

# Heart Disease in small breed dogs.

Heart valve disease is a common reason for dogs (particularly smaller breeds such as Cavalier King Charles Spaniels) to develop a heart murmur. It most commonly develops in middle age, from 4-5 years old.

The mitral valve separates the chambers in the left side of the heart, acting as a one-way valve to regulate the direction of blood flow when the heart pumps. For reasons we don't fully understand, the mitral valve in the heart can become thickened, stopping it forming a tight seal between these chambers. This means every time the heart pumps some blood can flow back in the wrong direction.

Over time this causes the heart chamber (the Left Atrium) to enlarge, but eventually the pressure in the chamber also increases and causes fluid to leak out of the blood vessels in the lung (these are connected to the Atrium).

## 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 do not yet have any structural changes in the heart.
-  Hearing an abnormal heart rhythm. If there is heart disease it can affect the way the heart's normal electrical impulses are transmitted and 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
-  Cough, especially when resting
-  Faster breathing when resting
-  Difficulty breathing
-  Collapse or fainting

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.

## 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 and blood pressure check to look for underlying causes of heart disease.

## 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.

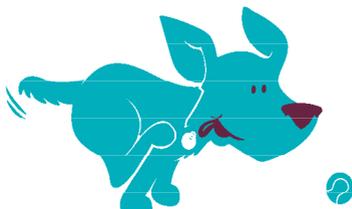
If your dog has valve disease, but has no change in the heart chamber size yet, normally no treatment is recommended. We do however recommend your dog has regular veterinary check-ups to monitor for signs of deterioration.

If we find your dog has changes in the size of their left atrium and it is becoming enlarged, 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.



## What is the prognosis for my dog?

If your dog has valvular disease, 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 by approximately 15 months. 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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