

The Importance of warming up your horse

Emily Wilton BSc(Hons), Dip. MCAM

Proper warm up is essential to keeping your horse fit and muscle tone elastic. Warming up and cooling down will help to minimize muscle stiffness and loss of range of motion. This will also help to prevent injury such as to tendons or muscles and help prepare the horse and rider both mentally and physically to maximise performance.

As an equine therapist, I often feel that people misunderstand the importance of warming up their horse. In the busy lives we lead, it is easy to ignore or cut short a good 10-minute warm up session before any activity. In some horses, particularly older ones, you may need up to half an hour. As you get to know your horse, you will be able to establish the length of time needed. If we now discuss what happens in the warm up phase it may help to understand the importance of it.

Oxygen availability

Initially the warm up increases both the heart rate from a resting state and the horse's circulation. Oxygen is carried in the blood to the muscles and tissues, and an increase in circulation means that oxygen can reach the muscles faster. Also, during this time the spleen contracts, and this releases red blood cells, which are responsible for carrying oxygen. More red blood cells mean a larger oxygen carrying capacity and the more oxygen in the horse, the better the performance. Horses are unique in their ability to store red blood cells in their spleen and when horses exercise the volume of red blood cells can increase by as much as 70%. A warm up will ensure that the release of red blood cells will be complete because there is a lag time between the start of exercise and contraction of the spleen. The red blood cells can then be distributed uniformly in the blood.

Body Temperature Alteration

The warm up increases the temperature of muscles. Glucose and glycogen are the main fuel used when we exercise and the utilisation of these generates heat, which raises body temperature. Certain enzymes in muscles work better at higher temperatures. However if the core body temperature gets too hot the body will shut down so a gradual increase in temperature is required. Haemoglobin functions in oxygen transport more readily at higher temperatures therefore it is more efficient if the muscles are warmer.

Energy Preservation

Horses and humans use glycogen (which is stored in the muscles) in the initial stages of exercise, as glucose is not yet available in the blood. There is only so much that can be stored in the muscles so this supply of energy needs to be preserved. Warming up slowly enhances the use of glucose in the blood, so if you don't warm up you will quickly run out of energy as the glycogen becomes depleted.

Musculoskeletal benefits

Every stride the horse takes causes an impact on the tendons. The warm up process increases the elasticity of the tendons allowing them to stretch to a greater degree without injury. This is because the collagen molecules in the tendons pack together and water is redistributed within the matrix.

Warming up also increases the strength of muscle. A weight lifter for example, will start off lifting a light weight and as the muscles become stretched, will increase the load. This is the same for a horse - the muscle contraction strength is increased as the muscles are stretched in the warming up period.

There are many ways in which people choose to warm up their horse - there are no hard and fast rules but the factors I suggest to people to consider are:

- The time it takes dependent on whether the weather is hot or cold. As much as you want your horse to be warm, you do not want to exhaust him in the heat!
- The time may vary on the age or breed and temperament
- Do not warm up too early for a competition or for too long
- Use a rug in between classes to prevent your horse getting cold
- Use the warm up to physically and mentally prepare you and your horse
- Warming up the tendons and muscles can help prevent injury

I hope this article can show you the reasons why is it so important to warm up your horse and gives you a different perspective to the processes that occur during this phase. Emily Wilton, (2008). emily@animaltherapist.co.uk; Tel 0780 3294446. www.animaltherapist.co.uk