

Heart Murmurs in Dogs

What is a heart murmur?

A heart murmur is a sound that results from turbulent blood flow within or near the heart, in the same way that a stream of water 'hisses' when you obstruct the flow from the end of a hose with your finger.

How are Heart Murmurs Detected?

Murmurs are detected using a stethoscope but in some animals, they may be heard intermittently. Cardiac ultrasound (echocardiography or echo) is used to determine the cause and seriousness of the murmur. In conjunction with chest x-rays and ECG, we can make a full diagnosis and develop a treatment plan.

What is involved in an echo examination?

An echo is usually performed in conscious patients, sometimes with light sedation, with the patient gently restrained on its side. A small area of hair is usually clipped from both 'armpit' areas. A gel is applied to the skin and a plastic probe is held against the skin. A moving, 2-dimensional image of the heart appears on the screen that enables the vet to measure a variety of parameters such as chamber size and blood flow velocities but also to track blood flow through the heart in real time. Videos and still images are stored for evaluation. The procedure generally takes 30-40 minutes.

What causes murmurs in dogs?

Degenerative Valve Disease

These are the most common murmurs that we hear and they result from the gradual thickening and nodular change over time on the atrioventricular (AV) valves, typically the left AV or Mitral valve. This condition is known as Myxomatous Mitral Valve Disease (MVD). The valve changes lead to reverse flow of blood through the valve during the heart's pumping cycle. Over time this can lead to a backlog of blood within the system and ultimately congested heart failure* [read separate article on MVD and exiting new developments in the treatment of MVD](#)

Congenital murmurs

These result from malformation in the heart during development. The defects can include narrowing of valves, holes in the heart (communications between chambers of the heart), the incomplete closure of blood vessels or malformation of valves during development. These murmurs are generally detected at a young age and can range in severity between benign and life-limiting (only a few of which can be corrected). Flow murmurs – These are frequently heard in young puppies due to the fast, turbulent blood flow through the chambers and small blood vessels. There are no abnormalities in the heart and typically these murmurs disappear by 6 months old. Flow murmurs can also be detected in severe anaemia where the viscosity of the blood is altered.

Other murmurs

These can result from other conditions such as cardiomyopathy (weakening of the heart muscle) or endocarditis



(infections of the valves). Vets will generally grade murmurs depending on how loud they are on a scale of 1 to 6, with grade 1 being the quietest.

Murmurs in Dogs Can Lead to Heart Failure

Signs of heart failure include:

- Increased breathing rate
- Tiredness
- Difficulty exercising
- Coughing
- Difficulty breathing
- Fainting/collapse



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