

Monitoring your dog's heart condition

Owner Guide and Logbook

Produced in collaboration with Mike Martin, Consultant Veterinary Cardiologist



Your dog, congestive heart failure and you

This booklet has been designed to help answer questions that you may have about congestive heart failure (CHF) and how it is treated.

Whilst heart failure is a lifelong condition, treatments are available that will help relieve the symptoms of disease and extend your dog's life.

This booklet will give you information on how to best help your dog during treatment. In addition, the logbook section of this booklet provides you with a simple and easy way to monitor your dog's progress.



Cardisure[®]
Pimobendan

What does heart failure mean for my dog?

A diagnosis of heart failure for your dog means that his or her heart is not working as efficiently as it should. To understand how you can help your dog, it is useful to know how a healthy heart works.

The healthy dog's heart

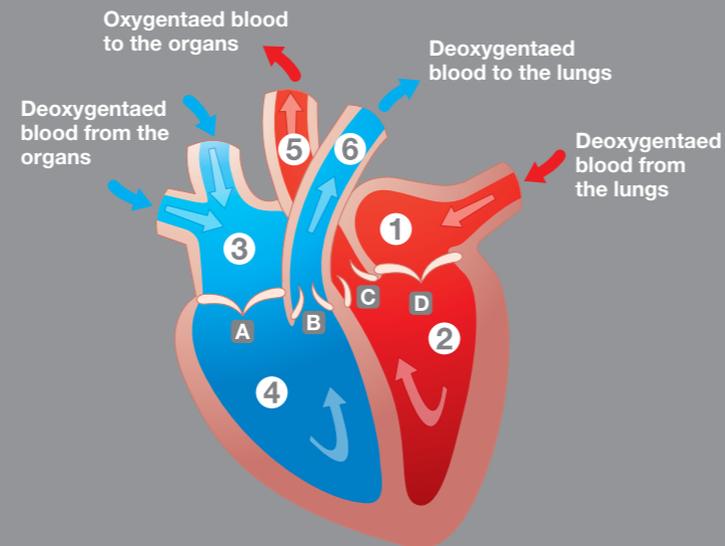
A healthy dog's heart works to pump blood around the circulation. This system provides oxygenated blood to all the vital body organs or muscles. Your dog's heart is just like a human heart and consists of a muscular pump containing four chambers.

The chambers are separated by four one-way valves. The closure of these valves is what makes the typical 'lub-dup' sound we all associate with a normal heartbeat.

Diagram of the healthy heart

1. Left atrium
2. Left ventricle
3. Right atrium
4. Right ventricle
5. Aorta
6. Pulmonary artery

- A. Tricuspid valve
- B. Pulmonary valve
- C. Aortic valve
- D. Mitral valve



Canine heart disease

Where any abnormality occurs within a healthy heart, the patient is considered to have heart disease. The most common heart diseases encountered in dogs occur due to abnormalities in the valves or the heart muscle itself.

Mitral Valve Disease (MVD)

Mitral valve disease is the most common heart disease in the dog, and tends to occur most commonly in the small to medium sized breeds, such as the Cavalier King Charles Spaniel.

In MVD, one of the valves of the heart becomes thickened and misshapen so it does not close with a tight seal. The valve therefore no longer acts as a non-return valve, but results in a squirt of blood through gaps in the valve backwards. This may lead to accumulation of fluid (blood volume) into your dog's lungs.

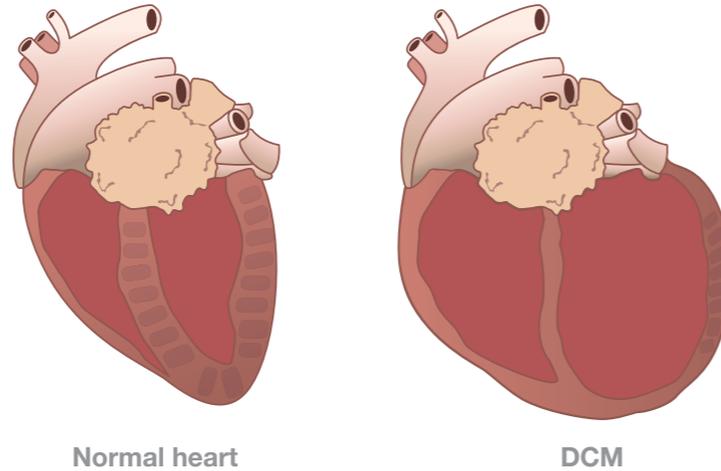
This squirt of blood flowing the wrong way through a heart valve creates a sound, which is called a murmur. In the early stages of MVD, a murmur may be the only symptom your dog displays.



Dilated Cardiomyopathy (DCM)

This type of heart disease tends to affect larger breeds of dog such as the Doberman. The muscle of the heart becomes weak over time and the chambers of the heart become dilated.

The heart has to work faster to pump blood around the body. Gradually not enough blood is pumped out of the heart and some blood builds up backwards, leading to fluid accumulating in your dog's lungs.



Normal heart

DCM

When does heart disease become heart failure?

For most dogs, heart disease is progressive. In the early stages the hearts' of dogs with MVD and DCM generally compensate for the disease.

However, eventually the extra work becomes too much and the heart is unable to pump enough blood out into the circulation and at the same time, fluid accumulates in the lungs. It is at this point where a dog is considered to be in heart failure.

Recognising the signs of heart failure

When your dog's heart is working inefficiently, not enough oxygenated blood is getting to the vital organs or muscles.

Your dog may;

- become more tired than expected when out for a walk
- choose to rest more at home
- breathe quickly
- have a larger abdomen (stomach area) than normal
- have a cough
- be less interested in food and lose weight
- collapse or faint



If you become concerned about your dog's health, you should consult your veterinary surgeon immediately.

Diagnosing heart failure

Your vet will give your dog a thorough examination including listening to your dog's heart with a stethoscope. They will also ask you questions about what you've noticed at home.

A stethoscope will only provide limited information about your dog's heart. Your vet is likely to want to do further tests on your dog to establish that a heart condition is the cause of his or her symptoms; or whether they have another condition such as a respiratory disease (which has similar symptoms). This will help them decide on the correct treatment plan for your dog.

Your vet may wish to do the following tests:

- X-ray (radiograph) – to assess the size of your dog's heart and determine if there is any fluid in the lungs
- Ultrasound of the heart (echocardiogram) - to look at the heart muscle and valves and to assess if any the heart's chambers are dilated/swollen
- Blood test – to check the general health of your dog
- Electrocardiogram (ECG) – to assess the electrical activity of the heart which controls the co-ordinated pumping of the heart.



Treatment of heart failure

Your vet may well choose a combination of medicines to treat your dog's heart failure. These medicines can be divided into three families according to their function, i.e.: those which:

- 1 Increase the strength of the heart contractions (inotropes) e.g. Cardisure
- 2 Dilate blood vessels (vasodilators) e.g. Cardisure
- 3 Remove fluid (diuretics) e.g. frusemide

These medicines will improve the efficiency of your dog's heart and reduce the symptoms of heart failure. Treatment will not cure your dog's heart failure but will improve his or her quality of life.

Cardisure is a veterinary medicine for treating dogs with heart failure. It works by increasing the strength of heart contractions and by dilating (widening) blood vessels which makes it easier for the heart to pump blood around the body.

Nutrition and your dog

Nutrition can also play an important role in the care of CHF cases. Omega-3 fatty acids from marine sources support maintenance of lean body mass, appetite and normal cardiac rhythm.

SPECIFIC™ is a range of veterinary pet nutrition made with high levels of fish and other marine ingredients to provide nutritional support for the management of many health conditions as well as helping keep dogs and cats healthy.



Find out more about the SPECIFIC™ range supporting dogs with heart and kidney problems here:



What you can do at home

It is important to ensure your dog is given his or her heart medication regularly, as prescribed by your vet.

You can also help by monitoring your dog at home. It is very important for your vet to have a clear picture of how your dog has been doing on their medication and whether they have signs which may indicate progression of heart failure.

To help you with this, please complete the home monitoring charts included in this guide and share your findings with your vet. The chart enables you to monitor:

- 1 Appetite
- 2 Exercise levels
- 3 Happiness
- 4 Coughing
- 5 Respiratory (breathing) rate



The importance of resting respiratory rate

It is important to familiarise yourself with your dog's normal breathing rate.

In most cases, the resting respiratory rate of a healthy dog should be 15 to 25 breaths per minute. If your dog's breathing rate starts to increase it could indicate that your dog's heart failure is worsening.

If further copies of the home monitoring chart are required, please contact your veterinary surgeon to request a digital copy or a heart failure logbook.

How do I measure my dog's respiratory rate?

- 1 First, wait until your dog is resting or asleep, ideally lying on their side beside you.
- 2 Next, observe the chest lift, when your dog breathes in, and fall when they breathe out. One rise and fall cycle is counted as one breath. You may also notice your dog's flank (tummy area) rising and falling with each breath too.
- 3 Count the number of breathing cycles which occur in 60 seconds and mark this number on the home monitoring chart. Where measurement of a full 60 seconds is not possible, measure the amount of breathing cycles in 30 seconds and multiple your result by two.



Scan the QR code to watch Consultant Veterinary Cardiologist Mike Martin demonstrate how to record a dog's resting respiratory rate.

Medication Schedule

Use the following table to monitor the medication and dosing of your dog each day.

Date	Medication name	Dosage	Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week of: 1st July	Cardisure (10 mg)	1/4	8am	✓	✓					
	Furosemide (40 mg)	1/2	9am	✓	✓					
	Benazepril (5 mg)	1	9am	✓	✓					
	Spironolactone (100 mg)	1/4	9am	✓	✓					
	Cardisure (10 mg)	1/4	8pm	✓						
	Furosemide (40 mg)	1/2	9pm	✓						

Date	Medication name	Dosage	Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week of:										

Date	Medication name	Dosage	Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week of:										

Date	Medication name	Dosage	Time	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Week of:										

Home monitoring

Month: _____ Year: _____

Date																				
Day																				
Heart rate / min																				
Respiration rate																				
50																				
40																				
35																				
30																				
25																				
20																				
18																				
16																				
14																				
12																				
10																				
Please score your pet: 1 = Very poor 2 = Poor 3 = OK 4 = Good 5 = Excellent																				
Appetite																				
Exercise level																				
Happiness																				
Cough																				

Home monitoring

Month: _____ Year: _____

Date																				
Day																				
Heart rate / min																				
Respiration rate																				
50																				
40																				
35																				
30																				
25																				
20																				
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Please score your pet: 1 = Very poor 2 = Poor 3 = OK 4 = Good 5 = Excellent																				
Appetite																				
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Happiness																				
Cough																				

Quick Reference guide

Answers to some questions you may have about Cardisure.

What is Cardisure and how does it work?

Cardisure contains Pimobendan which acts on the heart muscle to increase its strength of contraction and acts on blood vessels to cause dilation. This makes it easier for the heart to pump blood around the body.

How do I give Cardisure to my dog?

Cardisure should be given orally in the morning and at night each day, (12 hours between doses is ideal). Cardisure should be given one hour before feeding and because the tablets are flavoured they are readily accepted by most dogs as a treat. Follow the instructions given by your vet.

What should I do if I forget to give a tablet?

Speak to your vet. **DO NOT** give a double dose next time.

For how long will my dog require treatment?

Your dog is likely to need Cardisure for the rest of its life. Always follow the instructions given by your vet.

Will I need to revisit my vet?

Yes. It is important that your dog has regular check-ups to assess how his or her heart is coping. You should tell your vet how your dog has been at home. Your vet may recommend follow up tests and may suggest changes to the treatment plan.

Does Cardisure have any side effects?

Cardisure is generally well-tolerated. Rarely an increase in heart rate, vomiting, diarrhoea, reduced appetite and lethargy can be seen. If you think your dog is unwell then contact your vet as soon as possible.

Cardisure[®]
Pimobendan

Too much jargon? Confused?

Don't worry. We have listed some of the terms with their definitions below.

Abdomen

The portion of the body between the chest and the pelvis containing the abdominal cavity.

Breathing rate

The number of breaths taken per minute, also known as respiratory rate.

Cardiac

Relating to the heart.

Cardiomyopathy

Disease in which the heart muscle loses its normal strength.

Circulation

The flow of blood around the body within the blood vessels and back to the heart.

Dilation

Widening or stretching of a structure such as a blood vessel or heart chamber.

Diuretics

Medicines that increase the amount of urine produced, to get rid of retained fluid.

Heart failure

Inability of the heart to pump sufficient blood to meet the body's needs.

Inotropes

Medicines that help the heart muscle to contract stronger.

Mitral valve

The valve on the left side of the heart between the two left side chambers (atrium and ventricle).

Vasodilators

Medicines that cause dilation of blood vessels.

CARDISURE: Cardisure contains pimobendan

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