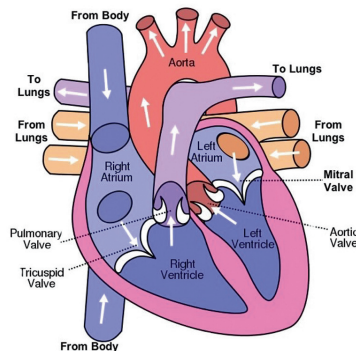


# Heart conditions in horses

By Matt Hanks BVSc, MRCVS at Central Equine Veterinary Services

**S**o, what can go wrong with the horse's heart? First let's look at some anatomy. The heart consists of left and right atria (or atrium) receiving chambers, left and right atrioventricular (AV) valves, left and right pumping ventricles, and aortic and pulmonic semilunar valves.



The right heart collects blood returning from the body via the large veins and pumps it to the lungs. From the lungs, the blood goes into the left heart which pumps it to the body via the aorta.

## Signs of an equine heart problem include:

1. Loss of condition
2. Increased fatigue during exertion
3. Shortness of breath
4. Weakness and occasional collapse
5. Fluid accumulation in and around the belly and/or chest

Many conditions are not serious enough to cause any signs and a horse can live a long and happy life with a mild heart condition.

## Heart murmurs

Most heart murmurs are caused by turbulent blood flow in one or more of the chambers of the heart, often caused by a valve not closing properly. We hear this as a 'whoosh' rather than the valves snapping shut with a 'lub-dub.' Heart murmurs are relatively common and often are not a cause for concern but the higher the grade, the more of a concern

the murmur can be:

**Grade 1** - Very soft murmur that requires extended auscultation to detect.

**Grade 2** - Readily audible murmur.

**Grade 3** - Readily audible murmur that is moderately loud.

**Grade 4** - Readily audible murmur that radiates widely.

**Grade 5** - Very loud murmur with a palpable thrill (vibration) that is detectable with fingertip pressure over the heart.

**Grade 6** - Very loud murmur associated with a palpable thrill that is audible with the stethoscope held just off the chest. The majority of heart murmurs heard in the horse are

of no cause for concern and can increase or vanish with exercise or when the horse is in an excited state.

In general, heart murmurs should be assessed by a specialist, especially when accompanied by other signs of cardiac dysfunction or illness. Some murmurs are caused by leaking valves but some can be caused by defects at birth.

## Heart rhythm irregularities

There are two main types of heart rhythm irregularities: regular and irregular.

Horses often have a 'dropped beat' which makes the heart sound like it's pausing for a beat but keeps the rhythm overall. So you can count 'one-two-one-two-one-two' but suddenly you hear 'one-two-one-PAUSE-one-two'. The heart beat should always stay regular. This is called a second degree AV block and is considered normal in horses when they disappear with work.

A more serious heart rhythm irregularity is atrial fibrillation which is a genuine arrhythmia. Atrial fibrillation is caused by the normally regular, organised atrial electrical waves becoming

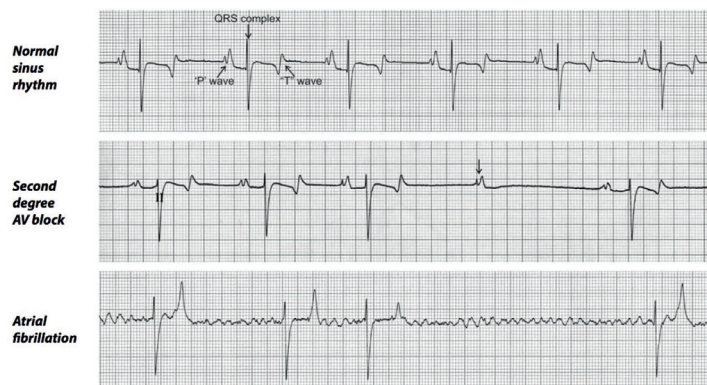
irregular, disorganised and chaotic, and the atria fail to contract normally. This results in an unpredictable, irregular heartbeat.

*In such cases, signs of cardiac insufficiency are usually not recognised at rest or with mild to moderate exertion,*

Although atrial fibrillation often develops in horses with advanced structural heart disease and atrial dilation, horses most often develop this arrhythmia with minimal or no detectable additional signs of heart disease. Draught breeds are more commonly affected. In such cases, signs of cardiac insufficiency are usually not recognised at rest or with mild to moderate exertion, but become apparent at more strenuous levels of exercise.

Accurate diagnosis of arrhythmias requires evaluation of an electro-cardiogram (see picture), where the lack of normal atrial waves and the irregular ventricular waves can be readily identified. Further evaluation of the structure and mechanical function of the heart by echocardiography (ultrasound) is also recommended.

Due to their unpredictable nature, it becomes difficult for a veterinarian to give the 'all clear' when a significant heart condition is identified and as such he or she may suggest that you don't ride your horse but remember that serious heart conditions are rare and unlikely to spoil your enjoyment of owning and riding an animal that can be considered all-heart.



**Central Equine Veterinary Services Ltd**

**Edinburgh: 0131 664 5606**

**Kinross: 01577 863333**

**info@centralequinevets.co.uk - www.centralequinevets.co.uk**

