

# TOTAL HEART

**Ingredients:** Each Tablet Supplies: Crataegus Oxycantha Extract (hawthorne) (berry) 50mg, Heart 100mg, Spleen 40mg, Co-Enzyme Q-10 2mg, Vitamin C (sago palm) 100mg, Vitamin E (as succinate) 50 i.u, Magnesium (as Chelate) 20 mg., Selenium (as Chelate) 50 mcg, Potassium (as Chelate) 20 mg., L-Taurine 50 mg., L-Arginine 50 mg., L-Carnitine 20mg.

**Supportive Function:** Synergistic heart support is boosted with other ingredients, including the electron-carrier nutrient Co-enzyme Q-10, a vitamin-like molecule best known for its supporting actions on energy, circulation, and the heart. Supports heart health, and the health of the vessels.

**When is Total Heart helpful?** Support for heart health and all cardiovascular functions; such as blood pressure, workload capacity, etc.

**Clinical Applications/Research: Vitamin C** has been shown to reverse arteriosclerosis in humans (Rath & Pauling, *Proceed of N Academy of Sci of the USA*, Aug 1990; 87 (16): 125-134). Vitamin C is essential to maintain and repair the integrity of arteries, may help prevent the oxidation of cholesterol by protecting against free radicals, and has been shown to boost the immune system (Cameron & Pauling, 1982; Cordoba, 1982; Leibovitz & Steigal, 1978; Pauling, 1970).

**Vitamin E:** In European population studies, those with low serum levels of vitamin E were shown to be at greater risk from heart disease than those with high cholesterol levels and high blood pressure (Gey et al, "Inverse Correlation between Plasma Vitamin E and Mortality from Ischemic Heart Disease in cross-cultural Epidemiology," *Am J of Clin Nutri* Jan 1991; 53 (1): 326S-334S). Vitamin E supplements may inhibit platelet formation, prevent blood clots, and help repair the lining of blood vessel cells (Hennig et al, "Protective Effects of Vitamin E in Age-Related Epithelial Cell Injury," *International J of Vitamin & Nutri Research* 1989; (59): 273-279). In one Harvard Medical School Study of 87,245 female nurses, those who took 100 i.u. of vitamin E for more than 2 years had a 46% lower risk of developing heart disease (Stampfer et al, "Vitamin E and Heart Disease Incidence in the Nurses Study," Am Heart Assoc Annual Meeting, Nov 18, 1992). Another Harvard study of 39,910 male health professionals, who took 100 i.u. of vitamin E for an undisclosed period of time, had a 37% lower risk of heart disease (Rimm et al, "Vitamin E and Heart Disease Incidence in the Health Professionals Study," Am Heart Assoc Annual Meeting, Ibid.).

**Magnesium:** People who die suddenly from heart attacks have been found to have lower levels of magnesium and potassium than controls (Wood et al, *Lancet* Jul 1984; 2 (8395): 117-21). Magnesium may help dilate arteries and ease the heart's pumping of blood, which may help prevent irregular heartbeats. It can help raise HDL cholesterol, lower total cholesterol, inhibit platelet aggregation, and help prevent calcium deposits in blood vessels (Seelig & Heggveit, *Am J Clin Nutri* 1974; 27: 59-79).

**Selenium** is a co-factor in an antioxidant enzyme, glutathione peroxidase, and is reported to strengthen the immune system. Low serum selenium has been associated with higher incidence of cardiovascular disease (Salonen et al, *Brit Med J* Mar 1991; 302 (6779): 756-760).

Supplementation of selenium has been shown to reduce platelet aggregation (Stead et al, *Am J Med Sci* Dec 1985; 290 (6): 228-233).

**Potassium:** heart muscle deficiency in potassium has been associated with irregular heartbeats, EKG abnormalities, and decreased tolerance to cardiac medications. Potassium is reported to reduce a patient's reliance on blood pressure and diuretic drugs (*NE Ctr for Env. Med. Health Letter*, Fall 1992).

**Hawthorne Berry** extract may help increase blood flow to the heart by dilating blood vessels, increasing the strength of heart contractions, and relieving spasms of arterial walls. The extract has been reported to reduce the production of the blood vessel constricting substance angiotensin II (Weiss, *Herbal Medicine*, 1988).

**Heart:** heart tissue supplies whole nutritional support to strengthen the heart, including co-enzyme Q-10. Co-enzyme Q-10 concentration in heart and heart tissue is 10 greater than in brain or colon tissue.

**Spleen** tissue supplies nutritional support factors to help enhance the spleen's role in immune functions.

**Co-Enzyme Q-10** has been shown to have antioxidant properties protecting against oxidized cholesterol. It has been demonstrated to scavenge free-radicals produced by lipid peroxidation, stabilize cellular membranes, and prevent depletion of metabolites necessary for resynthesis of ATP in mitochondria (Beyer, 1985). It helps strengthen the heart muscle and the cardiovascular system in many heart patients. (Dolkers et al, 1985). Co-enzyme Q-10 may protect against atherosclerosis (Hanaki et al, *New Eng J of Med* Sept 1991; 325 (11): 814-5).

**L-Carnitine** deficiency has been reported to be a common feature of heart disease. Supplemental L-Carnitine helps enhance cardiac function in human and animal studies. It has been successfully used to treat heart disease, cardiac arrhythmia, and angina pectoris. It has also been shown to lower triglyceride levels and increase beneficial HDL cholesterol levels in humans (Leibovitz, *Carnitine, The Vitamin BT Phenomenon*, NY, Dell, 1984). L-Carnitine has been reported to support both energy production and cardiovascular health. It has been reported successful in combating fatigue and increasing stamina by utilizing the body's ability to use fat for energy. Deficiencies can cause symptoms of muscle weakness, severe confusion, and angina (Bazzato, 1981; Dipalma, 1988).

**L-Taurine** is reported to help the heart pump and regulate heartbeat. It is a by-product of homocysteine metabolism, when homocysteine is broken down correctly. Supplemental taurine has been reported to help those with congestive heart failure and prevent digitalis-induced arrhythmia. Taurine spares the loss of potassium from heart muscle and is thought to regulate the osmotic flow of calcium and potassium in heart muscle.

**L-Arginine** may enhance immune function. Arginine is a precursor of nitric oxide, which may help dilate blood vessels and increase the flow of oxygen to the heart. In rabbit studies, arginine has been shown to reduce hypercholesterolaemia and atherosclerosis (Chaitow, 1988: 44-48).

**Testimonials/Nutrient Tidbits: Tidbit:** For those who may be sensitive to Hawthorne berries, Total Heart II does not contain that herb. The dimethylglycine and folic acid in Total Heart II will additionally support the homocysteine pathway.

**Suggested Dosage:** 1 tablet 3 times daily or as directed

**Size:** 90 tablets

**Vegetarian:** No

**Contraindications:** Hawthorne berries are used with caution concomitantly with ACE inhibitors (the berries also have some ability to inhibit ACE, a vasoconstrictor.)