

The IMPORTANCE of WATER in WINTER



Usually, when a horse owner thinks about dehydration it's during the summer. After all, it's hot and humid during the summer and the summer is when we ask the most of our horses. Therefore most horse owners would be surprised to learn that horses can actually be thirstier during the winter. During the winter, especially if the humidity is high, a horse's thirst mechanism does not always function as efficiently as it does in the summer.

Most adult horses weighing, on average, 1,000 lbs. require a minimum of 10 to 12 gallons of water each day for their basic physiological needs. Water is the most important nutrient in a horse's diet because it is needed for just about every bodily function. It is essential for maintaining normal digestion and proper moisture levels in the feces. It is also vital to maintaining normal blood volume and it aids in the normal function of the sweat glands.

A horse's body loses water constantly through the urine, feces, and moisture in breath exhaled from the lungs. Additionally, if the horse is worked during the winter, significant water can also be lost from sweating. If a horse loses too much water from its body and does not replenish it, or if a horse just doesn't consume enough water to meet its bodily needs, dehydration occurs.

There are two common complications that result from inadequate water consumption during cold weather. The first is decreased feed intake. One reason for this is the lack of saliva to mix with the feed as it is being chewed. A normal adult horse that is well hydrated will secrete up to 10 gallons of saliva per day to help soften its feed as it is being chewed and swallowed. Reduced saliva production due to dehydration makes chewing difficult and swallowing painful.

The second, and potentially more detrimental complication, is impaction colic or constipation. Both the feed material during digestion and the fecal contents after digestion must maintain sufficient moisture levels. If they do not maintain sufficient moisture levels, they are not moved along the intestinal tract in a timely manner and may cause an intestinal blockage (impaction). Impaction does not occur in a single day, the process usually happens over several days to several weeks. As the horse fails to drink enough over an extended period, it becomes chronically dehydrated, the body reserves are lowered and

the stage is set for an impaction.

The first signs of impending impaction include decreased manure production and/or drier feces. Owners should keep an eye out for signs that the horse is not eating well or becoming lethargic or that fecal changes have occurred. If any of these signs are spotted, the owner may be able to prevent a colic episode by encouraging increased water consumption.

If the impaction is not resolved, the horse will display signs of pain, such as pawing, laying down, and rolling. At this point the horse owner should definitely call their veterinarian. Early detection usually means the colic can be treated without requiring surgery.

Encouraging horses to drink is no easy feat. As the old saying goes, "You can lead a horse to water but you can't make him drink." However, there are a few things that horse owners can do to inspire their horses to drink.

Horses should always have free choice, good quality water available. Good-quality water must be free of harmful germs, foreign material, excessive minerals, environmental pollutants, and unusual flavors.

Studies have shown that the best water temperature for horses is from 45 to 65 degrees. Many horses will decrease consumption if the water is below 45 degrees, especially older horses whose teeth are sometimes more sensitive.

Increasing salt intake will also stimulate a horse's thirst mechanism. The idle, adult horse should consume about two ounces of salt per day. While salt is added to most commercial grain mixes, it is always a good idea to offer it free choice loose or in a block. If you've offered the salt free choice and the horse still isn't drinking enough, additional salt may be given either by adding it to the grain or as a salt slurry. A salt slurry is made by mixing one-ounce of regular white table salt with water in a syringe and administering it orally. As long as free-choice water is available, consumption of additional salt will not result in health problems.

—SARAH GEE

References:

Jones, Steven M., *Responsible Horse Care for Winter and Summer*, FSA3031 University of Arkansas Division of Agriculture Cooperative Extension Service.
Marteniuk, Dr. Judy, *Winter Dehydration in Horses*, a publication of the College of Veterinary Medicine, Michigan State University.