



Congestive Heart Failure

What is congestive heart failure?

Congestive Heart Failure (CHF) is a term that refers to the heart's inability to pump adequate blood to the body. There are many causes of CHF in dogs. The two most common causes are mitral valve insufficiency (MVI) and dilated cardiomyopathy (DCM).

Clinical signs vary depending on whether the dog has left- or right-sided heart failure. The most common symptoms are decreased stamina, coughing or difficulty breathing.

What is the difference in the signs?

Right-sided congestive heart failure causes poor venous return to the heart. In other words, when the heart contracts or “pumps”, instead of the right ventricle pushing the blood through the lungs for oxygenation, some returns to the right auricle or top part of the heart. This blood is unable to be cleared from the systemic circulation and consequently becomes “congested”. Fluid accumulates in the abdomen and/or the chest cavity, interfering with the function of the organs in these areas. The abdomen may become enlarged with fluid called *ascites*. Fluid may also leak from veins and swelling may appear in the limbs known as *peripheral edema*.



When CHF involves the left ventricle, blood is not pumped into the systemic circulation and builds up in the lungs. Fluid then seeps into the lung tissue resulting in pulmonary edema. This causes coughing and difficulty breathing. Left-sided congestive heart failure (LS-CHF) is the most common form of congestive heart failure. The classic signs of heart failure – coughing and fluid in the chest – are most commonly caused by LS-CHF.

Is CHF due mainly to heart valve disease?

CHF is most commonly caused by valvular insufficiency. It is estimated that 80% of the canine CHF cases are caused by MVI. MVI results in LS-CHF. However, there are many other causes. Disease of the heart muscle (cardiomyopathy), irregularities of rhythm and narrowing of some of the major blood vessels can also cause CHF.

What clinical signs should I expect?

CHF usually results in coughing, ascites, exercise intolerance, general lethargy, weakness and weight loss despite having an enlarged abdomen due to ascites. The normal pink color of the mucous membranes may become pale or bluish color.

How is CHF diagnosed?

As with any heart problem, diagnosis involves several tests:

Auscultation or listening to the heart with a stethoscope is the first step in diagnosing heart disease. Pulse quality and heart rhythm are also assessed during auscultation.

Chest x-rays are then used to determine the size and shape of the heart and the presence of fluid in the lungs.

Blood and urine tests are performed to give an indication of any other disorders in the body. Liver and kidney function are often impaired in patients with heart disease.



An **electrocardiogram (ECG)** will also be run. This measures the electrical activity of the heart and allows accurate determination of both heart rate and rhythm. Any abnormal rhythms (arrhythmias or dysrhythmias) can be detected and evaluated.

Ultrasound examination (echocardiogram) utilizes sound waves to evaluate the heart's contractions and to measure the amount of blood pumped by the heart.

Can't you treat my dog without these tests?

Accurate diagnosis gives us a much better guide to the type and extent of treatment necessary. Today there is a wide selection of heart medications that can be used to treat congestive heart failure and treatment regimes must be tailored for each patient. Without these tests, your veterinarian is unable to provide the best care for your pet and may inadvertently cause more harm than good.

With correct treatment, many dogs are able to live a normal life for months to years.

*This client information sheet is based on material written by Ernest Ward, DVM.
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