

Potential Sequelae

Some cats are predisposed to the formation of blood clots in the heart. If a clot breaks up and enters the circulation, small pieces may lodge in arteries such as the terminal aorta leading to the hind legs causing lameness or paralysis. This process is often accompanied by severe pain.

What are the goals of treatment?

Treatment of cardiomyopathy is aimed at improving diastolic function, alleviating circulatory congestion, suppressing certain arrhythmias if indicated, and reducing the risk of arterial thromboembolism (blood clot formation).

Drugs such as Diltiazem, a calcium-channel blocker, enhance diastolic function by improving myocardial relaxation and increasing blood flow to the heart muscle itself. ACE inhibitors are used to reduce myocardial workload and scar formation.

Diuretics such as lasix are often used to relieve circulatory congestion in cats with pulmonary edema causing respiratory distress. Other drugs may also be prescribed to meet your pet's specific needs.

What should I monitor at home?

It is important that you monitor your cat's overall attitude and any change in appearance. It may be helpful to keep a record of your pet's breathing rate so that you will notice increases or changes from normal breathing. If you notice any of the following, please call us immediately:

- heavy or labored breathing
- lameness or inability to walk
- fainting spells
- restlessness
- lethargy

Thank you for visiting the cardiology service at the Ryan Veterinary Hospital. If you have any further questions, please do not hesitate to contact us.



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Matthew J. Ryan Veterinary Hospital
Section of Cardiology

Understanding Feline Cardiomyopathy

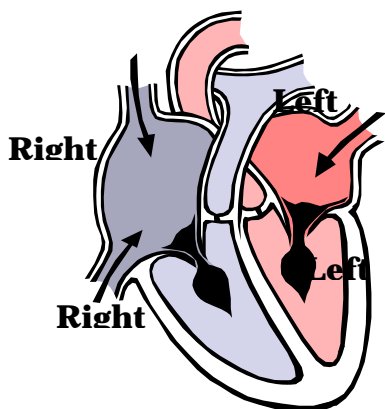


Many Species. One Medicine.

Feline Cardiomyopathy

How does the heart work?

The heart is the organ responsible for maintaining the circulation of blood within the body. It is a four-chambered organ containing right and left atria (upper chambers) and ventricles (lower chambers). The right side pumps deoxygenated blood returning from the venous system in the body into the lungs. From the lungs, oxygenated blood enters the left side of the heart where it is pumped out into the tissues of the body through the arteries.



What is feline cardiomyopathy?

Cardiomyopathy means “disease of the heart muscle” - the myocardium. Broadly speaking, cardiomyopathy is brought about by a structural abnormality in one or more of the four chambers of the heart. The heart muscle grows too thick, it scars and becomes stiff, or it weakens. In each case, the heart’s ability to pump blood is impaired.

Feline cardiomyopathies are primary diseases - those whose origins are either genetic or unknown. The heart can also thicken as a secondary disease; for example, due to hyperthyroidism or high blood pressure.

There are three types of primary cardiomyopathy: hypertrophic, restrictive, and dilated. Cardiomyopathy is primarily a disease of adult cats (avg. 6.5 years) and occurs most frequently in males (75%), but can affect females (25%) as well. Though all cats are susceptible, a genetic predisposition for the disease has been shown in Persians, Ragdolls, and in some American shorthair cats. In Maine Coon cats, hypertrophic cardiomyopathy has been proven to be inherited through a dominant gene.

Hypertrophic Cardiomyopathy (HCM)

Hypertrophic Cardiomyopathy (HCM) is the most prevalent feline cardiac disorder. It is a primary disorder of the myocardium (heart muscle) characterized by hypertrophy (thickening) of the heart’s left ventricle, impaired relaxation of the heart muscle, and secondary left atrial enlargement. These changes lead to diastolic dysfunction - a condition in which the heart fails to relax and fill with blood normally. A resulting backup of pressure in the lung may lead to congestive heart failure.

A confirmed diagnosis of HCM requires an echocardiogram (ultrasound of the heart) demonstrating a thickened, left ventricle with no identifiable underlying cause for the observed changes.



Restrictive Cardiomyopathy (RCM)

Restrictive cardiomyopathy is caused by the excessive buildup of scar tissue (fibrosis) on the inner lining and muscle of the ventricle. This prevents the ventricle from relaxing, filling, and emptying with each heart beat. This disorder is also characterized by severely enlarged atria and reduced cardiac filling and pumping efficiency. The clinical signs are similar to HCM and a confirmed diagnosis requires an echocardiogram.

Dilated Cardiomyopathy (DCM)

Dilated cardiomyopathy is rarely seen in cats today. Historically, it was linked to a dietary deficiency in taurine, which has been corrected by most cat food manufacturers. DCM is characterized by a poorly contracting dilated left ventricle and oftentimes enlarged atria. Cats with DCM usually progress to congestive heart failure.