Horses and Electrolytes- The Proper Balance

You can lead a horse to the salt block but you <u>can't</u> make him lick. This statement is as true as the old maxim concerning making a horse drink water. In fact, the old salt block may not be licked frequently enough to provide adequate consumption for your horse's salt and mineral needs. Salt as well as water is at the top of the list for healthy animals. Why are salt and water so important? The answer to that question is easy. A horse's body is made up of approximately 60% liquid. Salt and water are the major components of that liquid- change the natural balance in that equation for prolonged periods of time and trouble is generally just around the corner.

Basic Make-Up of Internal Liquid

The liquids found stored in a horse's body are divided into two areas: extra cellular and intracellular. Extra cellular is the liquid found outside the cell such as plasma, brain fluids, stomach fluids, etc. This accounts for approximately 33% of the total fluid in a horse. The other 67% is intercellular or liquid found within the structure of the cell. Some of the major components of the cells are: sodium (NA), chloride (Cl), potassium (K), calcium (Ca2), and magnesium (Mg2). These components are what are called electrolytes.

What are Electrolytes?

Electrolytes, at the primal level, are salts that divide into separate ions when they are dissolved in water. They are essential to basic muscle and nerve utility and to most of the other physiological processes. As mentioned above in the cell structure, basic electrolytes consist of: potassium, calcium, sodium, chloride, and magnesium.

Consequences of Lack of Electrolytes

A horse's body is constantly trying to correctly balance the electrolyte amounts in the system. In fact, if a horse receives too many electrolytes the horse's system will flush the excess out through urine or sweat. If this balance is deficient over time, the consequences can cause bodily dysfunction. Problems can develop in the brain, resulting in unclear thinking. Also potential areas for problems are the digestive system, the muscles, and even the heart.

Activities That Lower Electrolytes

Horses can lose large amounts of liquid in extreme exercise situations such as endurance rides, long trial rides, heavy work-outs, and competitive events.

Depending upon the activity and the air temperature, a horse can lose 2 ½ gallons (or more) per hour of liquid. That is a ton of liquid that will eventually need to be replaced. Horses have a tendency to lose more electrolytes in the sweating process than humans. During work-outs the biggest electrolyte losers are sodium, chloride, and potassium. It is during these electrolyte draining activities that you may choose to supplement your horse's electrolyte intake. Different methods and types of supplements are available from salt and mineral blocks to pastes and liquids.

Don't Forget the Water

While replacing electrolytes, don't forget to provide the water requirements for your horse. As a general rule a non-active horse needs about a gallon per 100 pounds of his weight per day. An active horse can required 2 to 4 times that amount. A method of adding liquid to your horse's diet is to soak or spray your hay with water before feeding. Dry hay can consume water that is necessary for the digestive system.

NutriBit

The majority of electrolyte loss takes place in the early stages of a work-out. During events like endurance rides or trial rides it is difficult to administer electrolytes and supplements during the ride. Now there is a new product called NutriBit that allows the rider to give electrolytes and vitamins to the horse while in the saddle. The secret of this device is found in the rein and bit system. With a pouch located on the rein, to hold liquid nutrients, the rider squeezes the pouch which pushes the fluid down the rein through an enclosed hose and into the bit. The bit has been manufactured to allow the nutrients to enter and exit by dropping on top of the horse's tongue.

The NutriBit system also has an option for an owner or caretaker to administer liquid nutrients while on the ground. The system has a quick release mechanism that changes quickly from an in-the-saddle system to an on the ground syringe-to-bit operation.

Whatever method(s) you choose for supplementing your horse's electrolyte needs be sure you don't give your horse the responsibility of giving himself the proper amounts of electrolytes or other vitamins and minerals, by means of a salt or mineral block. Take that responsibility yourself.

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