

Feline Hypertrophic Cardiomyopathy

- Feline hypertrophic cardiomyopathy (HCM) is an inherited disease of the heart muscle; however, the specifics of its genetic inheritance are not fully understood.
- With HCM, the heart walls become so thickened and rigid that very little blood is able to be pumped through the heart.
- Medications to lessen the workload on the heart can help stabilize a critical patient and decrease the likelihood of entering another crisis.
- Cats with HCM may never show signs of illness, may die without warning, or may develop acute or chronic heart failure.

What Is Feline Hypertrophic Cardiomyopathy?

Hypertrophic cardiomyopathy (HCM) is a disease of the heart muscle. The exact way the disease occurs in cats is unknown, but the result is that the heart muscle becomes extremely thickened with normal and abnormal cells. The thickened muscle can't relax and contract normally, so HCM decreases the amount of blood that the heart can handle. Heart failure results because there is so little room for blood to collect and be pumped out to the rest of the body. HCM can present itself in a number of ways:

- **Asymptomatic HCM:** The cat has no clinical signs of illness. The diagnosis of HCM is made without evidence of heart failure.
- **Chronic congestive heart failure:** A mild to moderate amount of fluid builds up in and around the lungs.
- **Acute congestive heart failure:** Sudden fluid buildup in the lungs causes a cardiac crisis.
- **Blood clot formation:** Irregular blood flow in the heart leads to clots being sent out to the body.

- **Sudden death:** The heart stops because it is unable to produce a normal beat.

HCM is believed to have a genetic component because families of Maine coon cats, American short-haired cats, and Persian cats have been found to pass the disease to their offspring. The most common cats affected, however, are domestic short-haired cats. Male cats are affected more often than female cats. HCM is a progressive disease and can be found in kittens as early as 3 months of age and adult cats well into their senior years.

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What Are the Signs of Feline Hypertrophic Cardiomyopathy?

If there is relatively mild heart muscle thickening, cats can live a long, full life with HCM and never have any problems. The worry comes when there is more severe heart muscle thickening. When not enough blood is being pumped out from the heart to the rest of the body, the following signs can be seen:

- Increased respiratory rate and effort, caused by fluid in and around the lungs
- Severe leg pain, neurologic signs, and kidney failure, caused by clots that form in the heart and move out toward the legs, brain, and kidneys
- Sudden death, which occurs when the heart stops beating normally because the muscle no longer works or a clot forms in the heart and blood cannot be pumped through

Common Conditions

What Is the Diagnosis for This Disease?

Heart failure is defined as a condition in which fluid builds up in or around the lungs as a result of impaired heart functioning. HCM must be distinguished from other causes of heart failure such as hyperthyroidism, high blood pressure, and heart defects.

The diagnosis of HCM is based on medical history, physical exam findings, and specific tests that look closer at heart functioning and the health of the heart and lungs. During physical exam, a stethoscope is used to listen to the heart and lungs to detect a heart murmur, abnormal heart rate or rhythm, or chest fluid. Murmurs are “extra” sounds (in between the heartbeats) heard when blood is flowing abnormally through the heart. Some cats with HCM don’t have heart murmurs. If there is fluid in the chest, the lungs can sound abnormally loud or quiet. Feeling the legs and feet for warmth and pulses helps detect clots that may have lodged in the arteries carrying blood through the body. When HCM is suspected after a physical exam, some or all of these tests may be recommended to confirm the diagnosis:

- **Blood tests:** to look for thyroid, kidney, liver, or other diseases
- **Blood pressure check:** to check for high or low blood pressure
- **Radiographs (x-rays):** to look for fluid in the chest and evaluate the size and position of the heart
- **Echocardiogram (heart ultrasound):** to measure the thickness of the heart walls, look at the motion of heart valves, and see blood clots
- **Electrocardiogram (ECG):** to evaluate heart rate and rhythm

How Is Feline Hypertrophic Cardiomyopathy Treated?

- **Acute heart failure:** If a cat is having severe breathing problems or is otherwise unstable,

diagnostic tests may need to be postponed or limited until the patient can withstand them. Too much stress can be fatal in a cat suffering from heart failure. Medications may be given to calm your cat or take some of the load off of the heart, oxygen may be administered to ease breathing, and fluid may be removed from the chest to allow the lungs to fill with air more effectively. Hospitalization may be necessary to get the heart failure under control.

- **Chronic heart failure:** In order to prevent a crisis in a stable HCM patient with some degree of heart failure, medications may be prescribed to decrease the amount of work the heart has to perform.
- **Blood clot formation:** Anticlotting medications may help during a crisis and prevent new clots.
- **Asymptomatic HCM:** Generally, no treatment is prescribed until there is evidence that the heart is unable to successfully send blood to the rest of the body. There is no evidence that early treatment prevents the onset of heart failure.

What Is the Outcome for Pets With This Disease?

In many cases, heart failure never occurs, and cats with mild HCM may lead long, full lives. Sadly, once a cat with HCM enters heart failure, the chances of survival past 1 to 2 years are slim. It is difficult to predict what will happen once your cat is diagnosed with HCM. The progression of the disease varies from cat to cat, and cats can live for years or die suddenly. There is no cure for HCM, but severe, acute heart failure can sometimes be prevented by using medications to keep chronic heart failure under control.

The most important thing to remember is your role in managing this disease. Watching your cat for changes in respiratory rate and effort is key to catching heart failure early and monitoring the effectiveness of treatment once it has begun.