Doctor's BEST®

Science-Based Nutrition™

Sytrinol™

Maintains Normal Cholesterol in Healthy Individuals*

Sytrinol™
60 SoftGels

Ingredients per softgel:
Sytrinol™ .....150 mg
(a proprietary blend of citrus polymethoxylated flavones and palm tocotrienols)

Excipients: extra virgin olive oil, gelatin, glycerin, purified water, lecithin, yellow beeswax, orange natural flavor, titanium dioxide, chlorophylline, riboflavin-based colorant (for imprint).

Suggested Adult Use: One softgel two times daily, with or without food.

Ingredients

Sytrinol™ is a patented formula (US Patent # 6,239114 and # 6,251,400) derived from citrus and palm fruit extracts. It is a combination of citrus flavonoids and palm-sourced tocotrienols that can exert potent antioxidant effects.

The polymethoxylated flavones (PMFs) are a group of compounds that are derived from the peels of citrus fruits. These are the predominant flavonoids found in Sytrinol™. The two most common are tangeretin and nobiletin. These compounds, on their own or in combination with other nutrients, have an ability to affect the metabolism of lipids.*

The second major component of Sytrinol™ is a class of compounds known as tocotrienols. Tocotrienols are fat soluble vitamins related to the family of tocopherols, derivatives of vitamin E. They are potent free radical scavengers that may have the ability to modify certain cardiovascular risk factors.*

Benefits

Helps Maintain Normal Cholesterol Levels in Healthy Individuals*

PMFs: In Vitro and Animal Research

Research into the way in which PMFs modulate the production of cholesterol has revealed potential mechanisms of action. One such in vitro trial looked at the effect of tangeretin on human HepG2 cells, a model commonly used to study the metabolism of lipids. This study found that when these cells are exposed to tangeretin, the rate of Apoprotein B production rapidly decreases.[1] Apoprotein B is a structural protein that controls the synthesis of LDL cholesterol from the cells. The study showed that tangeretin inhibited apoprotein B secretion in a dose-dependant manner.

Another interesting component that was measured in this study was tangeretin's effectiveness in a lipid-rich environment. The cells were bathed in the tangeretin solution in the presence of a high amount of fat. In this environment, tangeretin possessed the same ability to decrease apoprotein B secretion.[1] It was thus shown that tangeretin can be effective at modulating the production of cholesterol in a variety of cellular environments.

The researchers also showed that tangeretin may modulate the production of triglycerides on an enzymatic level. Triglycerides are an important component of the body's lipid profile, and play a role in human health similar to other cholesterol components. Microsomal triglyceride transfer protein (MTP) and diacylglycerol acyltransferase (DGAT) are two components of triglyceride synthesis and transport within the cells. Tangeretin displayed inhibitory effects on MTP and suppressed the activity of DGAT, thereby affecting triglyceride metabolism.[1]

A 2005 in vitro study looked at the effects of the second major PMF present in Sytrinol™, nobiletin. The results of this study showed that nobiletin, in addition to being able to modulate the production of cholesterol, has important free radical scavenging effects in the bloodstream.[2]

It is well known that the levels of cholesterol in the bloodstream are not the only factor in determining cardiovascular risk. Just as important, if not more important, is the state of oxidation of LDL cholesterol molecules. Oxidized LDL may deposit in blood vessels and increase cardiovascular risk factors. Nobiletin was shown to prevent oxidative damage to LDL molecules in this study.[2] In purveying its potent antioxidant effect, it keeps the LDL molecules healthy and prevents them from causing potential harm.* A recent trial was conducted in hamsters to measure the effectiveness of a combination of tangeretin and nobiletin on serum cholesterol levels.



Continued on reverse side

This controlled trial investigated the effect of including these PMFs into the diet for 5 weeks. The control group received a normal, standardized diet free of PMFs. Blood parameters were measured and at the end of the experimental period, the animals fed the tangeretin/nobiletin combination showed significantly favorable results in a number of lipid parameters.[3] This research highlights the ability of these PMFs to have beneficial effects on the maintenance of cardiovascular health.*

Tocotrienols: Research Summary

A number of studies have highlighted the cardiovascular health benefits of tocotrienols. Animal studies have shown important serum lipid modulating functions of various tocotrienols. A study conducted in rats found that supplementation of their diets with gamma-tocotrienol resulted in significant effects on total and LDL cholesterol levels after 6 weeks.[4] A second study assessed the impact of feeding tocotrienol-rich rice bran oil to chickens. The results also showed significant decreases in total and LDL cholesterol levels.[5]

Additional in vitro and animal research has documented the far-reaching benefits of tocotrienols on a number of cardiovascular markers. Some of the most interesting research shows amazing antioxidant abilities of these compounds, including an ability to protect LDL cholesterol molecules from lipid peroxidation, thus preventing them from becoming harmful.[6] This is also a noted effect of PMFs.

According to in vitro trials, tocotrienols work to modulate cholesterol synthesis at the enzymatic level. This action is unique to these compounds and researchers believe that this mechanism is responsible for the positive results seen in the animal studies.[6]

Two human trials with tocotrienols have also shown positive results on lipid profiles. Tocotrienol-rich palm oil or rice bran oil was used in these studies and they both showed significant effects on plasma cholesterol levels.[6] The various mechanisms of action of tocotrienols make them an ideal choice for promoting heart health.

Sytrinol: Human Clinical Trials

Sytrinol™ combines the benefits of PMFs and tocotrienols in one convenient formula to promote cardiovascular health.* Two initial small clinical trials were conducted to determine the effectiveness of this product at maintaining healthy cholesterol levels already in the normal range.[7]

Both showed very positive results evidenced by a healthy impact on plasma cholesterol, LDL and triglyceride levels. Based on these results a larger clinical trial of 120 people was conducted with highly favorable results. This trial is due for publication soon.[7] The promising results of this trial and prior research place Sytrinol™ as a safe and effective cornerstone of cardiovascular health maintenance and wellness protocols.*

Scientific References

1.Kurowska EM,Manthey JA, et al. Modulation of HepG2 cell net apolipoprotein B secretion by the citrus polymethoxyflavone, tangeretin. Lipids. 2004 Feb;39(2):143-151.

2.Whitman SC, Kurowska EM, et al. Nobiletin,a citrus flavonoid isolated from tangerines, selectively inhibits class A scavenger receptor-mediated metabolism of acetylated LDL by mouse macrophages. Atherosclerosis. 2005 Jan;178(1):25-32.

3.Kurowska EM,Manthey JA. Hypolipidemic effects and absorption of citrus polymethoxylated flavones in hamsters with diet-induced hypercholesterolemia. J Agric Food Chem. 2004 May 19;52(10):2879-86.

4.Watkins T, Lenz P, et al. gamma-Tocotrienol as a hypocholesterolemic and antioxidant agent in rats fed atherogenic diets. Lipids. 1993 Dec;28(12):1113-8.

5.Qureshi AA,Mo H, Packer L, Peterson DM. Isolation and identification of novel tocotrienols from rice bran with hypocholesterolemic, antioxidant, and antitumor properties.J Agric Food Chem. 2000 Aug;48(8):3130-40.

6.Theriault A, Chao JT,Wang Q,Gapor A,Adeli K.Tocotrienol: a review of its therapeutic potential. Clin Biochem. 1999 Jul;32(5):309-19.

7.Press Release."SourceOne announces completion of phase III of Sytrinol ™ long-term clinical trial."NPI Center. URL: http://www.npicenter.com (25 Jan 2005

Doctor's Best • 1120 Calle Cordillera • Suite 101, San Clemente, CA 92673
phone: 800-333-6977 • fax: 949-498-3952 • website: www.drbvitamins.com
©Doctor's Best, Inc., Revised 06/07

Sytrinol™ is a formula derived from citrus and palm fruit extracts. It is a combination of citrus flavonoids and palm-sourced tocotrienols that can exert potent antioxidant effects. Sytrinol™ may have its major effect in the liver by acting there to balance the production of cholesterol. Research shows that it may be beneficial in helping to maintain normal cholesterol levels in healthy people.*

Helps maintain normal cholesterol levels in healthy individuals.*

Sytrinol™

*** These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.**

Distributed by: **Doctor's Best, Inc.**
1120 Calle Cordillera, Suite 101, San Clemente, CA 92673
(800) 777-2474 www.drbvitamins.com

Doctor's BEST®

Science-Based Nutrition™

Dietary Supplement

Sytrinol™

*HELPS MAINTAIN NORMAL LEVELS OF CHOLESTEROL IN HEALTHY PEOPLE**

60 Softgel Capsules

Supplement Facts

Serving Size 1 softgel
Servings per container 60

	Amount per serving	% Daily Value
Sytrinol™ (a proprietary blend of citrus polymethoxylated flavones and palm tocotrienols)	150 mg	†

† Daily Value not established.

Other ingredients: Extra virgin olive oil, gelatin, glycerin, purified water, lecithin, yellow beeswax, orange natural flavor, titanium dioxide, chlorophylline, riboflavin based colorant (for imprint).

Suggested adult use: One softgel two times daily, with or without food.

Not Suitable for Vegetarians

CONTAINS NOTHING OTHER THAN LISTED INGREDIENTS

7 53950 00134 3