

Heat Stress and Heat Stroke

As summer temperature rise and competitions start again it's important to know how to effectively prevent, diagnose, and treat heat stress and heat stroke in our horses. Just because the weather is hot doesn't necessarily mean we can't enjoy riding, we just have to be prepared to change up our routine a little and be ready to handle a heat induced incident should a problem arise.

Summer riding routines should be tailored, if possible, so that you are riding when it's cooler outside, typically in the early morning or late evening. Avoid riding in the heat of the day and when humidity is high. High humidity makes it much harder for sweat to evaporate which makes it harder to cool down. If you have a well ventilated covered arena available use it or find a nice shaded area to ride in. While riding, whether out on the trail or in a competition, it is important to take lots of breaks with the whole horse, head to tail, in the shade.



Provide ample fresh, clean water. Check daily that buckets or troughs are not contaminated with bird droppings, insect larvae, chaff, or algae growth. Try to keep the water cool. Horses may not want to drink warm water. Ponies and foals may have trouble reaching to the bottom of a shallowly filled trough. Make sure everyone in your paddocks can reach the water. During very hot weather, consider keeping your horses stabled during the day, and let them out at night. If your stables become hot and stuffy, consider setting up a fan. Make sure the horse cannot reach the cord or fan itself, it can't be tipped, and that it is plugged into a ground fault interrupt electrical receptacle if there is any chance of electrical wiring coming into contact with moisture, such as a spilled water bucket or a curious horse's mouth.

Remember that travelling in fully enclosed trucks or horsefloats with very little ventilation can also cause heatstroke. Locking dogs and children in stationary cars is deadly, the same applies to horses and horsefloats. It is also a good idea to offer a salt lick or mix electrolytes into the horses feed or water. Always follow the specific instructions for each brand of electrolytes and your vet's advice. Twice of much of a good thing is not better!

Even taking all the necessary precautions does not ensure that our equine friends will be protected from heat related illness. The signs of heat stress are easy to recognize, even without veterinary training. Some of the most common signs are dehydration, excessive sweating, not sweating at all, accelerated heart and respiratory rates, lethargy, and an elevated temperature. A simple way to check for dehydration is to pinch the skin on your horse's neck, a properly hydrated horses skin will snap right back to place when released. If the skin remains standing or is slow to reform to the neck, your horse is dehydrated.

The treatment of heat related illnesses should begin by getting the horses temperature lowered as quickly as possible. Immediately stop exercise, move your horse to a shady area, behind a fan if available, and repeatedly hose the horse down with cold water. If away from home standing a horse in a dam or creek and sponging and bucketing water over them will work. Sponge or spray the large blood vessels along the inside of the legs and belly. Offer sips of water.



You should also pay very close attention to the amount your horse is sweating. Know what is normal and acceptable for your horse. If he begins to sweat an unusually excessive amount, you should consider letting your horse take a break. Additionally, also be sure to check that your horse is sweating. Just as humans do, horses need to sweat in order to cool their bodies down to a safe level. If your horse is not sweating at all or sweating very small amounts it is very possible that he is suffering from anhydrosis. Anhydrosis is where horses lose the ability to sweat, and therefore their most effective cooling system. It can also cause hair loss, dull or damaged hair, and in some cases a decreased heart rate. There are a number of medications available on the market to help control anhydrosis. If you suspect your horse suffers from anhydrosis call your vet to discuss a treatment plan.

Call a vet and take immediate action if your horse exhibits any of these symptoms:

- Elevated respiration in an inactive horse Elevated pulse in an inactive horse, pulse that does not drop after several minutes, or climbs once exercise has stopped. An average respiratory rate in a working horse is usually around 60 breaths per minute but can increase to over 100 breaths per minute for a very intense workout.
- A normal heart rate in a working horse can range from 80-150 beats per minute and sometimes as high as 250 beats per minute for a very intense workout (such as a long gallop).
- Profuse sweating or no sweating at all.
- Elevated body temperature above 103F. A horse's normal temperature range is 99-101 degrees. Anything over 104 is considered unsafe.
- Irregular heart beat known as 'thumps.'
- A depressed attitude.
- Dehydration. Pick up a pinch of skin along your horse's neck. If the skin snaps back quickly, the horse is sufficiently hydrated. If the pinched area collapses slowly, the horse is dehydrated.



- The best way to use your horse's vital signs when diagnosing heat stress and heat stroke is to see if the vitals drop after exercise has been discontinued. After 10 minutes of rest, the vitals should have begun to drop back to normal range. If they have not, this is a good indication that your horse is in distress and may require treatment.

There are a few myths concerning horses and heatstroke that need to be put to rest.

- Make sure your horse has water! A common misconception is that a horse should not be offered water when hot. If they have normal to increased gastrointestinal sounds then let them drink, but not so much that their stomach can be distended, not bucketfuls. While drinking large amounts of water when a horse is hot can lead to colic we should still offer frequent but small amounts of water. Just a few swallows every few minutes is enough. This can be continued until the horse is completely cooled down, after which he may be offered free choice of water.
- Sponge or spray the large blood vessels along the inside of the legs, chest and belly. Traditionally, we were taught not to put cold water on horses' backs and hindquarters but if you have extra helpers putting cooling water all over the horse is great. Exercising muscle can reach 110 degrees (F), at which point protein fibres start to fall apart, and must be cooled off. The quicker this is done the better.
- Unless you are continuously pouring cold water or hosing your horse, you should scrape excess water off his body. Unless water can evaporate quickly it will heat up to the horse's body temperature and effectively retain that heat in the horse.
- Don't leave wet towels draped over the horse's neck and head. Unless you keep pouring cold water over it, the towel will warm up and become an insulating blanket and retain heat.
- Trotting or lightly exercising will **NOT** cool horses off. The temperature of a trotting horse goes up, not down.

When the vet arrives, depending on the severity of the heat stroke, the vet will usually administer IV fluids, jug electrolytes, and in some cases, cold water enemas to assist in bringing your horses core temperature down. Heat stroke is a very serious illness and should not be taken lightly. Death can occur within hours of being overheated.