

# Cardiac Disease

## Description

Congenital heart diseases in dogs are malformations of the heart or great vessels. The lesions characterizing congenital heart defects are present at birth and may develop more fully during perinatal and growth periods. Many congenital heart defects are thought to be genetically transmitted from parents to offspring; however, the exact modes of inheritance have not been precisely determined for all cardiovascular malformations.

The OFA gathers data regarding congenital heart diseases in dogs and to identify dogs which are phenotypically normal prior to use in a breeding program. For the purposes of the database, a phenotypically normal dog is defined as:

1. One without a cardiac murmur **-or-**
2. One with an innocent heart murmur that is found to be otherwise normal by virtue of an echocardiographic examination which includes Doppler echocardiography

Heart murmurs range from Grade 1 to Grade 6.

## Symptoms

Dogs with heart disease may be asymptomatic (free of any signs of illness) if the heart disease is mild. However, if the heart disease is severe enough that the heart cannot compensate for the disease, heart failure will occur and will lead to signs of heart failure.

The types of signs seen in heart failure will vary depending on how severe the disease is and which side of the heart is affected. However, the signs most commonly encountered with heart failure include:

- generalized weakness, tiring easily, depression, lack of appetite, weight loss, coughing, breathing heavily, swelling in the legs, a bloated, fluid-filled abdomen, increased heart rate, weak pulse

Symptoms that are less common include:

- cyanosis (a bluish coloration of the gums), vomiting, diarrhea or constipation, and fainting episodes

## Treatment

Treatment varies widely and is particular to each individual case. Treatment is also based on which side of the heart is affected. Typical treatments can include:

- systemic cardiovascular drugs, supportive care such as nutritional supplements and vitamins, and surgery

## Test method

The Congenital Cardiac Database with OFA is for dogs 12 months and over. Examinations performed on dogs less than 12 months will be treated as consultations and no OFA breed numbers will be assigned.

The clinical examination should be performed by an individual with advanced training in cardiac diagnosis. The animal should be standing and restrained, but sedative drugs should be avoided.

## Genetic/breeder information

At this time, inherited, developmental cardiac diseases like subaortic stenosis and cardiomyopathies are difficult to monitor since there is no clear cut distinction between normal and abnormal. The OFA will

modify the congenital cardiac database when a proven diagnostic modality and normal parameters by breed are established. However at this time, the OFA cardiac database should not be considered as a screening tool for these diseases.

A careful clinical examination that emphasizes cardiac auscultation is the most expedient and cost-effective method for identifying Congenital Heart Disease in dogs. While there are exceptions, virtually all common congenital heart defects are associated with the presence of a cardiac murmur. Consequently, it is recommended that cardiac auscultation be the primary screening method for initial identification of CHD and the initial classification of dogs. Murmurs related to CHD may at times be difficult to distinguish from normal, innocent (also called physiologic or functional) murmurs. Innocent cardiac murmurs are believed to be related to normal blood flow in the circulation. Innocent murmurs are most common in young, growing animals. The prevalence of innocent heart murmurs in mature dogs (especially in athletic dogs) is undetermined. A common clinical problem is the distinction between innocent murmurs and murmurs arising from CHD.

### **Stats within CdT breed**

From 1974-2012 there were 874 Cardiac Evaluations submitted to the OFA. Of those submitted, 99.9% were normal, .1% equivocal, and 0 affected.

### **Further info links**

Application for OFA Cardiac Evaluation:

[http://www.offa.org/pdf/cardapp\\_bw.pdf](http://www.offa.org/pdf/cardapp_bw.pdf)

### **Source of data**

[http://www.offa.org/stats\\_cardiac.html?view=1&sort=1](http://www.offa.org/stats_cardiac.html?view=1&sort=1)

<http://vetmedicine.about.com/od/diseasesandconditions/a/CW-DogHeartSigns.htm>

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