

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

**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 bottles of 150 & 300 capsules.

Biotics Research recommends these product adjuncts: **Lipid-Sirt**®, **ResveraSirt-HP**®, **EFA-Sirt Supreme**® and **CoQ-Zyme-30**™

Supplement Facts			Servings Per Container: 60		
	Amount Per Serving	% Daily Value		Amount Per Serving	% Daily Value
Vitamin A (as mixed carotenoids)	3,750 IU	75%	Olive Extract (Olea europaea) (fruit)	50 mg	†
Vitamin C (as ascorbic acid)	250 mg	417%	Quercetin (Olinophandra mollis)	50 mg	†
Vitamin D3 (as cholecalciferol)	4,000 IU	1,000%	Ginkgo Leaf Extract (Ginkgo biloba)	5 mg	†
Vitamin K (as Mena Q7™ menaquinone-7 (extract of Bacillus subtilis natto) and as phytonadione)	50 mcg	63%	Phytolens®*** (Lens esculenta extract)	5 mg	†
Thiamin (B1) (as thiamin mononitrate)	5 mg	333%	Lutein (from Marigold flower)	5 mg	†
Riboflavin (B2)	5 mg	294%	Lycopene (from tomato)	1.5 mg	†
Niacin	25 mg	125%	† Daily Value not established		
Vitamin B6 (as pyridoxine HCl)	50 mg	2,500%	Other ingredients: Capsule shell (gelatin and water), magnesium stearate (vegetable source) and gum arabic.		
Folate (as calcium folinate)	400 mcg	100%	* MenaQ7™ is the trademark of NattoPharma, Norway. Patents pending.		
Vitamin B12 (as methylcobalamin)	50 mcg	8,333%	** Albion® brand Magnesium Glycinate, Albion laboratories, Inc. of Clearfield, Utah		
Biotin	2.5 mg	833%	*** Phytolens® is a registered trademark of Biotics Research Corporation, U.S. Patent No. 5,762,936, Biotics Research Corporation		
Pantothenic Acid (as calcium pantothenate)	12.5 mg	125%	RECOMMENDATION: Five (5) capsules two (2) times each day as a dietary supplement or otherwise directed by a healthcare professional.		
Magnesium (as magnesium glycinate**)	125 mg	31%	Caution: Those taking Coumadin or anticoagulants should avoid supplements with vitamin K unless specifically recommended and monitored by their physician. Not recommended for pregnant or lactating women.		
Zinc (as zinc picolinate)	15 mg	100%	NDC# 55146-02925 Rev. 12/09		
Selenium (as selenomethionine)	100 mcg	143%			
Copper (as copper citrate)	0.5 mg	25%			
Coenzyme Q10 (emulsified)	50 mg	†			
Trans-Resveratrol (from Polygonum cuspidatum) (radix and rhizoma)	50 mg	†			
R-Alpha Lipoic Acid (from stabilized sodium salt)	50 mg	†			
Green Tea Extract (50% EGCG) (leaf)	500 mg	†			
Acetyl-L-Carnitine hydrochloride	500 mg	†			

**Caution:** Additional supplementation of vitamin D beyond that supplied in **VasculoSirt**™ is not recommended. Not recommended for pregnant or lactating women.

**VasculoSirt**®  
Another example of  
**Biotics Research Corporation**  
bringing you  
“The Best of Science and Nature”

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

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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.

# VasculoSirt®

Because Healthy Aging Requires Healthy Arteries and a Healthy Heart

“A man is as old as his blood vessels.” ~ Sir William Osler



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 Corporation, have developed a revolutionary nutritional supplement designed to:**

- Slow vascular aging
- Promote vascular and heart health
- Slow aging in experimental animals
- Provide healthy support for blood pressure, cholesterol, glucose and insulin levels within normal ranges



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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**

### **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:

- 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 is believed to be twice as active as traditional Alpha Lipoic Acid, which is a mixture of R and S forms. R-ALA is a disulfide compound found in the mitochondria of cells, and is the coenzyme for 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-lipoic acid 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 atherogenesis. 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 circulation vitamin K (K). Low levels of K influence secondary modification of osteocalcin, a K dependent 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** – supports 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.