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# Vets Love Pets!



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# HEART DISEASE

The heart is the most important organ in our pet's body. If there is a problem with the heart's function, life cannot be sustained. Heart problems can be found just after birth (congenital heart disease), or any time during the pet's life (acquired heart disease). Early diagnosis is the key to keeping our pet healthy. The heart is responsible for pumping blood to the lungs where it becomes oxygenated. From the lungs, blood is pumped back to the heart and then to the tissues, organs and cells of the body. It is when the heart can no longer

keep up with this pumping, that signs of heart disease and heart failure occur.



## Clinical Signs...



Of heart disease

- Exercise Intolerance
- Coughing
- Laboured Breathing
- Restlessness
- Fainting
- Anorexia
- Weight Loss

## Risk Factors...



1. Age
2. Obesity
3. Dental disease
4. High blood pressure
5. Poor nutrition
6. Genetics
7. Thyroid problems in cats

**Holiday Hours:**  
Regular Office  
Hours except:

Dec. 24<sup>th</sup>: 9-4 pm  
Dec. 25<sup>th</sup>: Closed  
Dec. 26<sup>th</sup>: Closed  
Dec. 31<sup>st</sup>: 9-4 pm  
Jan. 1<sup>st</sup>: Closed



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# If heart disease is suspected...



## Things to do...

If heart disease is suspected, further testing may be required. Chest radiographs can evaluate the size of the heart, and check for fluid accumulation within the chest and lungs. Ultrasound can more accurately diagnose the problem, determining the cause and severity of the heart pathology. ECG (electrocardiogram) evaluates the electrical activity of the heart. Thyroid testing in cats is important in evaluating underlying systemic disease. A complete history gives insight into nutritional deficiencies (i.e. Taurine deficiency in cats) that may lead to heart disease.

## Treatment

### Acute disease:

- Hospitalization
- Intravenous diuretics (help to remove excess fluid and address the “drowning” feeling)
- Oxygen therapy

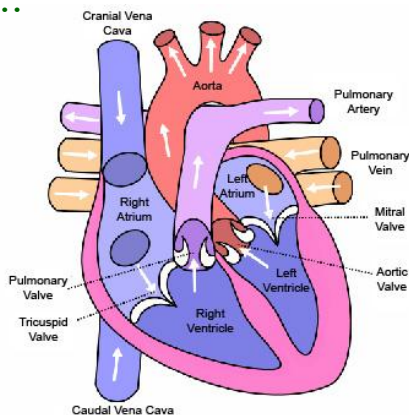
### Chronic disease:

- Oral diuretics
- Diet change—sodium restriction (Hills h/d)
- Omega 3 fatty acids
- Long-term heart medications (such as Fortekor or Vetmedin)
- Moderate exercise



## Flow of Blood...

De-oxygenated blood enters the right atrium, flows through the tricuspid valve, into the right ventricle. From the right ventricle, the blood passes through the pulmonary valve into the pulmonary artery and to the lungs. In the lungs, the blood is oxygenated, and returns to the heart via the pulmonary vein. The oxygenated blood enters the left atrium, travels through the mitral valve into the left ventricle. Exiting through the aortic valve and aorta, the blood travels to all the organs and tissues of the body, delivering the much needed oxygen.



If your pet is exhibiting any of the previously mentioned clinical signs, it is important that your furry friend be examined immediately. A thorough clinical examination is the first step in accurately diagnosing heart disease. Typically the heart will have a classic “lub dub” sound. However, often with heart disease, the heart sounds may be muffled. This is called a “heart murmur”. Depending on where in the heart the murmur is heard, will help determine what type of heart disease is most probable. Commonly, a murmur may be detected over the mitral valve (between the left atrium and left ventricle) in aging small breed dogs. This is termed “mitral regurgitation”. A murmur occurs due to the turbulence and less effective pumping of blood. Ultimately the body’s tissues start “screaming” for more oxygen. In response, the heart starts to pump faster and harder. Just like any muscle, if it is “exercised”, it will increase in size. Over time, this results in an ineffective pumping action by the heart. The end result...heart failure. Clinical signs result from the enlarged heart pressing on the trachea (windpipe) resulting in a cough, and a flooding of fluid into the chest/lungs, and/or abdomen. The cat or dog ultimately feels like they are “drowning”. Eventually this enlarged heart muscle becomes less pliable, and interferes with the filling of the heart with blood. The flow of blood slows down, has a tougher time delivering oxygen to tissues, and eventually life can no longer be sustained.