

Dehydration is preventable

The key to prevention is to provide adequate water and supplemental electrolytes.

Water makes up about 65% of a mature horse's body weight. For a 15.2-hand, 1,000-pound horse, that amounts to 650 pounds or 85 gallons of water!

- In a cool environment, an inactive horse needs 7 to 10 gallons of water a day.
- In a hot or humid environment, a horse might drink more than 20 gallons of water a day.
- Exercise increases the amount of water a horse must consume to remain hydrated. For example, a racehorse can lose up to 3 gallons of fluid as sweat in a single race.
- In the winter months horses prefer drinking water that is at room temperature or warmer.
- It is important to know how much water your horse drinks. A typical water bucket holds 5 gallons of water.

How healthy horses lose fluids and electrolytes

Fluid and electrolytes are lost through the excretion of sweat, manure and urine. Losses from normal defecation and urination are typically replaced by average feed and water consumption.

Losses due to sweating are another matter. Sweat is made up of fluid and electrolytes, so when horses sweat, regardless of the outside temperature, they lose both water and electrolytes. Horses generate a tremendous amount of heat in their bodies when they exercise or when they are stressed. Sweat is nature's way of cooling the horse's body. In hot temperatures or when a horse is working hard, large amounts of sweat are needed to keep a horse cool.

Understanding dehydration and electrolyte imbalances

Dehydration occurs when a horse doesn't have enough water in his body to carry out normal functions. This happens when fluid losses exceed fluid intake.

Coinciding with fluid loss is electrolyte depletion. Electrolytes are essential because they help regulate nerve and muscle functions by carrying electrical impulses between

cells. In addition, they assist the body in maintaining a healthy fluid balance by controlling your horse's desire to drink.

The majority of the fluid and electrolyte losses in a healthy horse occur because of sweating. Sweat pulls fluids from the circulating blood volume. Reduced fluid levels can lead to:

- Decreases in the thirst response, so horses stop drinking
- Inadequate blood supply to tissues
- Inefficient delivery of oxygen and energy sources to working muscles

Lack of fluids and electrolytes put a horse at risk for dehydration, muscle cramping, fatigue, tying-up, and colic.

Steps to prevent dehydration and support adequate electrolyte levels

In order to maintain proper hydration, horses must drink significant quantities of water and replace lost electrolytes. Exercise increases the need for water because of fluid losses incurred through sweating. To maintain adequate hydration and electrolyte balance, incorporate these strategies into your management practices:

- Ensure horses always have fresh, clean water available; hang multiple buckets and keep water tanks clean.
- Give horses ample opportunity to drink during long schooling sessions, trail rides, and multiphase competitions.
- Let a horse drink his fill during cool-out sessions. It is an old wives' tale that hot horses should not drink.
- Return electrolytes to the body in the same ratio in which they were lost. Supplement with a properly balanced electrolyte that contains a 1:2:4 ratio of potassium, sodium, and chloride, respectively.



Monitor for dehydration and catch it early

Know how to perform a skin-pinch test.

- Pinch the skin near the point of the shoulder.
- Sufficient hydration: the skin snaps quickly back into place.
- Moderate dehydration: the skin may stay tented for two to four seconds.
- Severe dehydration: the skin will remain lifted from the flesh for four to six seconds.

Assess hydration by checking capillary refill time (CRT).

- Press a finger or thumb on the upper gum, above an incisor, for a second or two. Upon removal of your finger, the pressure point will be blanched.
- If the color returns to the gum in one to two seconds, the horse is amply hydrated.
- If it takes longer than two seconds for the color to reappear, the horse is likely dehydrated.

It's a good idea to practice these techniques when you know your horse is healthy and well hydrated. That way, you will know what is normal for your horse and will be able to readily observe differences in skin tone and CRT.

Choose a well-balanced electrolyte and feed it according to your horse's needs.

ElectrolyteWise™:

- Aids in the maintenance of optimal hydration year-round
- Is a concentrated, low-sugar formula that allows you and your veterinarian to easily adjust the amount offered to meet your horse's specific needs
- Provides essential electrolytes in the proper ratios
- Replenishes B vitamins that play a key role in energy metabolism and the production of vital enzymes
- Supports trace mineral levels necessary for effective metabolic and muscle function



Follow proper supplementation guidelines:

ElectrolyteWise should be added as a top dressing on the daily grain ration or mixed with a carrier (applesauce or molasses, e.g.) and given orally.

ElectrolyteWise can be used as a daily supplement. Because of its concentrated formula it is easy to adjust the level of supplementation to meet your horse's individual needs. The amount of supplementation will depend on the level of work and the intensity of the heat and humidity the horse is working in.

During the cold winter months ½ to 1 oz of ElectrolyteWise can be supplemented daily to stimulate a horse's thirst response. Proper hydration in the winter decreases the risk of impaction colic. Horses should have access to ice-free fresh water at all times when being supplemented with an electrolyte.

ElectrolyteWise Administration Guidelines

Level of work	Normal Environment (oz/day)	Hot, Humid Environment (oz/day)
Rest	0	1
Light Work	1	1-2
Moderate Work	2	2-3
Heavy Work	3*	3-4*

**It is recommended to divide daily doses of 3 to 4 ounces into separate feedings of no more than 2 oz each.*

Guidelines for determining workload level

Always take temperature and humidity levels into consideration when supplementing with an electrolyte. Horses will sweat more in hot, humid climates. When it is very dry or cold, sweat may evaporate quickly and be less noticeable.

Light Work:

Visible Sweat (up to 5 liters sweat loss)
For example: low-level dressage, western and English pleasure, trail horses, equitation.

Moderate Work:

Dripping Sweat (5-10 liters sweat loss)
For example: jumping horses, upper-level dressage, racehorses, barrel racing, cutting, roping.

Heavy Work:

Dripping Sweat for Extended Periods (more than 10 liters sweat loss)
For example: upper level three-day event, western performance horses, polo ponies.