LDL on blood vessel walls. This may help in the prevention of atherosclerosis. In addition to their numerous functions within the body, PMFs are widely regarded as a valuable source of dietary antioxidants. The PMFs may help to protect cells and cell membranes from the damage caused by oxidized cholesterol. PMFs also assist in energy production.

Tocotrienols are powerful antioxidants. Tocotrienols are members of the vitamin E family of compounds. They appear to help reduce the formation of cholesterol without the harmful side effects of statin drugs.

Sytrinol™

**Sytrinol** contains powerful polymethoxylated flavones and tocotrienols that assist in the reduction of cholesterol and act as antioxidants. Each softgel capsule contains 150 mg of a proprietary blend of natural citrus and palm fruit extract. In clinical
studies, *Sytrinol* was well tolerated and there were no changes in BMI (body mass index) or blood pressure from the baseline. It appears to be safe, natural, and effective without adverse side effects, when taken as directed. 

When compared with results from numerous trials indicating the effectiveness of nutritional supplements (such as Red Yeast Rice, Pantethine, Policosanol, Garlic, Phytosterols, Gugulipid, and Niacin) on heart health, *Sytrinol* clearly emerges as the leader.

**Suggested dosage:** For usual adult dosage: take one softgel twice daily, or as directed by your health care professional.

**Caution:** Some of the ingredients in this product have been shown to affect total cholesterol, LDL, and triglycerides. If you are taking statin drugs and/or your cholesterol is below 160 mg/dl, check with your healthcare practitioner before taking this product.

**Scientific Studies**

“It works” is the most important statement that can be made about a product, yet it is the most difficult to prove. The claims made for *Sytrinol* are based on human clinical trials. The studies performed to date have employed the same dose of *Sytrinol*. Only people with moderately elevated cholesterol have participated in these trials. All of the trials have included a placebo control to verify the activity of the compound. The results from the trials have shown similar changes in serum lipid levels. Below are the results of one study.

In one of the double blind, crossover randomized studies conducted on Sytrinol, 120 patients were divided into two groups. In Phase I, one group of patients received a placebo, while the treatment group received 300 mg of Sytrinol per day for 12 weeks (150 mg a.m., 150 mg p.m.). Blood samples were drawn at baseline, 4, 8, and 12 weeks and measurements were taken on total cholesterol, LDL-C, total triglycerides, HDL-C, and LDL to HDL ratio. This trial provided very favorable results: after a 12-week period, upon comparison with the placebo group, total cholesterol for the treatment group had plummeted 27%, LDL-cholesterol diminished 25%, total triglycerides were reduced by 31%, and LDL to HDL ratio shrank by 28%. Even more significant is the fact that HDL (good) cholesterol levels increased by 4% over those of the placebo group.

Next in Phase II, there was a 4-week washout period. In Phase III, the groups were crossed over and a protocol of 300 mg of *Sytrinol* or a placebo was administered for twelve weeks. Blood samples were drawn at baseline, 4, 8, and 12 weeks. Phase III results indicated that treatment with *Sytrinol* was effective in maintaining reduced cholesterol levels. Twelve weeks of treatment with *Sytrinol* resulted in a:

- 27% Decrease in Total Cholesterol
- 25% Decrease in LDL-Cholesterol
- 31% Decrease in Total Triglycerides
- 28% Decrease in LDL to HDL ratio
- 4% Increase in HDL-Cholesterol

Further, a clinical trial was conducted to determine if a specific delivery system would improve the bioavailability of Sytrinol. The researchers found that the soft gelatin capsule delivery system greatly enhances the bioavailability of the active ingredients in Sytrinol compared to the two-piece, hard shell capsules containing the same potency. After ingesting Sytrinol, blood samples from the softgel group showed plasma concentrations of the two principal PMFs (nobiletin and tangeretin) were nearly 7 and 14 times higher, respectively, than in the hard shell group.

**Resources:**


*Sytrinol™* is a registered trademark of KGK Synergize.

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The FDA has not evaluated these statements. This product is not intended to diagnose, treat, cure or prevent any disease.