

Heat Related Emergencies – Horses

By: Lisa Beardsley, RN, BSN of the First Coast Classical Dressage Society and the Northeast Florida Dressage Association



Heat exhaustion and heat stroke consistently pose a threat to the health and wellness of our equine partners during the warmer months. Since they are unable to verbalize symptoms that they are not feeling well, we need to educate ourselves on the signs they exhibit that signal they are having a heat related reaction. Florida summers, with their high temperatures and insanely high humidity levels, create a condition of great threat for injury. Recall from last month's article, that heat exchange is dependent on gradients of temperature and moisture and as the ambient temperature and humidity increase, thermal transfer of heat becomes less efficient resulting in increased core body temperatures and increased possibility of heat related reactions. Here in Florida, this situation exists almost continuously for many months. Fortunately, by observing for signs associated with overheating and taking measures to correct the condition, bad outcomes may be avoided. Like many conditions – Prevention is key.

Heat exhaustion precedes deadly heat stroke, so it is imperative that the signs of heat exhaustion are readily recognized and actions to reverse the condition are undertaken immediately. If cooling actions are taken in error on a horse that is not truly being affected by the heat, it is far better than delaying treatment to an animal that is having an issue. If you have any concerns – initiate cooling measures. Do not rely on body temperature alone to determine if there is a heat reaction taking place, as body temperature readings may be normal. Be aware instead of the subtle signs your horse will exhibit. Monitor your horse at all times during the summer for any signs of heat exhaustion and take preventative measures as needed. Be sure to monitor your horse very closely during and after rides or when trailering as they are at increased risk of heat related illness during these activities.

In horses, sweating is the first line of defense against over heating. Once heat transfer becomes inadequate from sweating, the body attempts to dissipate heat through air exchange through rapid nasal breathing known as panting. If your horse suffers from anhydrous (does not sweat), a condition common in hot humid environments – your responsibility for prevention of heat exhaustion increases exponentially. (See: Prevention of Heat Related Emergencies Below)

As heat exhaustion progresses to heat stroke, the ability to sweat decreases or ceases and the horse becomes disoriented and unsteady on its feet. At this point, the horse is critical and may possibly collapse and die at any moment. Reversal at this point is quite difficult, if not impossible, unless a veterinarian and the proper equipment are immediately available. Again prevention is the best treatment for this condition. When heat stroke exists, rapid cooling must begin immediately if there is to be any hope of survival. Evaporative cooling is the best way to attempt to reduce core body temperature. If the horse is able to walk – take it to the wash rack and continuously spray it with cool water and place blowing fans on high speed upon the horse. Provide shade if possible. If there is a veterinarian at hand expect that intravenous electrolyte fluid replacement will ensure along with the potential for administration of cool water enemas. Icing the horse should be avoided as it actually causes vasoconstriction (tiny blood vessels become smaller) there by reducing blood flow to the skin surface impeding your cooling attempts. *Cool* water from a continuous running hose is best. If the horse is unable to walk, make every effort to continuously wet the horse with running water or repeatedly pour buckets of cool water over the horse. To simply wet the animal once or twice will not reverse the condition as the water next to the skin is quickly warmed and ceases to provide cooling measures. Fan the horse with towels, tarps or anything that will cause air movement. If possible run electrical cords to the horse and place blowing fans on high speed upon it. Provide shade by using tarps if possible. Regardless of attempts made at this point, survival rates are low. If you only recall one word from this article – let it be – ***Prevention. Prevention. Prevention.*** We live in the most dangerous climate for horses to experience heat related emergencies. Take preventative measures to assure your horse (and you) has as pleasant a Florida summer as possible. Actions taken by you will determine if your horse has reduced physiological stress this summer or is playing the horse version of Russian roulette.

Causes of Heat Exhaustion / Stroke	Treatment for Heat Stroke
<ul style="list-style-type: none"> ● <i>The #1 predisposing factor</i> is a very hot and humid environment (horses at rest may be affected too) ● High levels of physical stress ● Exercise ● Increased weight (obesity) ● Respiratory diseases ● Age (very young, very old) ● South East United States Region specific; increased physical activity levels in the presence of high temperatures and high humidity 	<ul style="list-style-type: none"> ● Get the horse out of the sun and into shade ● Offer cool water (not ice / not warm) ● Remove all tack, leg wraps/boots, etc ● Wet the horse repeatedly with cool water. Preferably a continuous cool running hose ● Begin Evaporative cooling measures by placing blowing fans on high speed upon the horse as it is hosed down with cool water ● Cool water enemas (by vet) ● Intravenous fluid and electrolyte replacement (by vet)

<u>Heat Stroke - signs</u>	<u>Heat Exhaustion - signs</u>
<ul style="list-style-type: none"> • Restlessness/Lethargy • Rapid pulse and breathing • Heavy breathing/panting • Increased/ No sweating • Excessive salivation • Redness of the tongue and oral area • High body temperature; 104+ • Erratic heart beat • Muscle spasms • Stumbling gait • Collapse • *note “panting” means rapid nasal breathing 	<ul style="list-style-type: none"> • Increased sweating • Increased respiratory rate • Increased heart rate • Pronounced dilated veins • Normal or elevated body temperature (101 – 103) • Dehydration (test pinch the skin – it should be smooth again in 1-2 seconds. If it takes longer – dehydration is present) • *note: Dehydration -- Once present, the cascade towards heat stroke has begun!

Prevention of Heat Related Emergencies

- Avoid the hot sunny part of the day. Ride early in the morning (before 10 am) or at sunset with arena lights. (Keep in mind that summer temperatures peak around 5-7 pm).
- Test your horse for dehydration prior to your ride by performing the “Pinch Test”. If dehydration is present postpone your ride until another time and determine how to prevent future dehydration by evaluating your horse’s environment for causes. (To perform a Pinch Test – pinch a small amount of skin on your horse’s neck or shoulder. If the skin takes longer than 2 seconds to return to normal, dehydration is present. Ideally, the skin should instantly snap back into place)
- If you must ride after 10am and before sunset, if at any way possible, ride in a covered arena or in the shade.
- Offer water during workouts – do not wait until your ride is over, or worse, until the horse is unsaddled, washed down and put back to pasture or into its stall.
- Train your horse to drink frequently by offering water throughout your workouts at home and during warm up / cool down periods at shows.
- Expose your horse to water with electrolytes at home so he will be more willing to drink it when offered in an emergency situation
- During rides, dismount and sponge down your horse with cool water during workouts and warm-ups (inside legs, belly, and neck) (every 10-15 minutes) (Someone on the ground may do this for you.)
- Increase the length of your cool down period. Dismount. Loosen the girth or remove the saddle and pads. Offer water and walk the horse (preferably in the shade) until and beyond cool
- Utilize fans blowing on high speed onto you and your horse when untacking and washing down after rides
- Assure your horse is on an electrolyte supplement during the summer months
- Assure your horse is getting enough calories/feed as increased calories are needed to effectively cool the body
- Provide shade continuously throughout the day. Do not ride a horse that has been forced to stand in the hot sun all day.
- Be aware of your own heat status – if you are affected, you may not notice signs in your horse.

If there is any one step you can do to minimize the threat of heat related emergencies in your horse – *offer water frequently*. Train your horse to drink often by offering water before, during and after your workouts and during show warm ups/cool downs. Offer cool or room temperature water. Avoid iced water or water that has been sitting in the hot sun for any period of time. Do NOT wait until your ride is over to offer water, or worse, until the horse is unsaddled, washed down and put back to pasture or into its stall and finally has access to a water bucket. If your stable does not have drinking water available in their arena, make a habit of taking a water bucket to the arena with you. In fact make a habit of taking two buckets. You will be better balanced during your walk and you may use one bucket for sponging off your horse during the workout and the other for offering drinking water. Use white or light colored buckets and take a towel to cover the water from the sun to keep it cooler or place the buckets near by in the shade. You may be very surprised at how much your horse actually drinks during workouts at home and at show warm ups! Remember, that heat and humidity affects horses at rest too. Assure all horses that are in pastures have access to shade at all times and that fans are utilized for horses standing in stalls. Be sure there is plenty of cool drinking water available at all times for all horses where ever they may be – stalls, pastures, arenas, or trailers. If troughs or buckets are in the sun, consider building shade barns to house these items to keep them cool in the summer.

When trailering your horse during hot months be sure to have your own supply of water and buckets along on the drive. Schedule your drive to avoid the hottest time of the day. Also, time your drive to avoid periods of heavy traffic as air flow inside the horse area is greatly reduced when the vehicle is not in motion. Install fans inside the trailer to blow upon each horse as you drive. Assure all windows and vents are open. Be sure to offer water before you load and along the drive if it is greater than 60 minutes. Unload as soon as possible once you arrive at your destination and offer water yet once again. You may also want to keep the water container inside your vehicle during the haul so that the water does not become warm or hot during transport. Cooler water will facilitate drinking along the route and immediately following unloading. Do not wait until you unload your gear and set up your stalls at your destination to offer water. Have your buckets and water supply on hand and ready to go. Do not make the mistake of assuming water will be available at your destination – even if it is a show ground – as systems fail and waterlines break. Be prepared for your horse's sake.

In closing, remember actions taken, or not taken, by you may greatly influence the health and wellness of your equine partner(s). A little time, consideration and implementation of heat exposure prevention will go a long way to increase the comfort level of your horse this summer. Remember too – ***Prevention, Prevention, Prevention***.