

VasculoSirt®

Because Healthy Aging Requires Healthy Arteries And A Healthy Heart



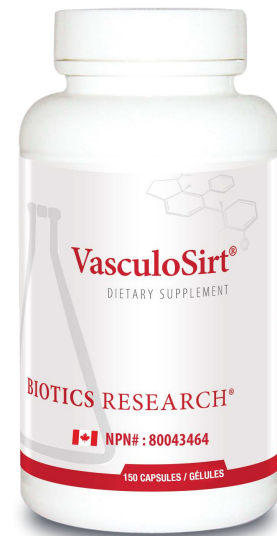
Following three years of research, Dr. Mark Houston, Associate Clinical Professor of Medicine at Vanderbilt Medical School and Director of Hypertension Institute and Vascular Biology in Nashville, in conjunction with Biotics Research, has developed a revolutionary nutritional supplement: VasculoSirt®.

VasculoSirt® is designed to slow vascular aging, promote vascular and heart health, provide healthy support for blood pressure, cholesterol, glucose and insulin levels within normal ranges, and has been found to slow aging in experimental animals.

Vascular aging is characterized by progressive arterial stiffness, loss of arterial elasticity and arterial compliance from a myriad of structural and functional changes in the endothelium, vascular media and adventitia, resulting in:

- Endothelial dysfunction
- Increased extracellular matrix
- Altered vascular smooth muscle (VSMC)
- Altered adventitia

(Mark Houston, MD, MSc, ABAAM, FACP, FAHA)



VasculoSirt® is a state of the art product, providing comprehensive support for healthy cardiovascular function.

To place your order for VasculoSirt® or for additional information please contact us:



(800) 840-1676

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ON L4P 3E2 orders@bioticscan.com
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Key components of VasculoSirt® include:

Resveratrol (Trans-Resveratrol) – a phytoalexin found in certain plants. Resveratrol is readily absorbed, but is rapidly metabolized and excreted.

Resveratrol is the focus of a significant level of ongoing research. Among its many attributes, Resveratrol has been shown to:

Resveratrol has been shown to increase the activity of SIRT1, which slows aging in animal studies and deacetylates enzymes that simulate caloric restriction and longevity in animal studies.

- Slow aging in experimental animals by up to 66%
- Simulate caloric restriction and assist in weight control
- Increase Nitric Oxide production
- Protect DNA from damage
- Increase the activity of SIRT1, which slows aging in

animal studies and deacetylates enzymes that simulate caloric restriction and longevity in animal studies

R-Alpha Lipoic Acid (R-ALA) – an active, natural isomer of lipoic acid. R-ALA, a mixture of R and S forms, is believed to be twice as active as traditional Alpha Lipoic Acid. R-ALA is a disulfide compound found in the mitochondria of cells, and is the coenzyme for both pyruvate dehydrogenase and alpha-ketoglutarate dehydrogenase. In-vitro studies have demonstrated R-ALA supplementation improves mitochondrial function, increases metabolic rate, and decreases oxidative damage. Ambulatory activity, a measure of metabolic activity, was almost three times

higher with R-ALA supplementation. Additionally, R-ALA enhances glutathione levels and is linked to detoxification of xenobiotics. R-ALA supports healthy blood pressure, glucose and insulin levels within normal ranges, and supports healthy arteries and heart health. An increase in nitric oxide levels have been noted as well.

EGCG (Epigallocatechin Gallate) – a major catechin found in green tea. EGCG is the most potent of all the green tea catechins and is readily absorbed. EGCG inhibits tyrosine phosphorylation of platelet-derived growth factor receptor-beta (PDGF-Rbeta) and its downstream signaling pathway, thereby inhibiting the proliferation of smooth muscle, one of the requisites of atherosclerosis. Other beneficial functions of EGCG include:

- Inhibits the activity of the transcription factors AP-1 and NFkappaB, key inflammatory mediators
- Thermogenic properties (promotes fat oxidation)
- Chemo-protective
- Supports healthy glucose and insulin levels within normal ranges, and supports healthy arteries and heart health

Vitamin K (K₂ and K₁) – Inadequate calcium metabolism results in the calcium paradox-concurrent arterial calcification and osteoporosis. Osteoporosis is correlated with low levels of circulating vitamin K (K). Low levels of K influence secondary modification of osteocalcin,



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a K dependent gamma-carboxyglutamic acid (Gla) protein, which is needed to effectively bind calcium to the bone matrix. K is a cofactor for gammaglutamylcarboxylase, which modifies the Gla proteins. With optimal levels of K, osteocalcin is carboxylated (cOC) and effective. With insufficient levels it is under-carboxylated (ucOC) and ineffective. Supplementation with K reduces serum levels of the ineffective form of osteocalcin. Insufficient K fails to modify (carboxylate) the Matrix Gla Protein (MGP), an important inhibitor of arterial calcification. MGP is a very strong and abundant inhibitor of soft tissue calcification. No ucOC MGP is found in healthy arteries, while increased amounts of non-functional, ucOC MGP was found around arterial salt precipitates.

Vitamin K₂ is structurally different from the more common K₁ (found in green leafy vegetables) and is found in fermented products, primarily Natto. The Natto K₂ supplies primarily menaquinone-7 (MK-7). It is more bioavailable than the other forms of K on a basis of intake. Experimental animal models have shown vitamin K₂ (MK-7) promotes removal of vascular calcifications and arterial plaque.

Additional components and benefits of VasculoSirt®'s comprehensive formulation include:

Coenzyme-Q₁₀ (CoQ₁₀), a fat soluble antioxidant, is supplied as a soy free micro emulsion for enhanced uptake and utilization. CoQ₁₀ functions

as an electron carrier in mitochondrial oxidative phosphorylation. Adequate CoQ₁₀ is critically important for energy production (ATP) of the myocardium, and supports healthy blood pressure, arteries and a healthy heart.

Acetyl-L-Carnitine supports healthy heart function by assisting in the transport of long-chain fatty acids across mitochondrial membranes for energy production. Acetyl-L-Carnitine also provides support for healthy arteries and blood pressure levels within normal ranges.

B-Complex vitamins support healthy blood pressure, homocysteine, glucose and insulin levels within normal ranges, and supports healthy arteries and heart function. Additionally, B-Complex vitamins work with enzyme systems that convert fuels to energy (tricarboxylic acid cycle).

Vitamin D₃ suppresses renin transcription and regulates the renin-angiotensin system. D₃ also supports healthy arteries, and healthy blood pressure, glucose and insulin levels within normal ranges.

Vitamin C - A potent antioxidant, vitamin C supports healthy arteries, and healthy blood pressure within normal ranges.

Magnesium, zinc, copper and **selenium** support healthy arteries and healthy blood pressure, glucose and insulin levels within normal ranges.



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Olive leaf extract supplies flavonoids and glycosides possessing well-defined antioxidant properties, having effectively been shown to prevent the oxidation of LDL *in-vitro*. Olive leaf's phytonutrients support healthy arteries, and healthy blood pressure, glucose and insulin levels within normal ranges.

Quercetin protects against lipid peroxidation and inhibits arachidonic acid cascade enzymes. Quercetin increases that activity of resveratrol by slowing hepatic metabolism.

Phytolens® – a patented and very potent antioxidant. **Phytolens®** effectively protects lipids from oxidation, and downregulates pro-inflammatory mediators *in-vitro*.

Ginkgo biloba extract possesses antioxidant activity. Research suggests Ginkgo protects endothelial cells from free-radical induced damage.

Lutein and **Lycopene**, natural carotenoids possessing significant antioxidant activity, provide support for healthy arteries and blood pressure levels within normal ranges.

VasculoSirt® is available in 150-count (#2924) and 300-count bottles (#2925).

Supplement Facts					
Serving Size: 5 Capsules					
Servings Per Container: 60					
	Amount Per Serving	% Daily Value			
Vitamin A (as mixed carotenoids)	1,095 mcg RAE	122%	Selenium (as selenomethionine)	50 mcg	91%
Vitamin C (as ascorbic acid)	250 mg	278%	Copper (as copper citrate)	0.5 mg	56%
Vitamin D3 (as cholecalciferol)	50 mcg	250%	Coenzyme Q10 (emulsified)	50 mg	†
Vitamin K (as menaquinone-7 from fermentation and as phytonadione)	50 mcg	42%	Trans-Resveratrol	50 mg	†
Thiamin (B1) (as thiamin mononitrate)	5 mg	417%	R-Alpha Lipoic Acid (from stabilized sodium salt)	50 mg	†
Riboflavin (B2)	5 mg	385%	Green Tea Extract (50% EGCG) (leaf)	500 mg	†
Niacin	25 mg	156%	Acetyl-L-Carnitine hydrochloride	500 mg	†
Vitamin B6 (as pyridoxine HCl)	50 mg	2,941%	Olive Extract (<i>Olea europaea</i>) (leaf)	50 mg	†
Folate (as calcium folinate)	400 mcg	100%	Quercetin	50 mg	†
Vitamin B12 (as methylcobalamin)	50 mcg	2,083%	Ginkgo Extract (Ginkgo biloba) (leaf)	5 mg	†
Biotin	2,500 mcg	8,333%	Phytolens® ** (Lens esculenta extract)	5 mg	†
Pantothenic Acid (as calcium pantothenate)	12.5 mg	250%	Lutein (from Aztec Marigold flower)	5 mg	†
Magnesium (as magnesium glycinate*)	125 mg	30%	Lycopene (from Tomato)	1.5 mg	†
Zinc (as zinc picolinate)	15 mg	136%			

† Daily Value not established

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

* **Albion®** brand Magnesium Glycinate. Albion Laboratories, Inc. of Clearfield, Utah.

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

This product is gluten and dairy free.

RECOMMENDATION: Five (5) capsules two (2) times each day as a dietary supplement or as otherwise directed by a healthcare professional.

CAUTION: Those taking blood thinners should avoid supplements with vitamin K unless specifically recommended and monitored by their physician. 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 # 2925 Rev. 12/18

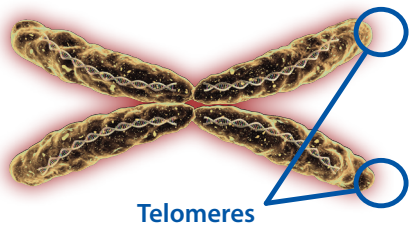


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What are Sirtuins?

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.***

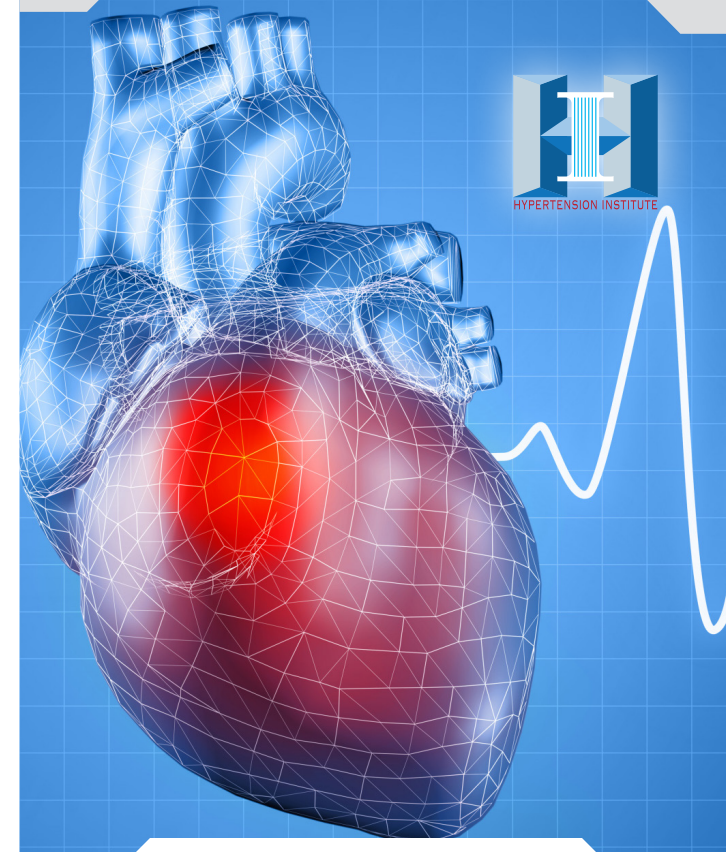


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Sirtuins

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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, Puigserver 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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