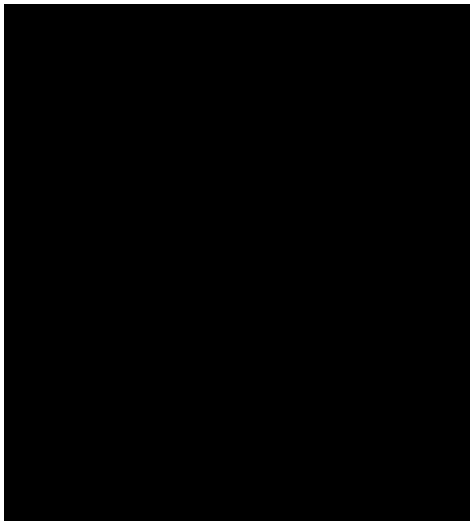


Dilated Cardiomyopathy in Dogs

 Print Article

By Malcolm Weir, DVM, MSc, MPH; Ryan Llera, BSc, DVM; Ernest Ward, DVM



What is dilated cardiomyopathy?

Dilated cardiomyopathy starts with degeneration of the heart muscle. The muscle becomes thinner and weaker, particularly the normally thick muscular wall of the left ventricle.

As the heart weakens, it loses its ability to pump blood effectively. The blood congests in the heart, causing increased pressure, which causes the thin heart muscle walls to stretch. This stretching causes the large, dilated appearance.

Some dogs develop a heart murmur if the heart valves become stretched enough to create a leak. Some dogs develop an abnormal heart rhythm because of the stretched heart muscle.

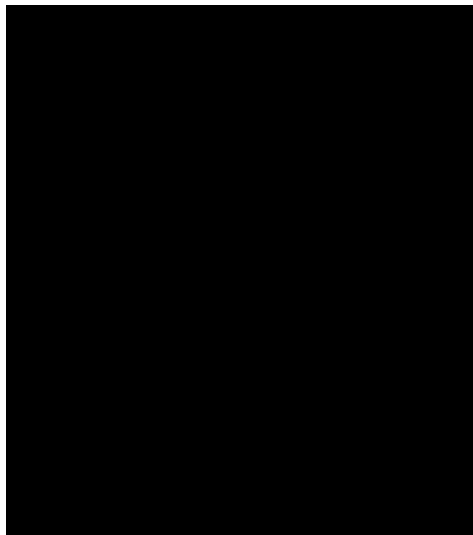
How common is the condition?

Dilated cardiomyopathy is the most common cause of heart failure in certain large breeds of dogs. These include boxer dogs, doberman pinschers, Great Danes, Irish wolfhounds, Newfoundland, standard and giant schnauzers and Saint Bernards.

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Occasionally, German shepherds and some medium-sized breeds such as cocker spaniels, English springer spaniels, and Portuguese water dogs are also affected. Small breeds rarely develop DCM. It is more often diagnosed in male dogs than female dogs.

My dog seemed to develop dilated cardiomyopathy suddenly. Can this disease develop that quickly?



Dilated cardiomyopathy may have a sudden onset of clinical signs; however, the

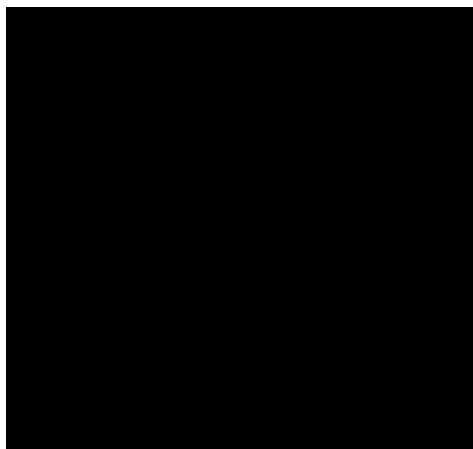
disease has been developing slowly and subtly. Some dogs may develop severe congestive heart failure (CHF) in only a few hours. Rapid, heavy breathing, a blue tongue, excessive drooling, or collapse may be the first signs.

What are the signs of DCM?

Signs may be sudden or progressive in onset. Regular checkups with your veterinarian may lead to a diagnosis of heart problems before clinical signs are present (this is the best time to diagnose a problem). Signs can include:

- rapid breathing when resting or sleeping (more than 30-35 breaths per minute)
- increased effort associated with breathing
- restless sleeping; moving around a lot and changing positions
- coughing or gagging
- weakness
- reduced ability to exercise
- collapse or fainting
- decreased appetite
- weight loss
- swollen belly
- depressed attitude or quiet and not interactive
- sudden death

How is DCM diagnosed?



To diagnose dilated cardiomyopathy, your veterinarian must perform several tests on

different aspects of heart function.

Auscultation: Listening to the chest with a stethoscope allows your veterinarian to identify murmurs due to the improper closure of heart valves. The murmur's location and intensity help determine its significance. Heart rhythm is also assessed during auscultation, and if there are concerns, your veterinarian may simultaneously palpate or feel the pulse to determine its strength and rhythm. Auscultation is also used to evaluate the lungs.

Blood and urine tests: Liver and kidney function can be a concern because these organs are often impaired in heart disease.

Cardiac biomarkers including Cardiac Troponin I and ProBNP: These blood tests measure specific protein levels in the body that change with structural changes of the heart and heart disease. The results of these tests must be assessed within the context of your pet's condition.

Chest radiographs (X-rays): Chest X-rays allow your veterinarian to examine the lungs and measure the size and shape of the heart. DCM usually causes obvious enlargement of the heart, particularly the left side.

Electrocardiogram (ECG). This assessment is based on the electrical activity of the heart. It allows your veterinarian to accurately determine heart rate and to diagnose any abnormal rhythms. In some cases, a holter monitor (a portable ECG monitor your dog wears for 24 hours) can be used to better assess your dog for the presence of abnormal heart beats (arrhythmias).

Ultrasound examination (echocardiogram). This procedure provides the most accurate determination of each heart chamber's size and thickness of the heart walls. Measurements of heart contractions can be taken to evaluate the heart's ability to pump blood effectively.

Can my dog be treated without these tests?

The combination of many of these tests gives your veterinarian the best evaluation of heart function. An accurate diagnosis provides a much better guide to the severity of the disease and the extent of treatment that is necessary. Treatment of the condition without proper diagnosis can potentially be fatal.

What is the treatment?

Several drugs are used to treat the symptoms of dilated cardiomyopathy. Initial stabilization depends upon the following:

- **Pimobendan:** This drug lowers the pressure in the arteries and veins and improves the heart muscle strength, thereby increasing blood flow to the body. Pimobendan does not appear to induce arrhythmias.

inhibitors continue to be developed and may prove useful for treating dogs.

- **Cardiac glycosides:** These drugs improve heart function in several ways. They slow the heart rate and strengthen heart contractions, so the blood is pumped more effectively. Digoxin is the most common digitalis glycoside used in veterinary medicine. The dose must be closely regulated and monitored through routine blood tests and ECG analyses, due to the potential for toxic side effects. Digoxin use has mostly been replaced by pimobendan, except for cases with a specific arrhythmia called atrial fibrillation.
- **Anti-arrhythmic drugs:** Many dogs with DCM have arrhythmias. If arrhythmias are not controlled with the above medications, antiarrhythmic drugs may be added in cautiously. Two main classes are beta-blockers (such as atenolol, sotalol, carvedilol) and calcium-channel blockers (such as diltiazem). Other types of antiarrhythmic drugs used long term can include procainamide, mexiletine, and amiodarone.
- **Diet therapy:** In certain breeds, dietary changes and nutritional support may be helpful. These may include carnitine or taurine supplementation. As well, there is ongoing study on a suspected link between heart disease and dogs fed a non-traditional diet; these dogs may return to normal with diet changes alone.

Asymptomatic dogs can also benefit from some of the therapies listed above. Based on your dog's condition, your veterinarian will choose the appropriate medication(s) to treat your dog with.

As a result of all these tests and treatment, will my dog live much longer?

Unfortunately, there are no guarantees in medicine. DCM is a serious disease that must be accurately diagnosed and aggressively treated. Some dogs with DCM do well with treatment for a period of time; however, some dogs will never resume a normal lifestyle. Doberman Pinschers have been shown to live as little as 3 months once diagnosed. Other dogs have been known to live between 6-24 months if they respond well to treatment.

"DCM is a serious disease that must be accurately diagnosed and aggressively treated."

Dogs that have developed clinical signs of heart failure have a worse prognosis than those that are put onto cardiac medication in the early stages of the disease. Your veterinarian will guide you through the diagnostic and treatment process to ensure that your pet receives the highest standard of care.

Keywords

Medical Conditions