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Heart murmurs in cats

When the vet listens to your cat's heart, they can usually hear two sounds. These sounds ('lub' 'dub') are the sounds of the heart valves closing.

In some cats, additional sounds can be heard. These sounds are heart murmurs, and are vibrations caused by a disturbance in the blood flow through the heart. Heart murmurs are given a grade from 1 – 6 depending on how loud the murmur is.

What causes heart murmurs?

Kittens may be born with 'holes in the heart' or abnormal vessels and heart valves, all of which may cause heart murmurs.

In adult cats that develop a heart murmur where previously they did not have one, there are two main possibilities:

1. There is no problem with the heart – the murmur is an 'innocent' murmur. Some cats may have quiet murmurs that come and go and just represent the blood moving quickly through the heart. Cats with anaemia may also have a murmur as the blood flowing through the heart is more watery.
2. There may be a disease of the heart muscle, affecting the way that the heart muscle beats. This is known as cardiomyopathy. The most common type of cardiomyopathy that we see in cats is 'hypertrophic' cardiomyopathy - this means that the heart muscle becomes very thick. Other types of cardiomyopathy are 'dilated'



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(the heart muscle becomes very thin), 'restrictive' and 'mixed' or 'unclassified'. In most cases, cardiomyopathy happens for no obvious reason - some cats seem to inherit a genetic risk of developing the condition during their life and it can seem to develop out of nowhere in young and middle-aged cats. Occasionally, cardiomyopathy can be caused by dietary deficiencies (for example, if a cat is fed on a vegetarian diet) but this is rare.

What should we do if we hear a heart murmur?

If a heart murmur is heard in an adult cat, we need to look at the size, shape and structure of the heart and to watch the way it is beating. This should enable us to tell the difference between innocent murmurs, hypertrophic and dilated cardiomyopathy. We can also tell how well the cat is coping with any heart disease and make decisions about medication. We do this by performing an ultrasound examination of the heart (echocardiogram, or heart scan).

At Acorn House Veterinary Hospital we recommend that cats with heart murmurs have a heart scan every 12 months. Additional scans should be performed if cats with a heart murmur are going to undergo a general anaesthetic or receive intravenous fluids, as these procedures can put an increased load on the heart.

What does a heart scan involve?



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A heart scan is almost always performed without any sedation or anaesthesia as it is a completely non-painful test.

Cats have a small patch of fur clipped from behind the right elbow and need to stand on a table in a darkened room, held by a nurse. The vet can then put the ultrasound probe on the clipped skin over the heart and see pictures of the beating heart on the screen.

What if the heart scan shows no heart disease (an innocent murmur)?

If no heart disease is seen, no treatment is needed. However, we would continue to recommend annual heart scans to make sure that heart disease does not develop in the future (listening out for a heart murmur is not a good early warning sign in cats that have a heart murmur already!)

What if the heart scan shows cardiomyopathy?

Cardiomyopathy cannot be cured but we have medications to help control some of its symptoms as they develop. In general, cats with cardiomyopathy should have their heart scanned and blood pressure checked annually; and their resting breathing rate measured at home weekly.

This allows us to divide affected cats into the following treatment groups:

1. No symptoms at home, resting breathing rate <30 breaths / minute; left atrium not enlarged and no clots seen - no treatment, recheck annually



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2. No symptoms at home, resting breathing rate <30 breaths / minute; left atrium enlarged and/or clots seen on scan - consider use of anti-clotting / blood thinning medication
3. No symptoms at home, resting breathing rate <30 breaths/minute; left atrium not enlarged and no clots seen on scan but heart rate persistently elevated above 210 beats/ minute - consider use of medication to slow the heart rate
4. Reduced activity at home and/or increased resting breathing rate at home - consider use of diuretics to help breathing (may need further scans or X-rays first)

Cats will tend to move through the treatment groups as their disease progresses, so regular measurement of breathing at home and regular heart scans are important to ensure that your cat receives the correct treatment.

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