



## Cardiac evaluation appointment

### ECG

To assess your horse's heart rhythm, we record and examine an ECG (electrocardiogram) at rest and during exercise. To do this, sticky pads are attached to your horse's skin, mostly around the girth area, leads are fastened to these pads, and they are connected to a small electronic box. This sends signals to a receiver in our laptop, and we can see the ECG in real time and record it for closer inspection after the exercise phase.

To ensure the pads stick to your horse's skin and to maintain good contact it is usually necessary to shave small patches of hair. If your horse is scared of clippers and needs sedation, this will have to be done in advance as sedation drugs will affect the ECG and your horse's ability to run around in circles. The exercising bit can be done on the lunge or under saddle depending on the use and fitness of the horse. We will therefore need a large area to lunge in, or an area suitable for riding at a relatively fast pace. It is important that we assess your horse's heart at a heart rate that would be similar or above what you would expect them to be doing in their daily work i.e. there's no point in assessing a racehorse at a steady canter.



Overview of exercising ECG where spikes in HR allow us to recognise points of arrhythmia which would need subsequent close inspection.





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### Echocardiography

Echocardiography is the name given to an ultrasound examination of your horse's heart. It allows us to evaluate the heart muscle thickness, chamber, and large artery sizes.

Echocardiography also allows us to utilise colour doppler and assess all the valves of the heart for any leakiness and, if present, the severity of it.

This kind of examination is often performed when a murmur has been detected by listening with a stethoscope at a routine or a pre-purchase examination.

To do this exam we use a special ultrasound machine and to obtain good quality pictures it is usually necessary to clip and scrub clean two small patches behind each elbow. Some horses resent being poked in the ribs, so we usually feed them a hay net or a lick throughout the procedure which lasts 30-60 minutes.

Again, clipping may need to be done in advance if your horse fears clippers. Also, this type of ultrasound machine is much more powerful than normal scanners and therefore needs to be plugged into an electricity socket rather than relying on battery.

