TECHNICAL DATA SHEET

Cardio Health Formula

Cardio Health Formula is a combination of vitamins, minerals, amino acids, and botanical medicines that nutritionally support and help optimize cardiovascular performance. Cardiovascular disease is the number one cause of death in the U.S. claiming more than a million lives annually. The nutrients in Cardio Health Formula play an essential role in preserving, protecting, and strengthening heart tissue. In addition, they support healthier cholesterol levels, greater energy production, and stabilize blood pressure. ***Cardio Health Formula has been clinically shown to increase cardiac function, heart output, and reduce the risk of vascular disease in patients with previous heart disease conditions.***

INGREDIENTS

Coenzyme Q-10 is a fat-soluble vitamin-like compound present in virtually all cells (75% is found in the mitochondria and the nucleus of the cell) and especially in high concentrations in the heart, liver, kidney, and pancreas. Its primary functions include activity as an antioxidant and free radical scavenger, a membrane stabilizer, and as a cofactor in many metabolic pathways, particularly in the production of adenosine triphosphate (ATP) in oxidative respiration (1). In the treatment of congestive heart failure (CHF), the mechanism is thought to involve prevention of oxidative damage. The effect in the treatment of angina may be due to increased ATP synthesis, reduction of free radicals, or membrane protection (2). People with hypertension, CHF, and periodontal disease, certain muscular diseases and AIDS have lower Coenzyme Q-10 levels (3).

L-Carnitine is naturally found in the body, especially the cardiac and skeletal muscles. L-carnitine plays a key role in cellular energy production. Carnitine is essential in the transport of fatty acids into the mitochondria and used for energy production. It is essential for beta-oxidation of long-chain fatty acids in the mitochondria. To enter the mitochondria, fatty acids must bind to coenzyme A, forming fatty acyl-CoA. Long-chain fatty acyl-CoA molecules are too large to cross the internal mitochondrial membrane and rely on enzymatic transportation that requires L-carnitine. In the mitochondria, fatty acids undergo beta-oxidation to ATP and L-acetyl-carnitine is excreted to begin a new transport cycle (4). A deficiency of carnitine results in reduced energy production and increased risk for heart disease and angina.

Taurine is a conditionally essential amino sulfonic acid that is found in large amounts in the human brain, retina, heart, and platelets (5). Taurine is beneficial in the treatment of CHF. Oral taurine alters intracellular calcium movement, increasing left ventricular function without any adverse changes in arterial pressure in patients with CHF (6). Taurine might also improve heart failure because it seems to lower blood pressure and may normalize excessive sympathetic nervous system activity that often occurs in people with hypertension and CHF (7).

Hawthorne Berry contains the active constituents that include flavanoids, such as vitexin, rutin, quercetin and hyperoside; and oligomeric proanthocyanidins (OPC's) such as epicatechin and procyanidins. Hawthorn berry (Crataegus oxycantha) has hypotensive and antiarrhythmic activity (8). In a clinical study of patients with coronary perfusion disorders, 77% of those who were given Crategus experienced an observable decrease of ischemia reaction to exercise.

Gynostemma Pentaphyllum (Jiaogulan) contains 82 distinct saponins that are referred to as gypenosides. Each of these gypenosides has a unique property that gives it a therapeutic significance. The gypenosides medicinal qualities range from lowering cholesterol, improving oxygen absorption, and increasing cardiac output by increasing stroke volume and not through increasing the heart rate (9).

D-Calcium Pantothenate (Vitamin B5) is required for intermediary metabolism of carbohydrates, proteins, and lipids. It is a precursor of coenzyme A, like pantethine, and other similar molecular strucures of pantothenic acid (B5), which is required in the acetylation reactions in gluconeogenesis; in the release of energy from carbohydrates; in the synthesis and degradation of fatty acids; and in the synthesis of sterols, steroid hormones, porphyrins, acetlycholine, and other compounds (10).
D-calcium pantothenate appears to be essential to normal epithelial function (11).

B6 Pyridoxal 5-Phosphate and Pyridoxine HCl
B6 is required for amino acid metabolism. It is also involved in carbohydrate and lipid metabolism (2). In the body, with the necessary cofactors, pyridoxine is converted to the biologically active form of B6 pyridoxal-5-phosphate. Decreased pyridoxine concentrations are associated with increased plasma levels of C-reactive (CRP). CRP is an indicator of inflammation that is implicated in increased cardiovascular morbidity (12).

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B12 Methylcobalamin
Vitamin B12 is a naturally occurring B complex vitamin that is formed by microorganisms. Cyanocobalamin and hydroxocobalamin are the synthetic forms of B12. Vitamin B12 is required for nucleoprotein and myelin synthesis, cell reproduction, normal nerve cell activity, DNA replication, and normal erythropoiesis. B12 is absorbed via an active transport system in the terminal ileum. This requires the glycoprotein, intrinsic factor, which is produced by the stomach.

Folic Acid
Folic acid is needed for normal DNA synthesis. After folic acid is absorbed, it is reduced to tetrahydrofolate and then enters a methylation cycle (13). In humans, tetrahydrofolate-based coenzymes play a major role in intracellular metabolism. Tetrahydrofolate plays an indirect role in the rate-limiting step of DNA synthesis. Folic acid deficiency disturbs cell cycling, induces cell apoptosis, and increases the rate of cell death (14). Folic acid reduces damage to DNA and prevents replication errors (15).

Magnesium is involved with more than 300 enzyme systems as well playing an essential role in more than 300 cellular reactions (16). Our bodies contain 25 grams (less than one ounce) of magnesium. Magnesium is required for the formation of cyclic AMP (cAMP) and is involved in ion movements across cell membranes. In cell membranes, a decreased concentration of magnesium and increased calcium to magnesium ratio has been associated with hypertension (17).

Potassium is a mineral that plays a role in many body functions including acid-base balance, electrodynamic characteristics of the cell, isotonicity, and various enzymatic reactions (18). Potassium is required for normal blood pressure. Potassium depletion occurs when deficient levels of magnesium are present in cardiac and vascular muscle cells. Without adequate stores of magnesium potassium is not retained.

Chromium is an essential trace element. Low chromium levels are associated with impaired glucose, insulin, and lipid metabolism, and resultant increased cardiovascular risk (19).

This formula is designed to be safely used with Ultra High Formula

Cardio Health Formula

Quantity: 90 capsules
Serving size: 3 capsules
Directions: 1 capsule, 3 times daily with food, or as directed by your healthcare professional.

Each 3 capsules contain:

Vitamin B5 (d-Calcium Pantothenate)	150 mg
Vitamin B6 (as Pyridoxine HCl)	30 mg
Vitamin B6 (as Pyridoxal-5'-Phosphate)	10 mg
Folic Acid	1000 mcg
Vitamin B12 (as methylcobalamin)	400 mcg
Magnesium (as Citrate-Malate)	150 mg
Chromium (as Nicotinate)	200 mcg
L-Taurine	400 mg
L-Carnitine	200 mg
Hawthorne Berries Extract (2.2% Vitexins)	200 mg
Potassium (as Citrate)	150 mg
Co-Enyzme Q10	50 mg
Gynostemma Pentaphyllum Extract 5:1 (as Jiaogulan leaf)	20 mg

Other ingredients: Gelatin capsules

Contains No: wheat, dairy, soy, corn or preservatives.
No fillers, binders, or flowing agents.

Patients: Consult with your healthcare professional for the proper dosage and use of this formula.

For more information about this and other Condition Specific Formulas®, please visit our website at:
www.mpn8.com

MOUNTAIN PEAK NUTRITIONALS
CONDITION SPECIFIC FORMULAS®

Portland, OR 97225

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