



### What is hypertrophic cardiomyopathy?

Hypertrophic cardiomyopathy is the most common heart disease in cats with studies showing the presence of disease in around 15% of the UK cat population. The disease is characterised by thickening of the heart muscle that impairs the heart's ability to pump efficiently. Whilst some cats will tolerate this condition for long periods of time, other cats will develop signs of heart failure (such as breathlessness) or complications such as a blood clot.

### What causes this disease?

Primary HCM in cats is a genetic disease. The disease is seen both pedigree cats and also mixed breed cats. There are likely to be many genetic mutations responsible for this disease and this may at least partly account for the variable outcomes for cats with this condition.

High blood pressure, an overactive thyroid gland, inflammation of the heart muscle and some types of cancer can induce changes in the heart that mimic those seen with hypertrophic cardiomyopathy and therefore in some individuals other tests may be required to establish diagnosis.

### What are the signs of this disease in cats?

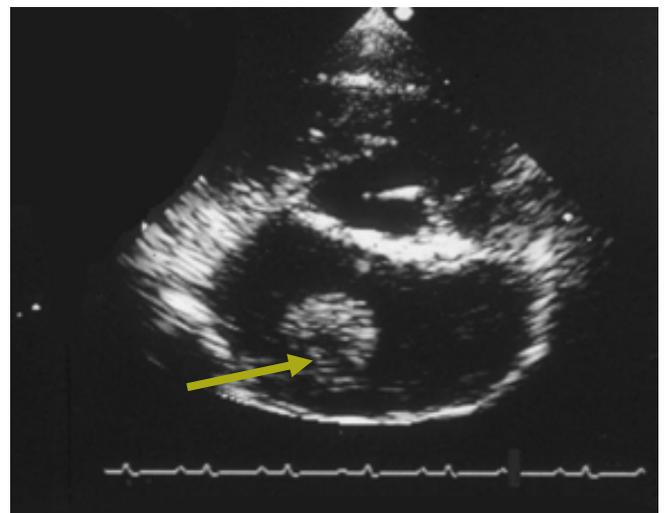
Cats may show signs of heart failure such as breathlessness, lethargy and weight loss or symptoms associated with a blood clot (thromboembolism) may be the first sign of illness. Sadly, in some cats, the only sign of HCM may be sudden death.

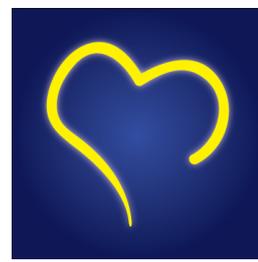
The echocardiography image (right) shows a large mobile clot (arrow) in the left atrium of a cat.

### What are the signs of blood clot formation?

These clots form in the heart and then travel via the arterial circulation until they lodge in a vessel. As these clots often occlude blood flow to one or both hindlegs the affected limbs become weak or paralysed, painful, develop a blue / purple colour most readily appreciated by looking at the foot pads and also the limb(s) may be cool and hard to the touch. Whilst the hindlimbs are most commonly affected, the clots can potentially lodge elsewhere causing forelimb lameness or other organ damage.

As this is a very painful condition please seek advice from a veterinary surgeon as soon as possible.





### How is the HCM diagnosed in cats?

Examination of your cat by a veterinary surgeon can screen for an audible heart murmur which can be a sign of heart disease. However, in true feline style, not all cats with murmurs have heart disease; and not all cats with heart disease have audible heart murmurs!

Echocardiography (ultrasound of the heart) is used to assess heart size and function. Echocardiography is painless examination that is performed without any anaesthetic or sedation and, at our centre, you can be present with your cat to reduce their anxiety whilst this test is performed. The aim of echocardiography is to establish whether there is underlying heart disease and guide decisions regarding treatment.

In some cats other tests may be recommended such as an ECG may be required to check heart rhythm, chest x-rays taken to screen for signs of heart failure such as fluid accumulation in the lungs (pulmonary oedema) and blood samples to check for concurrent illness and to assess kidney function.

### How is HCM treated?

Medication such as diuretics cannot reverse the disease but can help to control signs such as breathlessness.

### Can thromboembolic disease be treated?

Blood clot formation is often a serious complication of advanced heart disease in cats and, many cats that survive the first episode, will experience recurrence.

If there is severe underlying heart disease, the probability of recurrence of the blood clot coupled with the distressing signs associated with severe pain, result in many owners making the sad decision to request euthanasia.

In cases that are less severely affected, treatment with medications to reduce the risk of clot formation may be indicated. In cats with concurrent heart failure additional medications will be given daily to control signs such as breathlessness. Especially during the early stages of recovery, good nursing and physiotherapy can be very important.

### Key points

- Hypertrophic cardiomyopathy is a common heart disease in cats with some studies showing approximately 1:6 cats in the UK are affected,
- The disease results in thickening of the heart muscle walls,
- Some cats tolerate this condition for long periods whilst others progress to develop signs of heart failure (such as breathlessness),
- Aortic thromboembolism and sudden death are uncommon but distressing complications of this condition.