

Spring 2004 Comstock Health Chronicle

Rehydration Study

Although it is hard to believe based on our current weather, the summer competition season will be here before we know it. One of the big concerns for horseman in all disciplines is maintaining their horse's hydration while competing in the hot, dry months of summer. Proper hydration is not only important for holding the competitive edge, but is critical to the overall health of the horse.

Various studies have shown that both human and equine athletes do not completely replace fluid lost during exercise by voluntary drinking during the first few hours of the recovery period. There are a couple of reasons for this. The body's signal that it needs to drink is high levels of sodium in the blood. When an athlete sweats, both water and electrolytes are lost in sweat, so in addition to water loss, there is also a loss of the sodium needed to stimulate drinking. In addition, studies have shown that even severely dehydrated horses will drink no larger volume of water than their stomachs can hold. Therefore, satiation occurs before rehydration takes place.

Researchers at Michigan State University performed a study aimed at determining the best way to overcome these limitations to rapid oral rehydration of equine athletes. A diuretic (urination stimulator) and intense treadmill exercise equivalent to a 45-km endurance ride was used to dehydrate the study horses to a loss of 5% of body weight. They then looked at different times to offer water, different water temperatures, and different water salt concentrations to find which approach provided the best rehydration in the first hour after exercise. Here are their recommendations:

- * Offer the horse a 0.9% salt-water solution (6oz of table salt in 5 gallons of water) immediately after exercise. This was done in the study by offering a hand-held bucket to the horse for 5 minutes while it was standing. A dramatically increased respiratory rate and effort interfered with drinking, so horses were allowed to recover their breath before being offered the salt water.

- * After 5 minutes, the horse should be cooled out as normal with plain water available at all times.

- * Offer salt water and plain water at about 68°F as this is the temperature at which the horses drank the largest volume in the study. This is equivalent to hose-end water temperature during moderate ambient temperatures.

The researchers found no adverse effects of allowing unlimited water or saline drinking immediately after cessation of exercise.

This study, along with several other research projects that we feel will be of interest to our clients will be discussed at Dr. Frankeny's seminar *What's New in Equine Medicine and Surgery* (see upcoming seminars).

Welcome

We are very pleased to introduce our new associate veterinarian, Dr. Jody Hicks. Dr. Hicks is a Montana native and a 2001 graduate of Washington State College of Veterinary Medicine. After graduation, she joined R.G. Hibner and Associates in Livermore, CA and practiced equine medicine there until joining our practice in October. She has become a valuable member of the Comstock team and we hope you will all join us in giving Dr. Hicks a warm welcome to Comstock Large Animal Hospital and the Reno area.

Welcome (Addendum)

We are also very pleased to announce Dr. Alex Turner has joined our practice as an associate veterinarian. Dr. Turner is a 2002 Colorado State graduate of the College of Veterinary Medicine. After graduation, he completed an internship at Weatherford Equine Medical Center in Weatherford, Texas. Dr. Turner was as associate veterinarian there until joining Comstock Large Animal Hospital in mid-April. Please welcome Dr. Turner to the practice!

Here We Grow

As spring approaches, exciting things are happening here at Comstock Large Animal Hospital. We will be breaking ground on a new hospital soon. The project will change the entire face of our property, making it much easier for you, our clients, to visit with you horses and other animals. The

changes will include landscaping, new covered pens, a separate isolation barn, a lameness area, and the new hospital. The new hospital will house our reception area, offices, laboratory, pharmacy, three treatment rooms, radiology, and seven new stalls. The existing hospital will become the surgery center. Please do not hesitate to ask about our project when you visit us!