

# Mitral Valve Dysplasia

*courtesy of Animal Info Publications*

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## What is Mitral Valve Dysplasia?

Mitral Valve Dysplasia is a malformation of one of the valves in the heart, causing the heart to pump inefficiently, and depending on the severity, usually leading to Congestive Heart Failure (CHF). There are 4 chambers in the heart - two at the top called atria and two at the bottom called ventricles. The mitral valve connects the left atrium with the left ventricle, and a defect will prevent the valve from closing properly when the heart beats, allowing blood to flow back into the atrium when it should be shutting tight allowing all the blood to be pumped out of the ventricle. The valve is commonly called "leaky".



## There are two types of Mitral Valve Dysplasia:

### 1. Acquired Mitral Valve Dysplasia

All breeds of dog can acquire this disease as the body begins to fail, and degenerate with age. It is probably one of the most common heart defects affecting older animals, with some estimates indicating that in dogs over 10 years of age, over one third will have some degree of Mitral Valve Dysplasia.

### 2. Inherited Mitral Valve Dysplasia

Unfortunately, in a number of breeds there is a genetic predisposition for early development of the disease, with many affected dogs showing clinical signs before they reach 12 months of age, but others not until several years later. The condition will often become life-threatening by 3-5 years of age.

There is some evidence to show that Mitral Valve Dysplasia may be more common in males than females.

## What are the signs or symptoms?

Your dog may have some degree of Mitral Valve Dysplasia before any obvious symptoms develop. In fact, you may first find out about it from your vet when a heart murmur is detected during a routine check-up. Signs that you may notice in your dog may include an inability to exercise to their normal extent, breathing difficulties or a cough. Fluids may build up and cause congestion in the lungs, with coughing and breathing difficulties occurring even when your dog is resting. Eventually there may be intermittent episodes of weakness or collapse, and possibly total heart failure.

### **How is it diagnosed?**

A simple examination by your vet using a stethoscope may reveal a murmur, which will be loudest over the top of the left side of the heart. X-rays, Ultrasound (Echocardiogram) and an electrocardiogram (ECG) will further confirm and determine the extent of the condition. The left side of an affected dog's heart may be enlarged, and cardiac arrhythmia (abnormal heart rhythm) is also quite common.

### **How is it treated?**

Unfortunately there is no cure for Mitral Valve Dysplasia, although there are supportive measures you can use to improve and extend the quality of life for sufferers. Depending on the severity, treatments may allow a dog to live well with the condition for years.

Regular exercise, weight control and a good diet will help to reduce the chances of your dog developing the acquired form of the disease in older age. These measures will also help to prepare a dog with the inherited form to cope with the disease better, however they won't be able to prevent the onset of symptoms. A sodium restricted diet may be of benefit, and it may also be necessary to restrict exercise to a milder version of what they were used to. As the condition worsens, diuretic drugs may be used to reduce congestion in the lungs, as well as other medications such as digoxin which can help to manage arrhythmias.

### **How can you avoid Buying a dog with Mitral Valve Disease?**

There is no way you can avoid buying a dog that may acquire Mitral Valve Dysplasia in old age, unless it is already an older animal, and has developed a detectable heart murmur already. However, in susceptible breeds, you can improve your chances of buying a dog that is clear of the inherited form if you ensure that the parents of the puppy you are considering purchasing are clear of the disease. Make sure the sire and dam have had their hearts examined by a veterinary surgeon, and are certified clear for the disease. Responsible breeders will generally have certification done on their breeding stock on an annual basis. Unfortunately, this may not be enough to ensure you get a puppy with a clear heart. Due to the sometimes late onset of symptoms, the sire and dam of your puppy may appear to be clear of the disease until they are well into or past their best breeding years, so if they were carriers, you may not know it soon enough. What may help you further, is if you are able to look back through the pedigree of the parents to the grandparents (either with info from the breeder, or on one of the cardiac databases), for any evidence of Mitral Valve Dysplasia in the ancestral lines. Breeding is not recommended for dogs with Mitral Valve Dysplasia.