

PREVENTION AND TREATMENT OF HEATSTROKE IN HORSES

"Heatstroke is not just a summer disease. It happens in the spring and fall too. It is worse in the summertime, when it is hot and humid," says Dr. Jonathan Foreman, equine veterinarian at the University of Illinois College of Veterinary Medicine at Urbana, "but it can happen anytime.

"The biggest risk factor is being unfit. The backyard horse is more at risk than the competitive horse because it is less likely to be fit," he adds. The ability to lose heat is related to body size and shape. Physiologically, heat retention is a function of body mass or volume and heat loss is function of body surface area. A larger animal has a larger volume to surface area ratio and "better" heat retention. A big heavy horse will overheat faster than a small fit one. "That is one reason Arabs are good endurance horses," says Dr. Foreman. "It is also why most Olympic three-day event horses are Thoroughbreds or Thoroughbred crosses as opposed to strictly warmbloods."

Signs of heatstroke are unexpected fatigue, possibly stumbling, and an increased respiratory rate. Horses normally lose heat by sweating. When they are overheated, they pant in order to lose more heat. If the respiratory rate becomes higher than the heart rate, especially after resting for a few minutes, then the horse is overheated and needs help.

When this occurs, cool the horse off immediately. Get it in shade. Offer some drinking water. Run as much cold water over the horse as you possibly can. Use a fan, if one is available, to help cool it off. It is important to keep pouring cold water over the horse.

If you have to trailer the horse out to provide these things, bring the trailer to the horse. The last thing you want to do, if you can help it, is to make an exhausted, overheated horse exercise more by walking to the trailer. Find a shady spot to rest the horse where someone can pull up a trailer.

Watch for respiratory and heart rates to go down and an appetite for food and water to pick up. If there is no improvement after 20 to 30 minutes, and especially if the horse stops sweating, then call a local veterinarian for help.

There are a few myths concerning horses and heatstroke that need to be put to rest. "Traditionally, we were taught not put a lot cold water on horses' backs and hindquarters," says Dr. Foreman. However, exercising muscle can reach 110 degrees (F), at which point protein fibers start to denature or fall apart, and must be cooled off. "We've done it to over 500 horses in field settings and competitions leading up to and including the Olympics. We were slinging ice-cold water everywhere and had no horses tie up."

One thing you should not do is 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.

Another myth forbids a hot horse to drink water. "If they have normal to increased gastrointestinal sounds then let them drink, but not so much that their stomach can be distended, not bucketfuls," says Dr. Foreman. "In fact, the thirst drive to drink decreases with time after exercise." If you let them drink right away, they usually will. If you wait, even 5 to 10 minutes, they may not drink at all for a while even though they are dehydrated.

Another myth is that trotting or cantering will cool horses off. The rider feels refreshed by moving through the air. However, horses produce more heat to create the breeze than they lose to it. The temperature of a trotting horse goes up, not down.

You can prevent heatstroke by providing protection from the sun and by always having a salt block available. "People underestimate how much radiant heat is gained by standing in the sunshine. They think of it for themselves and wear a hat but they don't think of it for the horse," says Dr. Foreman. "Also, a salt block will provide electrolytes lost in sweat." A horse will sweat just standing in the pasture and will lose a lot of sodium and chloride and fair amount of potassium. 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.

The two most important factors are horse fitness and rider awareness. Watch for signs of heatstroke and cool it before there is a problem. If you would like further information on heatstroke in horses, contact your local equine veterinarian.

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