

Measuring horses' heart rate

The cardiovascular system, consisting of the heart and lungs, is of the utmost importance for the horse in order to be able to use the other body systems during physical exercise and how fast the horse's heart beats will be dependent on how hard the muscles are working.

A Horse's Heart Rate (HR) is measured for a number of different reasons. To measure fitness, stress levels, health and well-being. It is useful for horse owners to be aware of their horse's HR at rest when in good health as variations from this can be an indication of ill health.

The HR of an adult horse at rest averages 36-48 beats per minute, (BPM) and a pulse rate of 50 BPM or higher in an adult horse at rest may mean the horse is in physical distress. The horse's HR will increase if he is ill, excited or nervous, in pain and during and after exercise.

Sudden excitement or fear will result in a rapid increase in heart rate, with values of 80 to 100 BPM or more. During exercise a horse's HR can reach between 220 and 240 BPM.

Heart Rate can be measured to gauge fitness levels and assess training programmes. This information can minimise injury by avoiding overloading and fatigue, but also to ensure the horse is being suitably challenged to increase fitness. This is a crucial tool for horse owners, allowing them to evaluate their training programmes and many use a Heart Rate Monitor to give an accurate and measurement. A Heart Rate Monitor is also simple to use.

Heart Rate Monitors have become a modern tool to enable trainers, veterinarians and horse owners throughout the world to monitor equine heart rate in an accurate and efficient way. Heart Rate is considered the most reliable indicator of an equine's condition when used before, during and after exercise.

Another method to measure HR is to take a manual reading. A manual reading can be taken using two fingers under the horses left jaw bone to feel the facial mandibular artery and counting the pulses per minute. A manual reading can also be taken behind the horse's left elbow.

A study carried out at CAFRE Enniskillen Campus, compared equine heart rate monitors to manual pulse readings on horses of various fat scores.

Eight horses from the college were used in the study. Heart Rates were recorded by taking a manual pulse and by using equine heart rate monitor. Each method was recorded at rest and then again and after exercise. It was shown that there was no significant difference between the results collected from the manual pulse taken for 60 seconds and the data recorded from the heart rate monitor when the horse was at rest.

When comparing the methods after exercise, it was found to be difficult to measure the HR manually as the horse was less likely to stand still and because the HR dropped very quickly after exercise had stopped. The effect of Fat Score on HR monitor accuracy was also assessed and it was found to have no indication of an effect on the viability of the equine heart rate monitor.

Heart Rate monitors are easily fixed under the girth when riding or on a belt. The device transmits information to a watch worn by the rider or handler and can be used as a tool to ensure that the horse warms up correctly, does not over exert himself during exercise and to monitor recovery times.



During exercise a horse's HR can reach between 220 and 240 BMP