

Nutritional Minute



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Affordable, effective, research-proven supplements

The Scoop on Electrolytes and Hydration

What are electrolytes?

Imagine you are riding your horse on a hot summer day. If you do more than walk, you both begin to sweat. After a good workout your horse's coat is soaked and in some places even frothy. As you remove your helmet, the sweat runs down your face and you taste the saltiness on your lips. That salty flavor is from the electrolytes that, along with water, make up sweat. Electrolytes serve multiple functions in your horse's body. The primary electrolytes we are concerned with in equine nutrition are sodium (Na), magnesium (Mg), calcium (Ca), potassium (K), and chloride (Cl). Electrolytes in the correct ratios play a significant role in hydration (thirst response), muscle function, and the cellular water balance within your horse's body. When your horse's electrolytes are out of balance, problems occur.

Do everyday feeds and forages contain electrolytes?

Yes, everyday feeds contain some electrolytes, but not always enough to meet your horse's needs. Generally speaking, most forages (hay and pasture) are considered insufficient in sodium and only marginal in chloride. For this reason ALL horses—whether on pasture, dry lot or in a stall—should be provided free-choice salt in the form of a block or loose mineral. On the other hand, forages contain sufficient amounts of potassium for an average horse at maintenance. Some forages, such as alfalfa, contain greater quantities of calcium than other forages, such as orchardgrass. Still, many types of fresh grass and hay contain sufficient calcium for an adult horse at maintenance. Magnesium is generally adequate in good quality legume hays, although lush pastures and some low-quality hays can be deficient in the mineral.

Most commercial feeds are formulated to offer horses maintenance quantities of electrolytes. Electrolytes are added in the form of a mineral premix that is mixed in with the grains or pellets. However, it is important to realize that commercial feeds must be fed in accordance with the manufacturers' feeding directions to ensure your horse is receiving sufficient quantities of electrolytes for the phase of growth, production or work that the feed is formulated for. When additional electrolytes are needed beyond what forages and concentrates supply, an electrolyte supplement must be added to your horse's diet.

Do electrolytes make my horse drink? Why is that important?

When you eat salty foods you get thirsty. The same thing happens to your horse. The reason people and horses react this way is because sodium is responsible for signaling the body to drink. Horses and humans are two of the few mammals that cool themselves by sweating. Working horses, particularly in hot and humid environments, will sweat and sweat excessively,

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losing both water and electrolytes. The electrolytes and water that are lost in sweat must be replenished. While we can lead a horse to water, we cannot make him drink, but sodium can! Therefore, supplementing with sodium and other electrolytes is critical in triggering the thirst response so that your horse will drink. Rehydration, muscle recovery, proper gut function, and a multitude of cellular functions depend on a horse drinking enough water to replace what was lost from sweating.

When should I feed supplemental electrolytes?

Working horses sweat and hardworking horses sweat a lot, even in cold weather. A horse working at low intensity can lose between 5 and 10 liters (about 1 to 2.5 gallons) of fluid from sweating. Hardworking horses can lose up to 50 liters (about 13 gallons) of fluid! Horses being transported or those in stressful conditions will also sweat, sometime profusely. In order to stave off water loss and muscle fatigue, electrolytes must be supplemented before and after situations where horses sweat. Most commercial feeds are formulated with quantities of electrolytes that meet only maintenance (hanging out or light exercise) requirements. Remember, all feed manufacturers expect you to provide your horse with free-choice salt and a fresh, clean water supply. Feed formulas are created with the assumption that horses will be managed appropriately. When water and electrolyte loss do occur as a result of work or stress, it may well be in excess of what a horse can replace by consuming a normal diet. This is when it is important to supply an electrolyte supplement (like KPP's Summer Games Electrolyte) that is developed to provide the right amount and balance of critical electrolytes to your horses.

So soak up the sun and enjoy a good workout with your horse. Just remember, an ounce of prevention (or in this case supplemental electrolyte) is worth a pound of cure.



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