



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Equine Herpesvirus 1 (EHV-1) Reporting

Equine Herpesvirus 1 (EHV-1) can cause respiratory infections, abortions and neurologic disease in horses. The neurologic form of EHV-1 is called Equine Herpes Myeloencephalopathy (EHM), and can be caused by two different strains of EHV-1. Previously, only one of the two strains was a reportable disease in Minnesota.

Several veterinarians and horse owners attended the quarterly meeting of the Minnesota Board of Animal Health in April 2014 and asked that both strains of EHM be added to the list of reportable diseases in Minnesota following an outbreak of 7 EHM cases caused by the non-reportable strain in Minnesota in March and April of 2014. The Minnesota Board of Animal Health voted unanimously to make both forms of EHM reportable diseases in Minnesota.

The equine industry representatives in attendance at the Minnesota Board of

Animal Health meeting also requested that the Minnesota Board of Animal Health quarantine premises with positive cases of EHM, conduct epidemiological investigations, and post related information on the Minnesota Board of Animal Health's website. Minnesota Board of Animal Health officials will be working with equine industry leadership to create response guidelines for reporting EHM cases in Minnesota.

These steps will help ensure future outbreaks of EHM are communicated to the horse industry in Minnesota, will allow for collection of disease frequency, help identify disease trends, and track outbreaks.

To view a complete list of reportable diseases in Minnesota, visit www.mn.gov/bah/reportable-diseases.html

Source: *Minnesota Board of Animal Health and Stephanie Valberg, PhD, DVM, University of Minnesota*

Research Update: Stress During Transport

Acupuncture has been shown to have the beneficial effect of reducing stress responses in animals and humans. Pharmacopuncture is the injection of subclinical doses of drugs into acupoints to give therapeutic results without side effects. This study, conducted by researchers in Brazil, compared the effects of injecting the usual dose of acepromazine (ACP; 0.1 mg/kg, intramuscularly [I.M.]) with those of pharmacopuncture (1/10 ACP dose at the governing vessel 1 [GV 1] acupoint) on the stress responses of healthy horses undergoing road transport for 2.5 hours.

Four different treatments were applied immediately before loading, with 8 animals/treatment: injection of saline or ACP (0.1 mg/kg, I.M.) at the base of the neck; and injection of saline or 1/10 ACP

(0.01 mg/kg) at the GV 1 acupoint.

The road transport increased heart rate (HR), respiratory rate, body temperature, and serum cortisol of the untreated horses (injected with saline at the base of the neck). Pharmacopuncture at GV 1 reduced the average HR and transport-induced increase in HR at unloading, without changing the other variables. On the other hand, ACP (0.1 mg/kg) produced significant sedation and reduced the transport-induced increase in respiratory rate but without preventing the stress-induced increase of cortisol.

Other acupuncture points and drugs should be tested to verify the beneficial effect of this therapy to reduce stress in horses during road transport.

Summarized by: *Krishona Martinson, PhD, University of Minnesota*

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Upcoming Events

Lunch and Learn Webinar Wednesday, June 11, 2014

Noon to 1:00 pm

"Establishing a Horse Pasture" presented by Krishona Martinson, PhD, University of Minnesota

To join the webinar, visit <https://umconnect.umn.edu/pasture/>

Equine Pasture Management Program

One farm visit and a customized pasture and grazing management plan.

Registration open from April 1 through August 1.

\$650 per farm. To register: www.regonline.com/EquinePastureManag2014

75th Annual Minnesota Nutrition Conference

September 17 -18, 2014

Mystic Lake Casino
Prior Lake, MN

For more information, visit www.mnnutritionconf.umn.edu

Full day equine session on
September 18, 2014

5th Annual Horse Forage Field Day

Wednesday, August 20th

6:30 to 8:00 pm

St. Paul Campus

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Ask the Expert: Hay Soaking

By: Krishona Martinson, PhD, University of Minnesota

Questions: Should I always be soaking my horse's hay, or is this something reserved for horses with respiratory problems or other health conditions such as laminitis?

Answer: Soaking hay in water is a common strategy used to manage horses diagnosed with laminitis, equine metabolic syndrome (EMS), polysaccharide storage myopathy (PSSM), and hyperkalemic and periodic paralysis (HYPP). Soaking hay should not be done, and is not necessary, for healthy horses because essential nutrients are leached during the hay soaking process.

Hay is soaked for horses diagnosed with PSSM, EMS and laminitis to remove some of the nonstructural carbohydrates (NSC) from the forage; NSC are water soluble. Horses diagnosed with PSSM should have an overall diet of $\leq 10\%$ NSC, and horses diagnosed with EMS and/or laminitis should have an overall diet of $\leq 12\%$ NSC. Although forage is the major component of a horse's diet, when feeding horses diagnosed with these diseases, make sure to account for NSC content in any grain,

supplements, and treats the horse is also receiving.

Before soaking hay, it is critical to have the hay tested for nutritive value. Legumes (i.e. alfalfa) tend to be lower in NSC compared to cool-season grasses (i.e. timothy), and hays containing legumes may not need to be soaked. Soaking most grass hays for 15 to 30 minutes will remove enough NSC for horses diagnosed with PSSM, EMS, and/or laminitis. However, testing forage both before and after soaking is necessary to ensure recommended levels of NSC are being met. Soaking forage for greater than 60 minutes is rarely necessary and may actually be detrimental due to excessive leaching of essential nutrients and loss of dry matter.

For horses diagnosed with HYPP, soaking hay in water is necessary to leach potassium (K), which is water soluble. Unfortunately, legumes and cool-season grasses tend to be very high in K and often exceed the recommended 1.1% maximum overall diet for horses diagnosed with HYPP. For horses with HYPP, soaking hay for 60 minutes is often necessary. If soaking hay for 60

minutes does not achieve the recommended amounts, owners may need to consider feeding a complete feed that formulated for horses diagnosed with HYPP.

For horses diagnosed with respiratory disease, including heaves, thoroughly wetting the hay is sufficient. Wetting the hay is different from hay soaking. The goal of wetting hay is to weigh down mold and dust particles so they are not inhaled. Horses diagnosed with respiratory problems do not have nutrient restrictions (unless they have a secondary diagnosis), and therefore, hay soaking is not necessary. Wetting the hay will have a minimal impact on leaching of essential nutrients.

Bottom line, hay soaking should only be done if the horse has been diagnosed with laminitis, EMS, PSSM, and/or HYPP, and a hay analysis indicates specific nutrients are in excess of recommendations. Thoroughly wetting the hay is necessary for horses diagnosed with respiratory disease. Soaking hay in water is not necessary for healthy horses. For more information on hay soaking, click [here](#).

Biosecurity Tips for Show Season

By: Krishona Martinson, PhD, Univ. of Minn.

As we enter into horse show season and County Fairs, it is critical to practice biosecurity measures, including:

Work with your veterinarian to ensure horses are current with recommended vaccines.

Keep sick horses at home. Watch for signs of fever, nasal discharge and diarrhea.

Wash your hands frequently! Bring water, soap, hand sanitizer, and paper towels with you.

Clean and disinfect stalls at fairgrounds and show facilities.

Spray-on commercial disinfectants are readily available. Diluted bleach (8 ounces bleach to 1 gallon of water) is an inexpensive disinfectant; it works best on a surface that has been thoroughly cleaned.

Do not share feed and water buckets, hay bags, grooming tools, tack, or manure forks. Disinfect these items after arriving home from an event. Click [here](#) to learn how to clean and disinfect horse equipment.

Limit exposure. Do not allow

horses to have nose to nose contact. Limit the general public's contact with your horses and your contact with other horses.

Upon returning home from a show, wash your hands, shower, and change clothing and shoes before working with horses kept at home. Isolate returning horses from resident horses for 14 days. Monitor horses daily for signs of fever, nasal discharge, and diarrhea.

An ounce of prevention is worth a pound of cure. Click [here](#) for more information on biosecurity.