



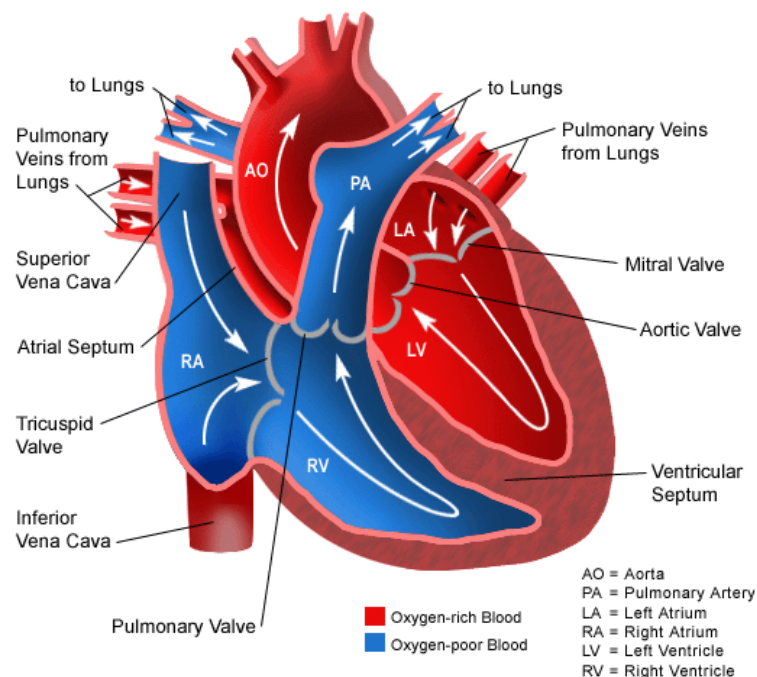
Dilated Cardiomyopathy (DCM)

BRIEFLY, HOW DOES THE HEART WORK?

The heart has four chambers. The upper chambers are called atria. One chamber is called an atrium, and the lower chambers are called ventricles. In addition to the upper and lower chambers, the heart is also considered to have a right and left side.

Blood flows from the body into the right atrium. It is stored there briefly and then pumped into the right ventricle. The right ventricle pumps blood into the lungs, where it receives oxygen. It flows from the lungs into the left atrium; it is held here briefly before going into the left ventricle. The left ventricle contains the largest muscle of the heart so the blood can be pumped out to all parts of the body.

Movement of blood results from electrical impulses that are transmitted from the brain to the heart. The impulses not only direct the heart to beat but also to maintain a steady, regular rhythm.

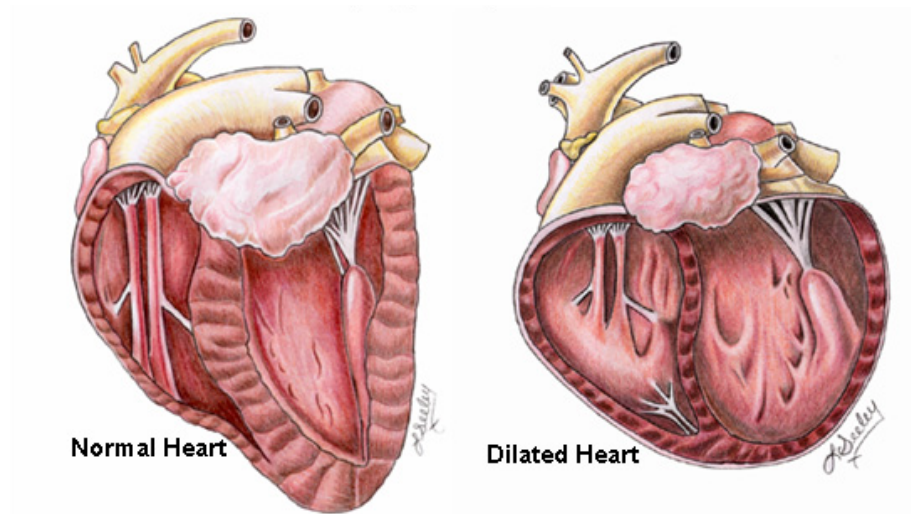




WHAT IS DILATED CARDIOMYOPATHY?

Dilated cardiomyopathy means that the heart muscle becomes unable to pump properly.

The pressure of the blood inside the heart then allows this weakened heart muscle to stretch, resulting in a much larger left ventricular chamber. Therefore, the two characteristics of dilated cardiomyopathy are a heart wall that does not contract or pump normally and a chamber that is much larger than normal.



HOW COMMON IS DILATED CARDIOMYOPATHY?

Dilated cardiomyopathy is not the most common cause of heart failure in animals in general. However, this is the most common cause of heart failure in large breeds of dogs. Small breeds are only occasionally affected. The most commonly affected breeds are Boxers, Dobermans and Great Danes. Occasionally, medium sized breeds, notably Cocker Spaniels and English Springer spaniels, and German Shepherds are also affected.





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ARE THERE ANY SIGNS OF HEART FAILURE WHICH WOULD BE NOTICEABLE TO ME?

When the heart is not pumping properly, blood backs up into the vessels of the lungs. Increased pressure within the vessels results in small amounts of fluid leaking out of the capillaries and eventually into the air passageways. This fluid collection in the lungs produces an increased breathing rate, the most obvious sign of heart failure. A normal dogs sleeping breathing rate is usually <30 breaths/min, so an increase above this may indicate heart failure (see sleeping respiratory rate monitoring sheet). Dogs in heart failure also tire very easily from minimal exercise.

Congestive heart failure begins when the heart is not able to pump blood with adequate oxygen to the tissues. Without adequate oxygen, the body's cells become desperate and trigger a series of responses. Various hormones are released by several organs in an attempt to correct the problem. These hormones conserve fluid in an effort to increase blood volume and the output of oxygenated blood by the heart.

For a variable period, these compensatory responses help the situation. However, increased fluid retention eventually becomes harmful. More and more fluid leaks out of the capillaries, causing an increased breathing rate and reduced stamina. Fluid may collect in the abdominal cavity and body tissues. Fluid in the lungs is called pulmonary oedema, fluid below the skin is called peripheral or limb oedema, and fluid in the abdomen is called ascites (dropsy). Congestive heart failure is common cause of these signs.

MY PET SEEMED TO GET VERY ILL JUST IN THE LAST DAY OR TWO. HOW CAN THIS HAPPEN?

Dilated cardiomyopathy may have a very sudden onset. Some animals go into severe heart failure in what appears to be a matter of hours. Rapid, heavy breathing, a blue tongue, excessive drooling, or collapse may be the first signs.





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HOW IS DILATED CARDIOMYOPATHY DIAGNOSED?

The best way to diagnose dilated cardiomyopathy is to perform an echocardiogram (heart ultrasound). This gives the most accurate determination of the size of each heart chamber and thickness of heart walls. Occasionally a chest xray and ECG (electrocardiogram) may be recommended. These give us the best look at the lungs and an assessment of the electrical activity of the heart.

The combination of all of these tests gives us our best evaluation of the animal's heart function, however if cost considerations prohibit us performing all of them, two or three will provide much valuable information.

IS THERE A TREATMENT FOR HEART FAILURE CAUSED BY DILATED CARDIOMYOPATHY?

If your pet has a sudden onset of heart failure, rapid administration of the proper medications is essential to survival.

There are several drugs that can help to relieve clinical signs of dilated cardiomyopathy. The cardiologist may prescribe diuretics (frusemide) to help reabsorb fluid from the lungs. Other medications that may improve the ability of the heart to contract (pimobendin) may also be recommended. Some patients will need to have fluid physically removed from the abdomen or chest cavity.

HOW MUCH LONGER WILL MY PET LIVE?

There are many factors that must be considered before this question can be answered. The results of the tests are important, and the response that occurs within the first few days is another indicator.

If response does not occur within a few hours to days, the prognosis is not good. However, most animals that stabilize quickly will live for a period of a few months to many months, but the long-term prognosis is not good. It can be difficult to generate an accurate estimate for life-expectancy when an animal has heart disease because many variables impact on survival, not least of which is the animal's activity levels.

