Heart disease in large breed dogs.

The most common heart disease we see in medium & large breed dogs is **Dilated Cardiomyopathy** (**DCM**). It is particularly common in breeds such as Doberman, Great Danes, Irish Wolfhounds and Cocker Spaniels. It is typically seen in middle-aged to older dogs, but can affect younger dogs.

In dogs with DCM the heart muscle becomes weak and floppy, meaning it is not able to contract properly to pump blood around the body. Over time the heart becomes stretched and enlarges. Initially the body can adapt and cope with the reduced heart function, but eventually signs of heart failure develop. Fluid starts to build up in the lungs (and sometimes the belly), affecting breathing and not enough blood is pumped to vital organs.

We do not know what causes DCM to develop. Rarely it can be due to a lack of taurine in the diet, but usually we do not find a specific cause for the heart damage.

What signs suggest my dog has heart disease?

Many dogs have heart disease, but are not outwardly showing signs of illness as they are not yet in heart failure.

While your dog may seem perfectly well outwardly, if the following changes are detected during a routine veterinary check-up we may recommend investigating heart disease further:

- Hearing a heart murmur. This may be heard when listening with a stethoscope. A heart murmur tells us that blood is not flowing smoothly through your dog's heart. It does not tell us why there is a murmur though; some dogs can have a heart murmur but not actually have any structural changes in the heart yet.
- Hearing an abnormal heart rhythm. If there is heart disease it can affect the way the hearts nor mal electrical impulses are transmitted, affecting how regularly it beats.
- Changes in heart rate. If your dog has an unusually fast (or sometimes slow) heart rate this may be due to heart disease.

The only way to know whether there is heart disease present or not is to perform an ultrasound exam of the heart (an echocardiogram).

What signs suggest my dog has heart failure?

Any of the following may be seen once heart failure develops:

- Less energy than normal
- 🗳 Weight loss
- 🇳 Cough
- Faster breathing when resting
- Difficulty breathing
- Collapse or fainting
- 🍟 Weakness
- Swollen abdomen

The change in breathing is usually due to fluid building up either in the lungs or around the lungs. If your dog has any of the above signs you should contact the surgery **immediately** for advice.

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How is heart disease diagnosed?

An ultrasound of the heart is the most useful tool for assessing the heart chambers, the thickness of the heart walls and tells us how well the heart is contracting. All of this information helps us determine whether there is heart disease present and if so, how severe the changes are and whether any treatment is needed.

We sometimes also recommend an ECG, to look at the hearts electrical activity and chest x-rays to look for changes affecting the lungs.

We may also advise a blood test (to look for underlying causes of heart disease and to check specific heart-related markers) and blood pressure check.

Treatment

While we cannot usually treat the underlying cause of heart disease, there are medications that can help the heart function more effectively if needed.

If your dog has DCM, but has no clinical signs yet, then it is possible to start medication to delay the onset of heart failure. Pimobendan can be given as a daily tablet and has been shown to increase the survival time of dogs when they are treated at this stage of the disease. Pimobendan works to improve the strength of each heart beat by improving the pumping action. It also opens up the blood vessels carrying blood to and from the heart, reducing the amount of work the heart has to do to pump blood around the body.

It is also very useful to keep a record of your dogs normal breathing rate at home (their "resting respiratory rate"). When your dog is relaxed, count how many breaths they take over a timed minute. Some companies have apps to help you count and record your dogs respiratory rate which you may find useful e.g. Cardalis app. Normally the respiratory rate should be less than 30 breaths per minute, contact us for advice if it is higher than this or if it is increasing.

Once your dog has signs of heart disease, we may recommend adding one or all of the following medications alongside Pimobendan:

- Diuretics Furosemide. These act to increase urine production to remove extra fluid from the body, particularly around the lungs. Sometimes we use a second, Spironolactone, if one alone is not effective.
- ACE inhibitors. These act to relax and open up blood vessels, to reduce the amount of work the heart has to do pumping blood around the body.

Your dog may also need additional medication if their heart is beating irregularly to try and make the heart beat in a more normal rhythm.



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What is the prognosis for my dog?

If your dog has DCM, the earlier we diagnose this problem the more likely it is that we can extend your dog's life expectancy. If treated before developing heart failure, studies have shown the time to onset of heart failure can be delayed. Once heart failure develops survival times can be very variable, sometimes only being a few months, to several years in other cases.



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