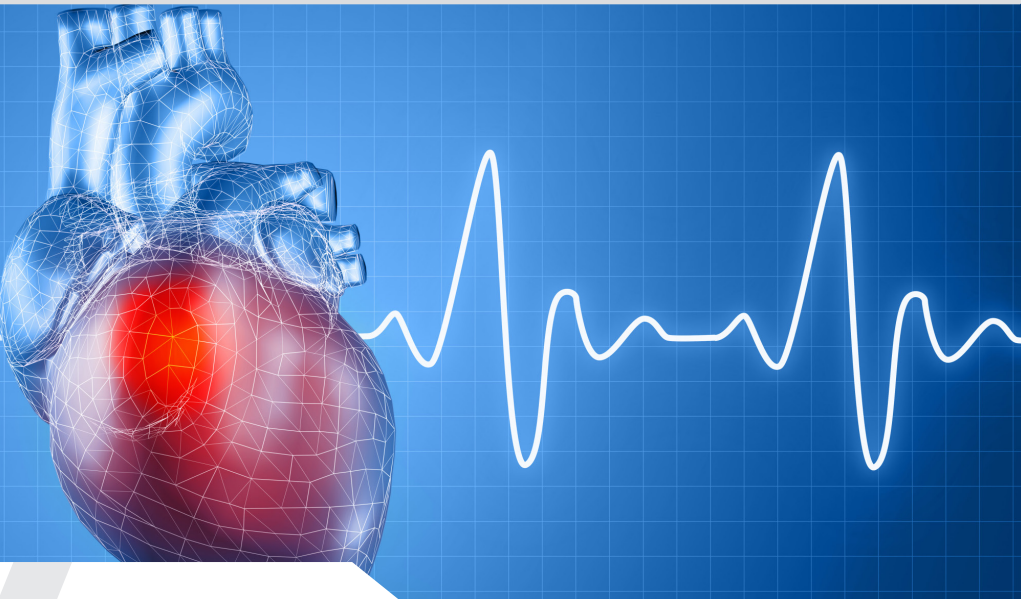


Lipid-Sirt®

LOWER CHOLESTEROL, NATURALLY



Dr. Mark Houston, Associate Clinical Professor of Medicine at Vanderbilt Medical School and Director of Hypertension Institute and Vascular Biology in Nashville, in conjunction with Biotics Research Corporation, has developed Lipid-Sirt®, a specialized formula designed to lower cholesterol, naturally! *

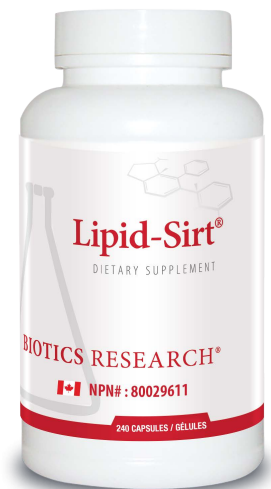
High cholesterol exists when the amount of cholesterol present in blood is at levels that are deemed unhealthy. Safe levels of cholesterol depend on individual risk factors such as antioxidant status, exercise, stress, tobacco use, genetics and other cardiovascular risk factors, such as blood pressure or established coronary heart disease. Although there is some controversy as to what the ideal level of total cholesterol is, most agree that a total cholesterol level below 200 is desirable.

Management of high cholesterol should begin with a combination of exercise and a dietary program that reduces saturated fat intake, and, to the greatest extent possible, the elimination of trans-fats, hydrogenated fats and refined carbohydrates. Additionally, specific nutritional supplements have been found to have a positive impact on cholesterol levels.^(1,2,3,4)

Lipid-Sirt® supplies specific nutrients that have been shown to modify the production of cholesterol in the liver by reacting with hepatic enzymes, increasing cholesterol excretion via the bile, inhibiting cholesterol uptake from the intestine, and supporting increased levels of HDL.

Pantethine, a natural compound, is a stable disulfide form of pantetheine, a precursor of coenzyme A, and is the co-enzymatic form of vitamin B5 (pantothenic acid) and cysteamine. Pantethine may increase levels of coenzyme A, which can increase the beta oxidation of fatty acids directly, while its metabolite, cysteamine, may decrease the hepatic synthesis of cholesterol by inhibiting HMG-CoA reductase. Pantethine has been shown to significantly increase HDL levels in as little as six weeks.^(5,6,7)

* **Phytosterols** (plant sterol esters) are structurally similar to cholesterol and have been shown to reduce the intestinal absorption of cholesterol by 30 to 40%. Clinical studies have shown that phytosterols can lower total cholesterol by an average of 6 to 10% and LDL cholesterol by 8 to 15%. Phytosterols are a safe, natural, effective intervention for the reduction of cholesterol. Foods or dietary supplements containing at least 400 mg per serving of free phytosterols taken twice a day with meals, for a daily total intake of at least 800 mg, as part of a diet low in saturated fat and cholesterol, may reduce the risk of heart disease.^(8,9)



Lipid-Sirt® supplies specific nutrients which have been shown to modify the production of cholesterol in the liver.

To place your order for **Lipid-Sirt®** or for additional information please contact us:



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Green Tea extract — Epigallocatechin gallate (EGCG) is the most abundant catechin (44-55%) supplied by green tea and possesses the most potent antioxidative activity of the green tea polyphenols. The potential protective health effects from catechins have been attributed to antioxidant, anti-thrombogenic and anti-inflammatory properties.

EGCG increases endothelial nitric oxide activity. Nitric oxide release from the endothelium results in vasodilation. Impaired vasodilation is associated with the progression of CVD. Widlansky examined the effects of EGCG on endothelial function in patients with coronary artery disease and found that EGCG improved endothelial function in patients with endothelial dysfunction. EGCG is also an inhibitor of xanthine oxidase, an enzyme that produces the purine, uric acid. Xanthine oxidase inhibition has been shown to improve endothelial vasodilation in hypercholesterolemic individuals.

In animal models, green tea catechins have been shown to decrease the solubility of cholesterol in micelles, thereby reducing the intestinal absorption of cholesterol.^(14,15,16,17,18)

Delta-tocotrienol — Natural vitamin E includes two groups of similar fat-soluble compounds - tocopherols and tocotrienols, with each group consisting of four separate isomers: alpha, beta, delta and gamma. While tocopherols have a side tail that allows the molecule to anchor itself in the membrane of cells, the tocotrienol side chain allows the molecule to move freely in and through the membrane, allowing it to hunt down free radicals across a much larger area.

Tocotrienols have been shown to inhibit HMG-CoA reductase, the first-rate limiting enzyme in the biosynthetic pathway for cholesterol synthesis, with delta and gamma tocotrienol possessing the greatest ability to inhibit cholesterol synthesis. Unlike other HMG-CoA reductase inhibitors, tocotrienols do not inhibit the synthesis of coenzyme Q10.^(10,11,12,13)

Phytolens® is a patented extract from the seed coat of lentils containing a rich mixture of condensed tannins (procyanidins). Polymeric procyanidins have been shown to increase endothelial nitric oxide synthase to a greater extent than monomers in aortic endothelial cells. **Phytolens®** possesses significant antioxidant activity and has been shown to positively impact inflammatory mediators *in vitro*.⁽¹⁹⁾

References:

1. NIH publication No 01-3290
2. Kessinger, J. *Diagnosis and Management of Internal Disorder, module 4 session 9, 2004*
3. Blum CB, Levy. Current therapy for hypercholesterolemia. *JAMA, June 23/30, 1989- vol 261, No.24; 3582-3587*
4. *Alternative Medicine Review, volume 3, Number 5, 379-381*
5. Pinns JJ, First S, et al. Pantethine beneficially affects apolipoprotein A-1, apolipoprotein B, low-density lipoprotein particle size but not high sensitivity C-reactive protein in a dyslipidemic population. *Circulation, 2004; 110(17 supp 3): III-778.*
6. Binaghi P, et al. Evaluation of the cholesterol-lowering effectiveness of pantethine in women in perimenopausal age. *Minerva Med. 1990 Jun; 81(6):475-9*
7. Gaddi A, et al. Controlled evaluation of pantethine, a natural hypolipidemic compound, in patients with different forms of hyperlipoproteinemia. *Atherosclerosis. 1984 Jan; 50(1): 73-78*
8. Micallef MA and Garg ML. The lipid-lowering effects of phytosterols in (n-3) polyunsaturated fatty acids are synergistic and complementary in hyperlipidemic men and women. *J Nutrition 2008;138; 1086-1090*

9. International food information council. *Functional foods fact sheet: plant stanols and sterols. July 2007*
10. Sen CK, Khanna S and Roy S. Tocotrienols: Vitamin E Beyond Tocopherols. *Life Sci. 2006 March 27; 78(18): 2088-2098.*
11. Chin SF, et al. reduction of DNA damage in older healthy adults by Tri E Tocotrienol supplementation. *Nutrition. 2008 Jan; 24(1): 1-10*
12. Qureshi AA, et al. The structure of an inhibitor of cholesterol biosynthesis isolated from barley. *J Bio Chem 1986, vol.261, No. 23, Aug15, pp 10544-10550*
13. Qureshi AA, et al. Dose-dependent suppression of serum cholesterol by tocotrienol-rich fraction (TRF 25) of rice bran in hypercholesterolemic humans. *Atherosclerosis, 2002 Mar; 161(1): 199-207*
14. Chow S, et al. Phase I Pharmacokinetic study of tea polyphenols following single dose administration of epigallocatechin gallate and polyphenon E. *Cancer Epidemiology, Biomarkers and Prevention vol 10, 53-54, Jan 2001*
15. Lorenz M, et al. A constituent of green tea, epigallocatechin-3-gallate, activates endothelial nitric oxide synthesis by a phosphatidylinositol-3-OH kinase, cAMP dependant protein kinase and Akt-dependent pathway and leads to endothelial-dependant vasorelaxation. *J Biological Chemistry 2004, vol 279, No. 7, 6190-6195*
16. Widlansky ME, et al. Acute EGCG supplementation reverses endothelial dysfunction in patients with coronary artery disease. *J Am College of Nutrition, vol. 26, no. 2, 95-102, 2007*
17. Yang TT and Koo MW. Chinese green tea lowers cholesterol level through an increase in fecal lipid excretion. *Life Sci. 2000; 66(5): 411-23*
18. Unno T, et al. Effect of tea catechins on postprandial plasma lipid responses in human subjects. *British J Nutrition 2005 Apr; 93(4): 543-7*
19. Phytolens, United States Patent 5,762,936. Antioxidant derived from lentil and its preparation and uses.

Lipid-Sirt® is available in 240-count bottles (#2935).

Supplement Facts

Serving Size: 4 Capsules
Servings Per Container: 60

	Amount Per Serving	% Daily Value
Pantethine	450 mg	*
Plant Sterols (from soybean)	400 mg	*
Green Tea Extract (50% EGCG) (leaf)	300 mg	*
Delta-tocotrienol (from annatto seed)	37.5 mg	*
Phytolens® ** (Lens esculenta extract) (husk)	2.5 mg	*

*Daily Value not established

Other ingredients: Capsule shell (gelatin and water), cellulose, silica, magnesium stearate (vegetable source), and modified cellulose gum.

Contains ingredients derived from soybean.

** **Phytolens®** is a registered trademark of Biotics Research Corporation. U.S. Patent No. 5,762,936

This product is gluten and dairy free.

RECOMMENDATION: Four (4) capsules two (2) times each day as a dietary supplement or as otherwise directed by a healthcare professional.

Caution: Not recommended for pregnant or lactating women.

KEEP OUT OF REACH OF CHILDREN

Store in a cool, dry area.

Sealed with an imprinted safety seal for your protection.

Product # 2935 Rev. 07/13

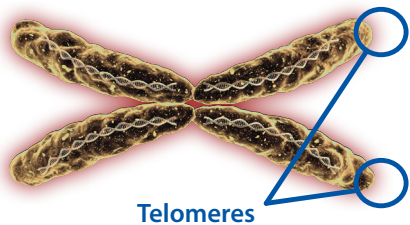
Biotics Research recommends these product adjuncts:
**VasculoSirt®, ResveraSirt-HP®,
EFA-Sirt Supreme®, Niacin 100™ and Red Yeast Rice**



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What are Sirtuins?

The sirtuin genes are located in the cell nucleus and possess a component that functions in repairing double stranded DNA breaks that occur as we age.⁽³⁾ This also plays an important role in controlling the length of the telomere, which in turn protects the ends of the chromosome from destruction. Because of this role, the sirtuins are considered regulators of the cellular defense systems and thus play a role in longevity.



Biotics Research Corporation has developed a line of products which support sirtuin activity.

These products include **VasculoSirt**[®], **Lipid-Sirt**[®], **EFA-Sirt Supreme**[®], **ResveraSirt-HP**[®], **Bio-CardioSirt BP**[®] and **Red Yeast Rice**. These products contain key STACs.

The utilization of STACs offers promising healthy alternatives to standard interventions, while also offering significant anti-aging properties.

***Ask your healthcare professional
which sirtuin product is right for you.***

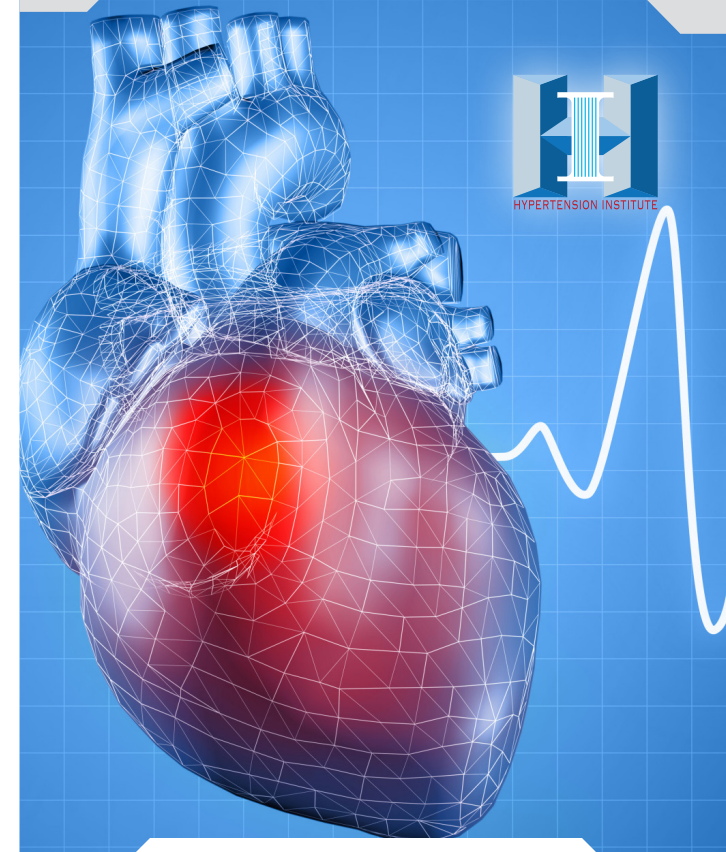


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Sirtuins

*Because Healthy Aging Requires Healthy
Arteries and a Healthy Heart*



These statements have not been evaluated by the Food and Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.

Why Sirtuins?

Support for vascular integrity and healthy aging by supporting and stimulating sirtuin activity



VasculoSirt® - The key Sirtuin-activating compounds (STACs) in this revolutionary cardiovascular supplement product include resveratrol and quercetin. The primary objective of **VasculoSirt®** is to slow vascular aging and promote both vascular and heart health. Case studies have demonstrated improvements in athletic performance, maintenance of healthy blood pressure and lipid panel, as well as a decrease in C-reactive protein (CRP). Improvements in both Carotid Intima-Media Thickness and Computerized Pulse Waveform Analysis (CAPWA) have also been observed, establishing its beneficial effects on cardiovascular function.

EFA-Sirt Supreme® offers a high potency mix of EPA, DHA and GLA, along with a high concentration of the delta gamma tocopherol form of vitamin E. It is specifically designed to target vascular health. In animals, omega-3 fatty acids have proven effectiveness in reversing a reduction in Sirt1.⁽¹⁾ Sirt1 is the main deacetylase in the regulation of genes involved in mitochondrial and fatty acid utilization. In response to low nutrients or a low level of glucose, cells increase the rate of fatty acid oxidation. Sirt1 is required for this increased rate of fatty acid oxidation in response to low glucose and has been implicated as the “metabolic regulator”, permitting the switch from glucose to fatty acid oxidation in nutrient deprivation conditions.⁽²⁾

ResveraSirt-HP® - Trans-resveratrol, the primary component in **ResveraSirt-HP®**, is a natural polyphenolic phytochemical, found in over 70 species of plant flora, including grapes, red wine and even peanuts. The most common source is

Japanese Knotweed (*Polygonum cuspidatum*). However, not all sources of Trans-resveratrol are created equal. Routine testing in our in-house laboratories has resulted in our rejection of multiple lots due to unacceptably high levels of benzopyrene, a polycyclic aromatic hydrocarbon and known carcinogen. Resveratrol possesses a diverse array of biochemical and physiological actions, and has been demonstrated to mimic calorie restrictions by stimulating SIRT2. Published studies suggest that in yeast, this action extends lifespan by 70%, and in animals increased lifespan by 30%. In the same study, it was also shown to increase DNA stability, which also has a positive impact on life expectancy. In both acute and chronic models of cardiovascular disease, resveratrol has demonstrated cardiac protection by virtue of its modulation of cellular vascular function and its ability to inhibit LDL oxidation. Additionally, it possesses both antioxidant and anti-inflammatory properties, playing a key role as a regulator of NF-kappaB.

Lipid-Sirt® - It is well documented that specific nutrients have a positive effect on cholesterol levels. These specific nutrients are included in **Lipid-Sirt®**. Pantethine has been demonstrated to significantly increase levels of HDL, the good cholesterol. A lower level of both total and LDL cholesterol has also been demonstrated with the use of phytosterols. Green tea extract has antioxidant properties and was found to decrease cholesterol solubility, resulting in reduced intestinal absorption. Delta tocotrienol is an effective free radical scavenger and an inhibitor of HMG-CoA (the rate limiting step in cholesterol synthesis). However, unlike statin drugs, it does not inhibit the synthesis of CoQ10. Phytolens® is a patented proprietary

procyanidin compound exclusively from Biotics Research, possessing potent antioxidant and anti-inflammatory activities.

Bio-CardioSirt BP® - Blood pressure increases with age as a consequence of the interaction of our environment, genetics and lifestyle including exercise and the dietary intake of macro and micronutrients. Nutrient-gene interactions and oxidative stress influences vascular biology in humans.

Bio-CardioSirt BP® supplies a unique patented combination of 7 key micronutrients that have been clinically proven to support normal, healthy blood pressure levels.

1. Wu et al. J Neurotrauma. 2007 Oct;24(10):1587-95. Gerhart-Hines Z, Rodgers JT, Bare O, Lerin C, Kim SH, Mostoslavsky R, Alt FW, Wu Z, Puigserver1 P.
2. Metabolic control of muscle mitochondrial function and fatty acid oxidation through SIRT1/PGC-1. EMBO J. 2007 April 4;26(7):1913-1923.
3. Michan S, Sinclair D. Sirtuins in mammals: insights into their biological function. Biochem J. 2007 May 15; 404 (1): 1-13.



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