

## **Congestive Heart Failure**

Congestive heart failure (CHF) is the result of severe heart disease and occurs when the heart is no longer able to pump blood efficiently. This increases the pressure within the heart, which backs up into the blood vessels of the lungs or body, causing fluid to leak from the blood vessels. This fluid can accumulate around the lungs (pleural effusion), within the lungs (pulmonary edema) and/or in the abdomen (ascites).

### **Symptoms**

Common symptoms include increased respiratory rate and/or difficulty breathing, coughing, lethargy, decreased appetite, exercise intolerance, abdominal distention, collapsing and fainting.

### **Diagnosis**

An ultrasound of the heart (echocardiogram or echo) will allow the cardiologist to assess the structure and function of the heart. Chest x-rays will show how much fluid has accumulated within and/or around the lungs. It is also important to assess the pet's systemic blood pressure and electrocardiogram (ECG) for arrhythmias that commonly occur with severe heart disease.

### **Treatment**

The goal of treatment is managing the symptoms and decreasing the workload on the heart. The most commonly prescribed medications include diuretics and ACE inhibitors. It is important to check kidney values before and after starting these medications to ensure the kidneys are functioning properly and can handle the medication appropriately.

Dogs may also be placed on pimobendan (Vetmedin) to help the heart contract better. Different medications may also be prescribed depending on the pet's underlying heart disease, severity of the heart failure and presences of arrhythmias.

Most cats will also be placed on anti-coagulants to help prevent the formation of blood clots. It is rare for dogs to form blood clots secondary to heart disease.

Fluid in the abdomen and around the lungs can be removed with a needle to help the pet feel better (abdominocentesis or thoracocentesis). Diuretics will help control the accumulation of fluid.

### **Hospitalization**

Many patients with severe heart disease need stabilization of their congestive heart failure in hospital before they can be started on oral medications at home. The time spent in the hospital will depend on the severity of the heart failure and type of disease. Hospitalization is beneficial because the patient can be placed in an oxygen cage to help them breathe better, and an intravenous (IV) catheter will be placed to administer injectable medications. An echocardiogram, chest x-rays, ECG, blood work and blood pressure assessments will be done initially. These assessments may be repeated several times during hospitalization to help adjust the treatment plan based on how the pet is responding.

### **Sleeping Respiratory Rate**

In an effort to catch congestive heart failure at its early stages as well as to monitor response to changes in treatment, it is important to become familiar with your pet's normal sleeping breathing rate and breathing effort at home. A normal sleeping cat or dog should have a respiratory rate of 30 breaths per minute or less. If you notice this number increasing consistently, or notice an increase in the effort it takes to breathe, contact your cardiologist or family veterinarian right away. An increase in breathing rate or effort is a signal that fluid is accumulating in or around the lungs, and the pet is going into congestive heart failure.

It may be helpful to keep a daily log of your pet's breathing rate so that you will notice increases or changes from normal breathing.

### **Prognosis**

As heart disease progresses over time, routine rechecks are needed to assess progression and make the proper medication adjustments. Should heart disease progress to CHF, the average survival time is 6-18 months depending on the type of heart disease, the presence of arrhythmias, and response to treatment. Most pets are able to be well managed with medications and can enjoy a very good quality of life during that period of time.