

GLUTEN-FREE • VEGETARIAN • NON-GMO

HEART CARE FORMULA

CoQ10 & HOMOCYSTEINE FACTORS

PIONEER Heart Care Formula is clinician-designed to offer outstanding support for cardiovascular health. High quality ingredients feature 60 mg of CoQ10, along with L-carnitine, homocysteine factors, low-flush niacin and more.

Primary coronary artery disease and stroke are the leading causes of death in the industrialized world. As with most chronic degenerative diseases in “developed” countries, the high frequency of cardiovascular disease has paralleled the degenerative quality of our modern lifestyles. Anti-health factors such as poor diet, inactivity, excessive body weight, cigarette smoking and chronic stress all contribute to an elevated risk for the cardiovascular and other chronic diseases that plague contemporary society.

Cardiovascular health requires the heart muscle to be strong and regular in its contractions, sufficiently fed with nutrients from the blood, and capable of sustaining the energy metabolism needed by its own cells. Blood vessels must be supple (easily distensible) with strong walls that are free of blockages. True preventive support for cardiovascular health, therefore, will always be comprehensive, addressing both *heart tissue* health, and *blood vessel* stability, integrity and elasticity.

PIONEER *Heart Care Formula* is a superior quality product, formulated by practicing clinicians for those desiring to achieve and maintain good cardiovascular health. It combines effective amounts of several physiologically relevant nutrients known to support heart and vascular function.

CONSIDER THESE ADVANTAGES:

1. 60 mg of Coenzyme Q10. Widely used in Europe, Japan and the US to treat cardiac disease, CoQ10 is a fat-soluble, vitamin-like essential substance produced in small amounts within the body. CoQ10 participates in energy production within the mitochondria of heart muscle cells and other cells in the body. CoQ10 also serves as an antioxidant in cell membranes, helping to preserve their integrity and function.¹ The body begins to produce less CoQ10 during the third decade of life.

Some of the most researched cardiovascular benefits of CoQ10 include reduced symptoms of congestive heart failure, improvement in overall efficiency of cardiac function, improved heart muscle respiration, reduced need for hyperten-

sive medication, reduced ischemia and protection after heart surgery.^{2,3} Many health professionals recommend 30 to 150 mg of CoQ10 daily with meals as part of a long term preventive approach to cardiovascular health.

CoQ10 can also be valuable for heart patients taking certain cardiovascular prescription drugs that significantly lower existing levels of CoQ10 in the body. These medications include cholesterol-lowering HMG Coenzyme-A reductase inhibitors (statins), certain beta blocker drugs and thiazide diuretics. Some clinicians recommend that patients take additional CoQ10 when using these classes of medicines to counteract their disadvantageous effect.^{4**} (Consult your doctor.)

2. L-Carnitine. Carnitine enables long chain fatty acids to enter the mitochondria for energy production. Because the heart depends on fats for energy, sufficient levels of carnitine are essential for cardiovascular health. Research indicates that patients with congestive heart failure are often deficient in L-carnitine (along with several other nutrients including CoQ10.⁵) L-carnitine supplementation has been shown to benefit the heart by protecting cardiac metabolism and function in many ways, notably increasing coronary blood flow and combatting arrhythmias.⁶

3. Homocysteine Factors. Homocysteine is an intermediate compound made by the body during the conversion of the amino acid *methionine* to *cysteine*. Complete conversion depends on the presence of three B vitamins known as homocysteine factors: B6, B12 and folic acid. In the absence of these factors, homocysteine levels can become elevated, a condition that is associated with increased risk of heart attack, stroke and peripheral vascular disease.^{7,8} Homocysteine is believed to damage the arterial wall by reducing its smoothness and integrity, which predisposes the lining to atherosclerotic deposits. Vitamins B6, B12 and folic acid are well known for their ability to reduce high homocysteine.^{7,8}

4. Niacin. (as inositol hexaniacinate) Niacin has been used for decades as an effective and safe way to lower total and LDL cholesterol, triglycerides and lipoprotein(a) levels. Niacin can also increase levels of “good” HDL cholesterol.⁹ Inositol hexaniacinate is a form of niacin that causes less skin flushing, and is regarded as safer and better tolerated than other forms. *Note: Those desiring to use elevated doses of niacin in any form should consult with their healthcare professional. High doses of niacin are not recommended for those who have liver problems.*

5. Magnesium. A deficiency of magnesium has been clinically associated with a number of cardiovascular conditions, notably arrhythmias, congestive heart disease, cardiac ischemias, sudden cardiac death and some forms of hyperten-

(over →)

sion and stroke. Magnesium plays a crucial role in enzymatic reactions related to heart muscle contractility and metabolism, and helps dilate and relax vascular and arterial smooth muscle.¹⁰ Because prolonged stress has been associated with decreased levels,¹¹ it is thought that supplemental magnesium may also help to counter general stress.

6. Chromium. Research shows that a rise in blood glucose levels can affect the smooth muscle cells within blood vessels. Chronically high blood glucose is often an indicator of increased tissue resistance to insulin uptake. Such insulin resistance can be a contributing factor in vascular constriction, plaque buildup and hypertension. As a key component of Glucose Tolerance Factor, chromium can help reduce insulin resistance and thus may diminish cardiovascular risk in those with a deficiency of this nutrient.¹²

7. Vitamin E. Recognized for its powerful antioxidant ability, vitamin E shows great promise in the prevention and treatment of cardiovascular disease. Its many uses include inhibiting the oxidation of LDL-cholesterol, aiding in the normalization of platelet aggregation and blood coagulation and reducing the risk of coronary heart disease.¹³

8. Black Pepper Extract. Bioperine® is a highly concentrated extract (95-98% piperine) of black pepper. Used as a bioavailability enhancer, black pepper extract has been shown to increase CoQ10 absorption, as well as the absorption of other vitamins, minerals and herbs.¹⁴

9. Micellization. The fat-soluble nutrients *CoQ10* and *vitamin E* are generally well-absorbed. However, some people have difficulty absorbing fats and fat-soluble nutrients, resulting in compromised uptake.¹⁵ To enhance absorption, PIONEER's natural *PMP*TM micellization process creates extremely tiny droplets (micelles) that may pass more readily through the digestive tract lining. The result is more complete absorption than with ordinary dry forms of *CoQ10* and *vitamin E*.

10. True Full-Disclosure Labeling. All ingredients, their forms, and ratios are fully disclosed on the label of every PIONEER product. Read the label!

Serving Size 2 capsules Bottles of 60 capsules	AMOUNT PER SERVING	%DV
Vitamin E (d-alpha-tocopheryl succinate) (PMP TM micellized)	. . .100 IU	.333%
Niacin (inositol hexaniacinate)	. . .250 mg	.2187%
Vitamin B6 (5:1 pyridoxine HCl:pyridoxal 5'-phosphate)	. . .25 mg	.1250%
Vitamin B12 (methylcobalamin)	. . .1000 mcg	.16667%
Folic Acid	. . .1000 mcg	.250%
Magnesium (1:1:1 glycinate:brown rice amino acid chelate:oxide)	. .100 mg	.25%
Chromium (chromium polynicotinate)	. . .300 mcg	.250%
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Coenzyme Q10 (PMP TM micellized)	. . .60 mg	.*
L-Carnitine	. . .500 mg	.*
Lecithin	. . .30 mg	.*
Betaine Hydrochloride	. . .50 mg	.*
Black Pepper Extract † 60:1 Piper nigrum	. . .2 mg	.*
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* Daily Value (DV) not established † BIOPERINE ®		
Other ingredients: vegetarian capsule (cellulose), cellulose, silica, magnesium stearate.		
THIS VEGETARIAN PRODUCT CONTAINS NO gluten, wheat, yeast, corn, added preservatives, colors or flavors, and no toxic levels of heavy metals. May contain traces of soy. NATURAL MANUFACTURING AGENTS ONLY. 12-09		

REFERENCES 1. Langsoen H, Langsoen P, et al. Usefulness of coenzyme Q10 in clinical cardiology: a long term study. *Mol Aspects Med*, 1994; 15 Suppl:165-75; 2. Morisco C, Trimarco B, et al. Effect of coenzyme Q10 therapy in patients with congestive heart failure: a long term multicenter randomized study. *Clin Invest* 1993; Mar;39(3):178-87; 3. Langsoen P, Langsoen AM. Overview of the use of CoQ10 in cardiovascular disease. *Biofactors* 1999;9 (2-4) 315-18; 4. Hendler S, Ed. *Coenzyme Q10 PDR for Nutritional Supplements*, 1st Ed., 2001, pg 104; 5. Sole MJ, Jeejeebhoy KN. Conditioned nutritional requirements and the pathogenesis and treatment of myocardial failure. *Curr Opin Clin Nutr Metab Care* 2000 Nov;3(6):417-24; 6. Lango R, Smolenski RT, et al. Influence of L-carnitine and its derivatives on myocardial metabolism and function in ischemic heart disease and during cardiopulmonary bypass. *Cardiovasc Res* 2001 Jul;51(1):21-9; 7. Spence JD, et al. Vitamin intervention for stroke prevention (VISP) trial: rationale and design. *Neuroepidemiology* 2001 Feb;20(1):16-25; 8. Witte KK, et al. Chronic heart failure and micronutrients. *J Am Col Cardiol* 2001 Jun 1;37(7):1765-74; 9. Enein AMA, et al. The role of nicotinic acid and inositol hexaniacinate as anticholesterolemic and antilipemic agents. *Nutr Reports Int* 1983; 28:899-911; 10. Tolsa JF, et al. Developmental change in magnesium sulfate-induced relaxation of rabbit pulmonary arteries. *J Appl Physiol* 1999; 11. Johnson S. The multifaceted and widespread pathology of magnesium deficiency. *Med Hypotheses* 2001; 12. McCarty MF. Up-regulation of intracellular signalling pathways may play a central pathologic role in hypertension, atherogenesis, insulin resistance, and cancer promotion --the 'PKC Syndrome'. *Med Hypotheses* 1996 Mar;46(3):191-221; 13. Pryor WA. Vitamin E and heart disease: basic science to clinical intervention trials. *Free Rad Biol Med* 2000;28:141-64; 14. Badmaev V, Majeed M, et al. Piperine derived from black pepper increases the plasma levels of coenzyme Q10 following oral supplementation. *J Nutr. Biochem* 2000 11:109-113; 15. Yokota T, et al. Vitamin E deficiency in acquired fat malabsorption. *J Neurol* 1990 Apr; 237:103-6

****CAUTION:** If you have a medical condition or are taking medication, consult your healthcare professional before using this product. • Not for use by pregnant or breastfeeding women. • Keep out of the reach of children.

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