



# My Pet has a Heart Murmur – What Does This Mean?

By Dr Gretta Howard – Senior Veterinarian

An important part of the veterinary examination is listening to your pet's chest to check the heart sounds with a stethoscope. Sometimes during routine auscultation, a heart murmur is heard by your veterinarian.

## What is a heart murmur?

A heart murmur is an abnormal sound to the heart beat, usually due to turbulent blood flow. Abnormal turbulent blood flow can occur when blood passes across abnormal heart valves or across abnormal structures within the heart.

### *Congenital heart murmur*

Congenital heart murmurs are those heard in young animals due to an abnormality to the structure of the heart. All loud congenital heart murmurs should be immediately evaluated with a heart ultrasound known as an echocardiogram. Any soft heart murmur persisting after 18 weeks of age is likely to be significant and an echocardiogram should be performed to identify the cause of the murmur.

### *Acquired heart murmur*

Acquired heart murmurs are not present at birth and usually occur due to a degenerative change to the valve structure. Dogs and cats can also develop a heart murmur as a result of a low red blood cell count, known as anaemia.

## Should I be worried if my pet has a heart murmur?

While it is important to be aware of heart disease, having a murmur does not mean your pet has heart failure. In fact, murmurs do not always progress to affect your pet's physical health. If your pet has other clinical signs such as lethargy, exercise intolerance, coughing or difficulty breathing, then your pet's heart murmur may be a cause for concern, but these clinical signs can also occur with other conditions and may be completely unrelated to a murmur. That is why it is important to regularly monitor pets with heart disease. In dogs, usually the loudness of the heart murmur equates with the severity of heart disease, while cats can have a significant heart disease despite a soft murmur or barely detectable gallop rhythm.



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## What sort of tests are needed to investigate a heart murmur?

### *Chest x-rays*

Chest radiographs are particularly useful in assessing cardiac size, the condition of the lungs as well as the airways. Usually, chest x-rays can be performed under mild sedation to relax your pet, rather than a general anaesthetic. In dogs, chest x-rays are particularly useful in determining the size and shape of the heart because measuring the heart size will determine whether your dog will benefit from oral medication such as pimobendan (Vetmedin), to delay the onset of heart failure. If there is any coughing alongside a murmur, then chest x-rays are the only diagnostic test that can determine whether there is fluid on the lungs requiring diuretics.

### *Echocardiography*

Echocardiography is a heart ultrasound performed by an experienced ultrasonographer. Ultrasound enables the internal structure of the heart to be visualised while beating in real time. This can enable a specific diagnosis, as abnormal valves or lesions within the heart can be identified. Ultrasound also identifies a condition called pericardial effusion, where fluid accumulates in the pericardial sac which surrounds the heart. In cats, an echocardiogram allows the left atrial size to be measured and compared to the size of the aorta, which can determine if they are at risk of a serious blood clot. Sometimes blood thinners are prescribed to help prevent a thromboembolism (blood clot lodging in the body).

### *Blood pressure*

Like humans, blood pressure is an important measurement to determine whether a pet has an abnormal reading. High blood pressure can damage organs such as the kidneys and eyes and thus should be monitored and treated if identified. Low blood pressure may identify an underlying health concern such as anaemia or may mean that your pet is having a side effect to a medication that has been prescribed.

### *Blood test*

If your pet has a heart murmur in combination with pale mucous membranes or lethargy, blood testing is warranted to rule out anaemia or concurrent health conditions that may affect your pet's well-being. If your pet is already on heart medication, sometimes a blood test is recommended to ensure the kidneys and liver are coping with the drugs too.

## How should I monitor my pet at home?



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Pet owners typically spend a lot of time observing their pets and can often detect a change in their health early on to alert the need for a veterinary consultation. In addition to this, we recommend observing the following for any pet with a heart murmur detected.

### *Sleeping respiratory rate*

Measuring your pet's sleeping respiratory rate can be helpful in detecting fluid build up in the lungs. As a general rule, a regular but low respiratory rate such as 20-25 breaths/minute is completely normal. Remember that in order to get an accurate reading, your pet must be completely asleep and unaware of your presence. If the sleeping respiratory rate is consistently above 30, then a veterinary reassessment is recommended. Simply count the number of times the tummy moves up and down (1 breath cycle) in one minute.

### *Coughing*

If your pet starts coughing, then this may be respiratory or cardiac in origin. Cats don't generally cough as a result of heart failure, but dogs frequently do if they develop fluid on their lungs (known as pulmonary oedema). Pulmonary oedema can develop if the heart's ability to pump the blood around the body is ineffective, leading to plasma leaking out of the veins and into the air spaces while the blood is travelling through the lungs. This is known as congestive heart failure and requires diuretic medication and sometimes oxygen supplementation (if severe) to treat. There are many non-cardiac causes of coughing too, such as canine cough, tick toxicity and pneumonia, so it is important not to jump to conclusions and do the correct diagnostics to investigate.

### *Exercise intolerance*

If your pet develops exercise intolerance, lethargy or collapse, then a veterinary consultation is recommended. Blood testing is important in these cases to ensure there is no metabolic reason for the weakness. Imaging is often utilised as part of the diagnostic investigation in these cases.

## Will my pet need medication if a heart murmur is detected?

Our vets use evidence-based research to determine the stage (if any) at which your pet should be medicated. This depends on whether the murmur is clinical (causing signs of heart failure) or sub-clinical (no signs of heart failure). Some pets are on up to 4 or 5 oral medications to help manage their heart disease, but this is generally pets that have gone into congestive heart failure. Pets that have a murmur that has



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been classified with imaging (x-rays and/or echocardiogram) may or may not require medication. It really depends on the severity of the heart disease present.

## Do all heart murmurs lead to heart failure?

Many pets reach a ripe old age with a murmur that never affects their quality of life, but all murmurs should be closely monitored and classified correctly. Some pets have what is known as an 'innocent' (harmless) murmur, which means the heart sounds different, but no abnormalities were detected on imaging. Sometimes pets have loud heart murmurs but don't ever go into congestive heart failure. Using a stethoscope alone is not predictable of whether medication is required for your pet. Further diagnostics are usually required to properly assess your pet's heart murmur. Some dogs and cats with heart murmurs do require medication. In particular, pets that develop congestive heart failure or those at risk of blood clots will usually need medication for life.