

UNDERSTANDING HEART DISEASE



WHAT IS DILATED CARDIOMYOPATHY?

Dilated cardiomyopathy (DCM) is the second most common type of heart disease in dogs, typically affecting medium-large breeds such as Dobermans, Great Danes, Cocker and Springer Spaniels, Boxers, Irish Setters, German Shepherds, St Bernards, Irish Wolfhounds, Labradors and Golden Retrievers.

In DCM, the heart muscle gradually becomes weakened and floppy. The heart enlarges and stretches and becomes very inefficient at pumping blood around the body. Dogs with DCM can often live with the problem for months or years with no obvious signs of ill health, as the body makes adjustments to cope with the changes.

However, over time, weak heart muscles cause the heart's function to deteriorate. This stage, known as congestive heart failure, is when the heart is no longer able to pump sufficient blood around the body. The dog becomes unwell and their quality of life is affected.

It is really important to identify when the heart begins to fail, as intervening as quickly as possible helps to support the heart and improve the dog's quality and length of life.

HOW IS DILATED CARDIOMYOPATHY DIAGNOSED?

There are two phases to DCM; firstly a long “silent” phase where the heart has the disease and is slowly deteriorating, but where there are no outward signs of a problem. The second phase is a shorter “overt” phase where the heart can no longer cope and starts to fail.

The shorter phase is easier to identify as dogs show some or all of the following signs:

- Coughing
- Weakness
- Breathlessness
- Breathing harder and faster
- Weight loss
- Collapse
- Poor appetite

If you notice any of these signs in your dog then you should take them to your vet. Your vet will examine your dog and perform some additional tests. These tests may include blood tests, an x-ray or ultrasound of their heart or an electrocardiogram (ECG). If your vet diagnoses heart failure they will recommend that your dog starts treatment.

It is more difficult to identify dogs in the longer “silent” phase of the disease as they show no outward signs at this stage of the disease. Dogs in the silent phase of DCM appear completely happy and healthy and will walk in and out of a veterinary practice for their routine vaccinations, without anyone knowing that their heart is diseased. Vets can only diagnose dogs in this phase if they perform specific screening tests to assess the heart.

SCREENING TESTS FOR DILATED CARDIOMYOPATHY

There are a number of possible tests that a vet can perform to find out whether a dog's heart has a problem. A simplified screening programme has been put together for the dogs that are more at risk of having DCM. These dogs are those that are over 3 years old and from the following breeds:

- Doberman Pincher
- Great Dane
- Irish Wolfhound
- Boxer
- Newfoundland
- German Shepherd Dog
- St Bernard

The screening programme involves performing a simple blood test to check the levels of a substance called pro-BNP. Pro-BNP is a substance that is released into the blood stream when the heart muscle stretches excessively, such as in dogs with DCM. High levels of this substance in the blood are a good indicator that a dog is likely to have DCM.

If a dog has a high pro-BNP level then the final step is an ultrasound examination of the heart. This is a painless procedure where an ultrasound machine is used to look at the heart and see how well it is functioning. An ultrasound examination will show whether the heart is stretching and enlarging, confirming the diagnosis of silent DCM.

WHAT DOES MY DOG'S PRO-BNP LEVEL MEAN?

Normal pro-BNP

If your dog is one of the high risk breeds for DCM and has a normal pro-BNP level there is still a possibility of them developing DCM with time. It is recommended that your vet checks your dog's heart each year and if you see any signs listed previously that you are concerned about then you should get your dog's heart checked by your vet. You can also monitor your dog's breathing rate when they are resting at home, this is a very good way of detecting whether your dog's heart is having a problem. (See: *What can I do to monitor my dog's heart at home?*)

Abnormal pro-BNP

If your dog is one of the high risk breeds for DCM and has an abnormal pro-BNP level then it means that there is a high probability that they have DCM. If there are not any signs that their heart is having a problem (e.g. coughing, breathlessness, collapse etc.) then it is likely they are in the silent phase of the disease. It is therefore important that your dog's heart is checked with an ultrasound examination. This will determine for certain whether your dog has DCM. If your dog's ultrasound test is normal there is still the possibility of them developing DCM with time. The same advice would apply as described above for dogs with normal pro-BNP results in terms of regular check-ups at the vets and home monitoring of their resting respiratory rate. (See: *What can I do to monitor my dog's heart at home?*).

WHAT IF MY DOG HAS DCM?

If your dog is diagnosed as having DCM, there is a lot you can do to help. Some dogs will benefit from a medication in the silent phase to prolong the time before their heart begins to fail. Your vet will discuss with you whether this is an option for your dog.

If your dog is in the silent phase of the disease it is very important that they are closely monitored both at home, by you, and also regularly at your vets. This is to ensure that when their heart starts to deteriorate it is detected and treated as early as possible.



WHAT CAN I DO TO MONITOR MY DOG'S HEART AT HOME?

Measuring your dog's breathing rate when they are calm and resting at home is a really important tool for checking how their heart is doing. When your dog is calm and resting, perhaps lying on the floor at home one evening, count the number of breaths they take in a minute. This is known as their resting respiratory rate (RRR). A normal RRR is less than 40 breaths per minute. If your dog has a RRR above this or you notice that their RRR is increasing over time (e.g. each week it goes up slightly) then this is a very early sign that your dog's heart may be having a problem and should be checked by your vet.

For more information on how to measure your dog's resting respiratory rate search for "Heart2Heart" in the iTunes and android stores to download the free app to your phone.



WHERE CAN I GET MORE INFORMATION?

For more information on Dilated
Cardiomyopathy, pro-BNP blood testing
and measuring resting respiratory rate
please speak to your vet.



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