



### Hearty Circulation

Heart Endurance & Cholesterol Control  
Oyster Mushroom, CoQ10 and Policosanol

#### Oyster Mushroom Science & Benefits

Oyster mushroom powder comes from dried fruiting bodies of mushrooms of the Genus species: *Pleurotus ostreatus*. Oyster mushrooms possess an aroma and slight taste of cooked oysters. As with many mushrooms, there are numerous health benefits associated with their consumption. Oyster mushrooms contain water-insoluble polysaccharides, which are highly branched beta-D-glucans that helps modulate the activity of the immune system. Oyster mushrooms also contain high levels of vitamin B1, vitamin B2, vitamin D, vitamin C, vitamin E, iron, and other minerals for balanced nutrition. Oyster mushrooms contain unique antioxidant enzymes catalase, superoxide dismutase (SOD) and glutathione peroxidase that can help reduce the effects of age-related chronic diseases. Oyster mushroom powder has been part of numerous clinical health studies. Oyster mushrooms have been shown to reduce blood cholesterol levels, reduce conjugated dienes in blood plasma, reduce the incidence of atherosclerotic plaques in blood vessels, and caused lower incidence of foam cells in all types of blood vessel lesions. Oyster mushrooms have a lasting impact on heart and immune health.

#### Oyster Mushroom Benefits

- May support reduce plaque in arteries\*
- Supports normal blood flow\*
- Helps strengthen the immune system\*
- Helps reduce elevated blood cholesterol levels\*
- Supports healthy heart function\*

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

#### Policosanol Science & Benefits

Policosanol is a natural mixture of long-chain fatty alcohols derived from the waxy protective coating on sugar cane (*Saccharum officinarum*). Policosanol contains saturated primary alcohols of long carbon chains - C22, C24, C26, C27, C29, C32 and C34. Because they are alcohols, they are soluble in water. Research linking policosanol to lower cholesterol levels originated in 1972 with

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Japanese scientist Dr. Hiroko Sho. Dr. Sho identified the dominant components in the sugar cane rind: wax and fatty alcohols. He showed that these substances reduced cholesterol in the serum and liver of rats. Since then, many scientists worldwide have focused on the diverse cardio-beneficial properties of policosanol. Policosanol may fight atherosclerosis by reducing endothelial (vessel wall) injury to the circulatory system. The process of atherosclerosis is initiated by the oxidation of LDL (bad) cholesterol, followed by macrophage (white blood cell) recruitment to engulf oxidized LDLs. When the macrophages are filled with oxidized LDL, they are called foam cells; these foam cells penetrate the arterial wall and commence the process of arterial blockage. It is postulated that sugar cane policosanol protects the arterial wall as a waxy material by reducing the amount of macrophages recruited, resulting in a significant reduction in atherosclerotic lesions and endothelial injury. Policosanol has gone through numerous clinical studies. Policosanol lowers total cholesterol and LDL cholesterol. It actually inhibits the biosynthesis of cholesterol. Policosanol has a long-term effect on lowering blood cholesterol. Policosanol also has been shown to lower blood serum levels of pro-aggregating factors that can lead to blood clotting. After as little as 6 weeks, LDL cholesterol levels can drop 25-30% and HDL cholesterol levels can rise 15-25%. Importantly, policosanol has a long history of safe use, no observed side effects (not toxic to the liver) and no known drug interactions. Statin drugs may also lower LDL cholesterol, but only policosanol also increases HDL (good) cholesterol. Policosanol has also been shown to lower systolic pressure in hypertensive patients.

### **Policosanol Benefits**

- May lower LDL (bad) cholesterol levels in the blood
- Supports arterial health
- May raise HDL (good) cholesterol blood levels
- Helps reduce total blood cholesterol levels
- No known side effects and a long history of safe use

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## **Coenzyme Q10 (CoQ10) Science & Benefits**

Coenzyme Q10, ubiquinone, is a strong antioxidant that is primarily focused for hearty circulation. CoQ10 is a natural body biochemical synthesized within the mitochondria of every cell. Mitochondria are the site of energy production in the cell. Energy production is achieved by converting carbohydrates, fats and proteins into ATP biochemical energy. Unfortunately, this conversion process generates free radicals that slowly decay the functions of the mitochondria and the cell. CoQ10 is a strong defensive antioxidant against free radical generation. The reduction in free radical build-up in mitochondria also improves the energy-generating

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efficiency within these cellular powerhouses. CoQ10 helps limit the free radical oxidation of LDL cholesterol that can lead to clogging of arteries (a condition known as atherosclerosis). Therefore, CoQ10 assists individuals with proper blood flow and reduces the risk of blood clots and heart failure.

### CoQ10 Benefits

- Supports cellular antioxidant activities\*
- Works to enhance mitochondria energy productions\*
- Assists with daily energy requirements\*
- May supports proper blood flow\*
- May help with reducing the oxidation of LDL cholesterol\*

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## L-Carnitine Science & Benefits

L-Carnitine is naturally synthesized in the body to support energy production. L-carnitine is commonly used for weight loss as it facilitates the transport of fatty acids within cells into cellular mitochondria where they are converted into ATP energy. L-Carnitine is a common ingredient in weight-loss supplements as it assists in the conversion of body fat into energy during periods of fasting, dieting and cleansing. Individuals with poor cardio-performance, either from problems with heart pumping or from partially clogged ventricles or arteries, have difficulty in working, exercising and recreating as they did when they were younger and healthier. L-Carnitine supplementation helps these individuals with a boost of energy - allowing them to work harder, exercise longer, and endure daily activities through the evening. Increased body energy favorably affects heart rate, blood pressure, angina and blood lipid levels.

### L-Carnitine Benefits

- Supports daily energy needs\*
- Helps improve exercise duration and endurance\*
- May favorably affect heart rate, blood pressure, and blood lipids\*
- Supports the conversion of body fats into energy\*
- Helps enhance energy to meet the needs of daily work\*

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## Taurine Science & Benefits

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Taurine is a natural biochemical that functions in electrically active tissues, such as the heart and brain, to help stabilize cell membranes. Taurine functions as an antioxidant and detoxifier for blood vessels and even the eyes. Taurine aids in the transport of sodium, magnesium, calcium and potassium across the cell membrane - resulting in controlling nerve impulses. Understandably, Taurine is found in tissues of the central nervous system and muscle proteins; with the highest concentrations in tissues within the brain and the heart (approximately 50% of the amino acid proteins within the heart). Taurine is a sulfur-containing amino acid naturally synthesized with the amino acid cysteine using vitamin B6 as a coenzyme catalyst. When there are deficiencies in either vitamin B6 or the essential amino acid cysteine (or both) through poor nutrition, it can lead to symptoms of poor coordination and cardiovascular problems. Taurine is high in meat and fish.

### Taurine Benefits

- Supports proper nerve function\*
- Helps with mental activities\*
- Helps support normal body movement and coordination\*
- Supports and protects normal heart functions\*
- Helps blood flow by supporting healthy blood vessels\*

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## Niacin Science & Benefits

Niacin is a water-soluble B-vitamin - classified as vitamin B3. It is also known as nicotinic acid, nicotinamide and niacinamide. Niacin is a vitamin coenzyme linked with the mitochondria enzymes NAD and NADP to rapidly metabolize food into energy. Niacin is important in metabolizing fats and has a three-prong effect in reducing the risk of heart disease. Niacin has been shown to lower blood LDL (bad) cholesterol levels. Niacin has also been shown to lower blood triglyceride (fat) levels. An additional positive is that niacin has been shown to increase HDL (good) cholesterol levels. Niacin has been used to reduce many risks of heart disease and even help with diabetes. Good sources of niacin are dairy products, meats, peanuts and whole grains.

### Niacin (vitamin B3) Benefits

- Helps lower LDL (bad) cholesterol levels\*
- Supports higher HDL (good) cholesterol levels\*
- May help lower total triglyceride levels\*
- Helps metabolize blood lipids\*
- Promotes cardiovascular health\*

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### Selenium Science & Benefits

Selenium is the most recent essential mineral cofactor to receive extensive medical research in order to determine the daily dietary needs and its essential functions. Selenium is an antioxidant working with vitamin E in many cellular mechanisms. Selenium has been focused on as a potential in fighting cancer. Residents living in areas where soils contain high selenium levels has been correlated with low cancer rates. In addition, selenium has been associated with lower homocysteine levels - hence reducing the risk of stroke and heart disease.

#### Selenium Benefits

- May reduce homocysteine concentrations
- May reduce risks of stroke and heart disease
- Supports normal heart function
- Enhances antioxidant activity in the body
- Supports cardiovascular health

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### Folate Science & Benefits

Folate is a daily essential vitamin coenzyme for children, teenagers, adults and the elderly. Folate is often remembered as the vitamin coenzyme that is essential in higher concentrations for pregnant women for proper fetal development. Folate is a B vitamin abundant in greens, beans and fruits and a healthy diet usually provides close to minimum quantities of this water soluble vitamin. Because folate is a water-soluble vitamin, there is no risk of overdosing - excess folate is merely filtered and eliminated with the bodies urine and sweat. Folate, also known as folic acid, affectively lowers homocysteine levels in the blood. Homocysteine is an amino acid that causes plaque build-up on the walls within blood vessels. Additionally, homocysteine stiffens and thickens the walls of blood vessels. Blood vessels are in top condition when their walls are strong, thin and flexible in order to handle changes in blood pressure and blood flow as the body works, exercises and plays. High levels of homocysteine in the blood has been linked with low levels of folate in the diet. Homocysteine has also been linked to a higher risk for narrowing of the carotid artery, a strong predictor of heart disease. In contrast, subjects with higher levels of folate in their diets had clearer arteries. Consuming higher than normal daily quantities of folate has been shown to reduce the risk of stroke and the lower the risk of cardiovascular disease. In addition, consuming higher than normal daily amounts of folate has been shown to reduce the chances of high blood pressure in women.

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### Folate Benefits

- Helps lower homocysteine levels in blood\*
- Supports reduction of plaque in blood vessels\*
- May help blood vessel strength and flexibility\*
- Supports lowering of high blood pressure in women\*
- May help reduce the risk of stroke and cardiovascular disease\*

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To learn more and purchase the book:

[http://www.AgelessNutritionBook.com/hearty\\_circulation](http://www.AgelessNutritionBook.com/hearty_circulation)

