

Omnocardio™

Cardiac support for cats and dogs



OMNICARDIO® is the product to use in most chronic cardiac diseases as a support to cardiac function:

- Because it enhances myocardial contractibility
- Because it improves coronary function
- Because it decreases systemic blood pressure
- Because it corrects specific myocardial nutritional deficits

Omnocardio® composition and specific activity?

Crataegus



Crataegus is rich in cardio-active bioflavonoid (vitexin, rutin, quercetin, hyperosides, epicatequin e procianidine) that have the following activities:

- 1. Positive inotropic effect**, increases myocardial contractibility activity from 16 to 31% due to the increase of cellular sensibility and permeability to Calcium.
- 2. Increase of coronary flow** from 47 to 89%, enhancing the myocardial oxygenation, opposing the effects of the myocardial ischemia phenomenon, decreasing myocardial fibrosis.
- 3. Anti-arrhythmic and anti-tachycardial effect**, increasing intramyocytic AMPc, blocking the Potassium channels. Increases refractory time to depolarization in the myocardial cell's from 3 to 7 times.
- 4. Systemic anti-hypertension effect**, decreases blood pressure by a decrease of 10 to 20% in peripheric vascular resistance. Effects start 1 hour after administration.

The required effort for a systemic perfusion of the heart is reduced and avoids the negative impact of hypertension at renal level.

L-Carnitine



L-Carnitine increases the cellular respiration and its energy income by 2 mechanisms:

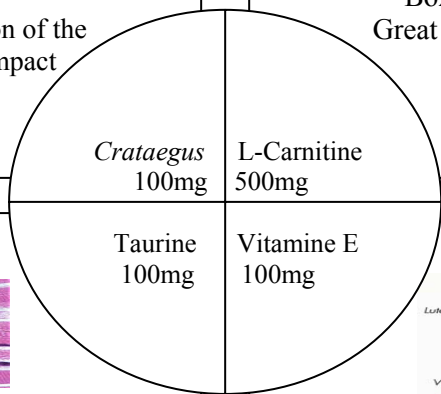
- Increases ATP production (energy) improving muscular contraction by the easier entrance of fatty acids into mitochondria.
- Releases CoA, essential to energetic metabolism due to excretion of short and medium chain fatty acids from mitochondria into cytoplasm.

In spite of being an amino-acid, only 25% is synthesised in the liver and kidneys, being the remaining 75% obtained from diet.

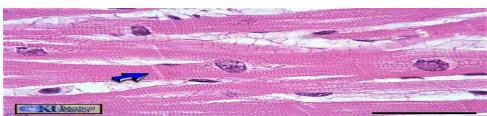
In cat's, the diet dependency is of 100%, since they don't synthesise L-Carnitine.

Aging is one more factor that dictates the decrease in muscular L-Carnitine levels.

Supplement is indicated for cardiomyopathy of Boxer, Doberman, Teckel, Dalmatian, Great Danes and other large size breeds .



Taurine



Taurine has the following activities:

- 1. Positive inotropic effect** upon the myocytes, providing an optimized cardiac contractibility.
- 2. Mild diuretic effect**, balancing the negative effects of Angiotensine II, promoting urine excretion of Sodium and increasing urine production.
- 3. Anti-oxidant effect**, neutralizing lipid peroxyde, decreasing the oxydative damage on the cardiac cells.

Cats are 100% dependent on diet as a Taurine source. Dogs, generally, are dependent of supplement in metionine and cistine (Taurine starting aa), but even fed with normal doses of these aa some can create a deficit in Taurine.

Indicated in cardiomyopathy of cats and dogs, especially in Cocker Spaniel, Waterdog and Doberman.

Vitamine E



Vit. E on top of being **essential to all muscle cells functions**, including the myocytes, it is one of the most effective **natural anti-oxidant**, contributing to oxidative free-radical neutralization. Oxidative free-radicals are extra damaging factors in most cardiac diseases.

Animal's with cardiac insufficiency produce more oxidants and have lower levels of Vit. E available (Freeman & al, 1999).

The oxidative stress is involved during the development of many cardiac diseases.

Omnocardio indications

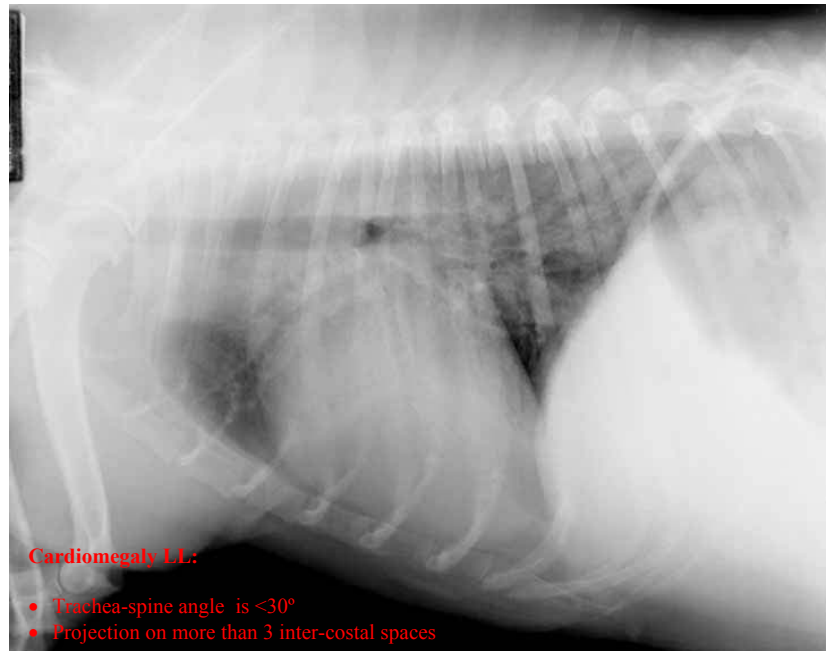
1. Cardiomyopathy: Typical in large dogs, starting at 5 years old, but may also be present in other breeds. Cardiomyopathy represents around 20% of all cardiac diseases.

Deficiencies in L-Carnitine and Taurine are difficult to diagnose by laboratorial or other means, therefore all animals should be supplemented for at least 3 months and then checked for their clinical response.

2. Cardiac valve disease: Typical in small dogs, from the age of 6 years, but may also be present in other races. Cardiac valve diseases represent around 70% of all cardiac diseases.

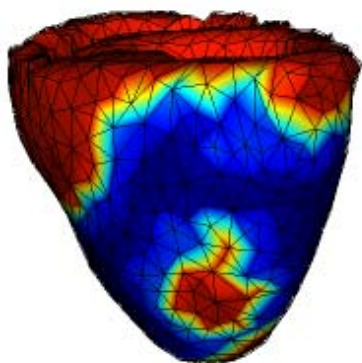
The characteristics of myocardial support and blood pressure balance, turn Omnicardio into an important element to include in cardiac valvular disease treatments.

3. Prevention: All animals with protein restriction, due hypoproteic diets indicated for renal or hepatic pathologies, need Taurine supplementation, as well as animals (mainly cats) with fed on human left-overs. The metonine and cistine supplements on its own do not prevent a decrease on Taurine concentration. This decrease may lead to cardiomyopathy in cats and dogs.



Advanced cardiomegaly compatible with clinical valve disease or with clinical cardiomyopathy. Evident Lung oedema (easier to see if radiography is taken while inhaling) Gas in the stomach, frequently the case in cardiac insufficiency cases.

Which cases will respond to L-Carnitine and Taurine?



Even sophisticated methods of diagnosis, as this computerized image of electromechanical ventricular stimulation, or diverse echocardiography and ECG techniques won't be able to determine whether an animal will respond or not to a therapy with L-Carnitine or Taurine. Only a cardiac biopsy, a complex and expensive procedure, may determine the tissue levels on these amino acids.

Animals that respond have a better quality of life and lifespan than others. Therefore all animals who suffer from cardiac disease should be treated with L-carnitine and Taurine.

Omnocardio contains not only L-Carnitine and Taurine, but also Crataegus and Vit.E, this is why it is a constant aid in recovering and supporting the cardiac condition.

Results of Omnicardio

In cardiac patients Omnicardio improves quality and lifespan as enhancing the cardiac therapy efficacy.

In cases with cardiomyopathy with deficiency in L-Carnitine or Taurine it may save patients life and in these cases is the fundamental therapeutic component. L-Carnitine and Taurine can be the only causal treatments in veterinary cardiology.

Results are evident by the decrease of symptoms, by better tolerance to exercise, by normalization of blood pressure and, sometimes, by a decrease on radiological symptoms.

Omnicardio administration

Dogs: ½ tab/ 10kg/ 12h

Cats: ¼ tab/ 5kg/ 12h

It is recommended to use a continued therapy without gaps for the rest of the patient's life.

On the day after respiratory symptoms disappear, you may try to withdraw the diuretic.

In cardiomyopathies and after 1 month, if the blood pressure is normalized and symptoms stabilize, having the animal a normal tolerance to exercise, you may try to withdraw the ACEI (Angiotensin II Conversion Enzyme Inhibitor).

Omnicardio precautions

As a natural product Omnicardio is very well tolerated. Its continuous use at high dosages may potentiate effects of digitalics (ex: Digoxine).

Its administration combined with diuretics and ACEIs is well tolerated. It is recommended to continuously monitor blood pressure levels for possible adjustments.

Omnicardio's main benefits

- Omnicardio's broad effects make it always an added value for treating most cardiac diseases.
- For animals responding to L-Carnitine or to Taurine Omnicardio may be essential to save their lives.
- Omnicardio is natural, palatable by most animals, very well tolerated and compatible with all drugs usually used in cardiology.



Packaging: box with 60 tablets in blisters

Bibliography:

1. Crataegi folium cum flore – ESCOP, 1999
2. Loew D., Albrecht M., Podzuweit H. Efficacy and tolerability of a Hawthorn preparation in patients with heart failure stage I and II according to NYHA – a surveillance study. *Phytomedicine* 1996;3(Suppl 1):92.
3. Schuessler M., Hoelzl J., Fricke U. Myocardial effects of flavonoids from Crataegus species. *Arzneim-Forsch/ Drug Res* 1995; 45:842-5
4. Gabard B, Trunzler G. Zur Pharmakologie von Crataegus. In: Rietbrock N., Schnieders B., Schuster J., editors. *Wandlungen in der Therapie der Herzinsuffizienz*. Braunschweig: Friedr. Vieweg & Sohn, 1983:43-53
5. Mark D. Kittleson, Richard D.Kienkle. *Small Animal Cardiovascular Medicine* 1998. Mosby