

# CANINE CARDIAC SUPPORT

**Canine Cardiac Support** is a nutritional supplement formulated with ingredients known as functional foods. These are foods that have been shown to benefit various organs and tissues in the body. **Canine Cardiac Support** is formulated to provide support for the myriad of tissues involved in cardiovascular health: myocardium, nerve and conductive tissues, liver, kidneys, adrenal glands, vascular endothelium, inflammatory mediators, blood quality, and blood flow dynamics. These functional food ingredients enhance cardiac (and other tissue) ability to respond to metabolic demands while promoting the heart's ability to rebuild and regenerate.

## Indications for use:

- General cardiac support
- Patients with reduced cardiac function or with increased cardiac demand
- Patients with conditions that increase cardiac workload
- Patients that are undergoing cardiac pharmaceutical therapy
- Clinical signs associated with cardiac dysfunction including reduced activity, coughing, dyspnea, and ascites
- Abnormal cardiac auscultation, ECG, thoracic radiographs, and echocardiography

## Systems Supported:

- **Heart** – primary support for the heart mediated by heart PMG, L-carnitine, *Cratagegus oxyacantha*, buckwheat leaf juice and seed, pea vine juice, ribonucleic acid, pancreas Cytosol, inositol, high selenium yeast, calcium lactate, rice bran, and nutritional yeast
- **Vasculature** – primary support for the vascular endothelium mediated by buckwheat leaf juice and seed, and orchic extract
- **Autonomic nervous system and nerves** – secondary support for the heart mediated by alfalfa juice, calcium lactate, orchic extract, porcine brain, nutritional yeast, and rice bran
- **Liver** – tertiary support of the heart mediated by support of the kidney by desiccated kidney, carrot, flaxseed oil, and buckwheat leaf and seed

## Whole Food Ingredient Sources:

- **Tissue desiccates** – liver, kidney, and spleen
- **Vitamin A complex** – liver and kidney
- **Vitamin B complex** – nutritional yeast, oat flour, defatted wheat germ, and rice bran
- **Vitamin C complex** – mushroom
- **Vitamin E complex** – pea vine juice and wheat germ oil
- **Bioflavonoids** – buckwheat leaf juice and seed
- **Omega-3 fatty acids** – flaxseed oil
- **Minerals** – alfalfa juice and high selenium yeast
- **Antioxidants** – spleen, liver, kidney, pea vine juice, and wheat germ oil
- **Botanical phytonutrients** – *Cratagegus oxyacantha*, and *Tillandsia usneoides*
- **Protomorphogens** – heart and veal bone

## **Individual Ingredients:**

**L-carnitine** – important amino acid, stimulates breakdown of fats in mitochondria, shown to beneficially influence the bioenergetics of cardiac function (Ettinger 2000).

**Bovine liver** – deliver vital substances to liver tissues, can be critical in the process of replenishing depleted cellular supplies of key factors.

**Bovine/ovine spleen** – contain high levels of superoxide dismutase, an antioxidant which has been shown to reduce the damaging effects of hypoxia by acting as a free radical scavenger.

**Rice bran** – excellent source of lipids, proteins, vitamin B complex, inositol and choline. important for cell energy reactions, antioxidant, vitamin E

**Bovine Orchic Extract** – promotes penetration and delivery of nutrients

**Bovine Pancreas Cytosol™ Extract** – ensures support of healthy blood sugar levels

**Beet root** – contains betaine (important methyl donor for detoxification, digestive support), high levels of folic acid.

**Wheat germ** – source of vitamin E complex, vitamin B complex, trace minerals, antioxidant

**Ribonucleic Acid (RNA)** – nucleic acid from cell cytoplasm and nucleolus, opens capillary beds for increased circulation, supports nuclear chromatin synthesis

**Wheat germ oil** – antioxidant, rich source of whole vitamin E complex, cell membrane health

**Flaxseed oil** – rich source of omega-3 fatty acids, important for immune, skin and cardiovascular health

**Cytosol extracts** – derived from cell cytoplasm, contain enzymes, hormone precursors and synergistic cofactors produced by the cell. Cytosol extracts serve as building blocks for cellular metabolic end products to be utilized by the cell.

**Veal bone PMG™ Extract** – source of structural determinants from whole veal bone.

**Alfalfa juice** – source of bioavailable protein, vitamin A, C, E, K complexes, carotenoids, chlorophyll, calcium, potassium, phosphorus, isoflavonoids and triterpene saponoids. Each of these factors provides direct and indirect benefits for the heart.

**High selenium yeast** – a rich source of selenium, an essential trace element for cellular metabolism, immune function, reproduction, enzyme activity, and antioxidant activity.

**Mushroom** – one of the richest sources of vitamin C complex, antioxidant

**Calcium lactate** – bioavailable form of calcium

**Crataegus osyancantha** – known as Hawthorn, a well-known heart and vascular tonic

**Nutritional yeast** – provides a range of the whole vitamin B complexes

**Carrot powder** – source of whole vitamin A complex, trace minerals

**Pea vine juice** – source of whole vitamin E complex. Important antioxidant

***Tilandsia usneoides*** – found to contain significant amounts of various minerals, chlorophyll, and most of the B vitamins. Excellent for tissue healing.

**Chlorophyll extract** – a fat soluble extract from plant material. Rich source of vitamin K and stimulants for tissue healing, maintenance and regeneration. Regarded as a natural GI tract deodorant and cleanser.

**Inositol** – a component of the B vitamin complex, acts as an important catalyst in energy reactions that involve metabolism of some fats and carbohydrates.

**Choline bitartrate** – a vitamin of the B complex group, essential to liver function.

**Oat flour** – Vitamin A source, supports capillary integrity.

**Porcine brain** – supports nerve function.