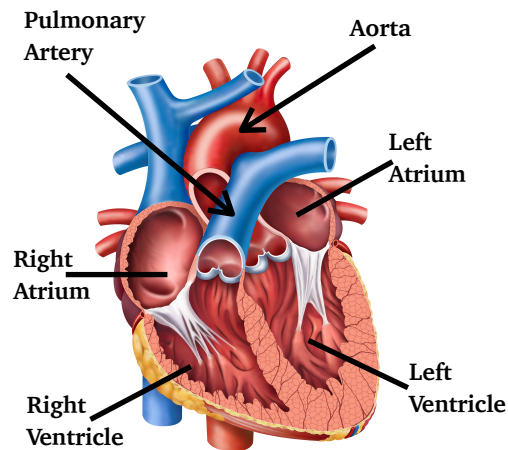


# Congestive Heart Failure

**Congestive heart failure (CHF)** refers to fluid build up in the lungs or in the body cavities due to underlying heart disease. Any type of heart disease can cause CHF, including myxomatous valve disease, congenital heart disease, cardiomyopathies (DCM, HCM, etc) and arrhythmias.

When the left-side of the heart is affected, pressure builds up in the left atrium (LA) and this impairs the return of blood flow from the lungs (normally the blood vessels in the lungs “drain” into the LA). As a result, fluid builds up inside the lungs (pulmonary edema). When the right side of the heart is affected, pressure builds up in the right atrium (RA). This impairs blood flow returning from the body/abdomen, as the blood vessels from the rest of the body usually “drain” into the RA. This causes fluid build up in the abdomen (ascites) and/or in the chest cavity (pleural effusion).

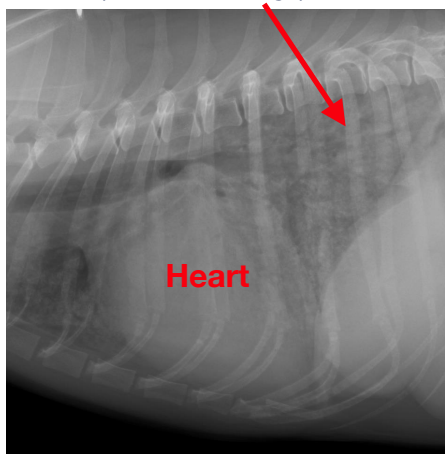


**Physical examination** will usually detect a heart murmur in a dog or cat with CHF (but not always!). Abnormal lung sounds (“crackles”) may also be noted and the heart rate is usually fast. An **echocardiogram** (ultrasound of the heart) is a non-invasive test that allows us to look inside the heart to diagnose the type of underlying heart disease. Identifying the type of heart disease is helpful to better assess prognosis. Additional tests that may be done for a dog or cat with CHF include:

- ◆ Chest X-ray - to assess the overall heart size and the lungs
- ◆ Kidney panel - to assess kidney function before starting medications
- ◆ Electrocardiogram (ECG) or Holter - to assess electrical activity in the heart, particularly if there is an irregular heart beat (arrhythmia)
- ◆ Blood pressure - to determine whether vital organs are compromised

**Treatment** is required for dogs and cats with CHF. Unfortunately, there is no cure. Diuretics (e.g. furosemide, torsemide) are used to slow reaccumulation of fluid in the body and minimize clinical signs. ACE inhibitors (e.g. enalapril/benazepril) help to balance electrolytes and block negative hormones associated with CHF. Pimobendan is also often used - this medication improves the pumping function of the heart. Most patients will have a good quality of life in between episodes of CHF. Careful monitoring of these patients is important and they require frequent rechecks to assess their heart, lungs, and kidney function.

Chest xray showing a severely enlarged heart and pulmonary edema (fluid in the lungs)



## QUICK FACTS:

- ♥ Congestive heart failure (CHF) occurs secondary to advanced underlying heart disease
- ♥ Left-sided CHF causes fluid to accumulate in the lungs (pulmonary edema)
- ♥ Right-sided CHF causes fluid to accumulate in the body cavities (pleural effusion, ascites)
- ♥ Diuretic therapy (e.g. furosemide) is the main treatment for CHF. Other medications are also often needed
- ♥ Signs of CHF include difficulty breathing, coughing, exercise intolerance, fainting, decreased appetite, abdominal distension
- ♥ Counting breathing rates AT REST is one of the best ways to monitor your pet at home
- ♥ Average survival for pets with CHF is 9-12 months, but this depends on the type of heart disease and kidney function