

OMNICARDIO – HOW IT WORKS



TAURINE

Taurine is an amino acid that is essential for cardiac health. It supports cardiac contractility to help maintain efficient myocardial contractions. It also aids in the excretion of sodium to support natural diuresis.



Cats require a dietary source of taurine (found in meat or fish), but dogs can synthesise taurine themselves provided their diet contains adequate amounts of the amino acids methionine and cysteine. However, recent research into heart disease in dogs suggests that breeds with genetic heart problems may have difficulty maintaining the right balance of taurine in the body.

American cocker spaniels, golden retrievers and Newfoundlands are breeds that all suffer from Dilated Cardiomyopathy (DCM), but that also appear to have a predisposition to taurine deficiency. Diets containing high fibre, low protein or a lamb and rice diet can also lead to taurine deficiency.

For dogs that are already suffering from heart disease, especially DCM, a taurine supplement may be recommended. Cats with insufficient taurine in their diets may also develop DCM and require supplementation.

L-CARNITINE

Carnitine is an enzyme co-factor produced in the liver from the amino acids methionine and lysine. In normal, healthy dogs the liver should produce all the carnitine a dog requires but carnitine deficiency has been linked to dogs with DCM.

The heart preferentially uses long chain fatty acids as energy. Carnitine helps to transport these into the mitochondria, supporting cellular respiration and energy performance of myocardial cells. Studies show that supplementing the diet with L-carnitine (or other active forms of the substance) can help to improve blood flow.



ANTIOXIDANTS

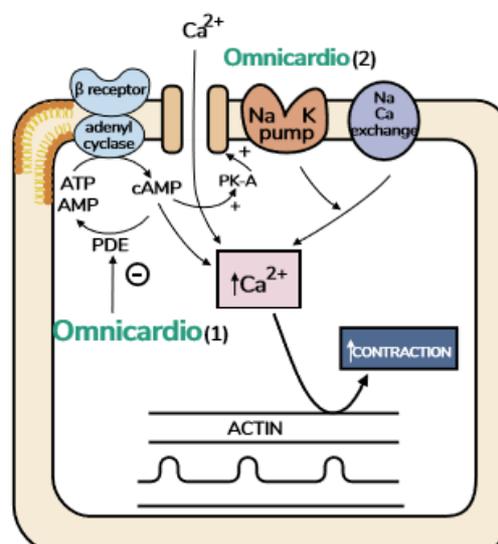
During normal cell metabolism (oxidation) the body produces unstable molecules called free radicals. Free radicals are responsible for normal aging but if they are able to increase in number they can cause excess damage. Antioxidants including Vitamin E help to neutralise free radicals. Studies have shown that dogs with either DCM or Mitral Valve Disease (MVD) have an imbalance between free radical production and the amount of antioxidant protection available.

CRATAEGUS



Crataegus is derived from the hawthorn plant and contains flavonoids. It has been shown to inhibit PDE-3 and the sodium-potassium pump, supporting normal calcium levels in the myocytes. This in turn maintains efficient cardiac contractility, supports normal cardiac rhythm, aids coronary circulation and maintains relaxed peripheral vascular system.

In human epidemiological studies increased dietary flavonoid intake has been shown to be related to reduction in coronary-related mortality. In vitro studies on cultured myocytes demonstrated negative chronotropic and antiarrhythmic effects of crude hawthorn extracts.



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