



Heart Failure in Dogs: Mitral Valve Insufficiency



Heart disease is quite common in older dogs just as it is in older people. Unlike their owners, however, dogs do not develop hardening of the arteries or blockages, and heart attacks are extremely rare. The most common type of heart disease in older dogs is called *mitral valve insufficiency* or *mitral regurgitation*. It affects more than a third of dogs over 10 years of age and, in one study, as many as 75% of 16-year-old dogs. It's most common in small and toy breed dogs, although all breeds can be affected.

What is Mitral Valve Insufficiency?

Your dog's heart has four chambers (two ventricles and two atria) and valves between the chambers serve to make sure that blood flows in the proper direction as the heart beats. If the mitral valve begins to wear out or leak, blood can flow backward into the left atrium, eventually resulting in enlargement of the heart chamber and backup of blood into the lung's blood vessels. The earliest sign of a leaking mitral valve is usually a *heart murmur*. Over time, several months to a few years after a murmur is detected, this chronic condition can eventually lead to a buildup of fluid in the lungs known as *congestive heart failure*.

Early Detection—Before Signs Appear— Can Slow Progression of Heart Failure

Mitral valve insufficiency typically is first suspected when your veterinarian hears a new heart murmur during a routine wellness exam. You may also notice that your dog has a dry, hacking cough, especially during exercise or excitement or just after he or she wakes up. Other signs of mitral valve insufficiency in dogs include lack of energy or inability to exercise, weight loss, fainting spells, panting, difficulty breathing, increased respiratory rate, and difficulty sleeping.

If your veterinarian finds a heart murmur in your dog, he or she may recommend chest x-rays (radiographs), an electrocardiogram (ECG), and an echocardiogram (ultrasound of the heart). Your veterinarian may do some of these tests at their office or they may refer you to a cardiologist. A cardiologist is a veterinarian who has completed additional training and specializes in heart diseases of dogs and cats.

Can Mitral Valve Disease Be Treated?

While mitral valve disease can't be cured, your veterinarian can prescribe several types of medications that can improve your dog's heart function, relieve symptoms, and slow disease progression. These medications may include:

- ✓ A *diuretic* to stimulate the kidneys to remove of excess water that has accumulated in the lungs from the body
- ✓ An *angiotensin-converting enzyme (ACE) inhibitor*, or *vasodilator*, to dilate arteries



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and veins and promote better blood flow

- ✓ A *digitalis* drug, such as digoxin, to strengthen and coordinate the heart muscles' contractions
- ✓ Pimobendan, a drug that works to lower the heart rate and help the heart contract better
- ✓ A *low-sodium diet* to prevent retention of excess fluids

Even with therapy, however, heart disease usually worsens over time. Prognosis depends on the severity of disease as determined by diagnostic testing and your dog's response to therapy.

Believe it or not, maintaining your dog's oral health can play a key role in prevention of heart failure. Severe dental problems, such as periodontal disease, can enable bacteria from the mouth to enter the bloodstream. The bacteria can then infect the heart valves leading to irreversible damage. It is VERY important to make sure your dog receives regular dental care to help prevent this from happening!

Once mitral valve insufficiency has been diagnosed, maintaining your dog at a healthy weight with regular exercise and an appropriate diet, and adhering to the regimen of medications prescribed by your veterinarian, can slow progression of the disease and may add precious months or years to your senior dog's life!