



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Research Update: Feeding Horses with PSSM

Researchers at the University of Minnesota have been examining the effects of feeding horses hay with varying levels of nonstructural carbohydrate content (NSC) in order to determine the best diets for horses with polysaccharide storage myopathy (PSSM). The study objectives were to determine if there is a difference in blood glucose and insulin response to feeding hay types with varying NSC content between horses with PSSM and control horses.

Horses' glucose and insulin levels were measured after feeding hay with high (17%), medium (11%), and low (4%) NSC content. In the control horses, significantly higher insulin responses were observed when horses were fed high NSC hay, but the blood glucose levels did not differ.

In the PSSM horses, a greater insulin

response to the high NSC hay compared to medium or low sugar hay was detected, but this group's insulin concentrations were less than the controls on high NSC hay.

Blood insulin response appears to be a more sensitive indicator of the metabolic effects of high NSC hay than glucose response.

Researchers suggest that owners or managers avoid feeding PSSM horses hay with an NSC of greater than 16 %; they recommend hay with less than 11% NSC for these horses because it does not produce a significant elevation in blood sugar or insulin. Analyzing your hay for quality will determine NSC content.

Authors: L. Borgia and S. Valberg, U of M; K. Watts, Rocky Mtn Res.; and J. Pagan, KER. Reprinted with permission of The Horse (www.TheHorse.com).

Participate in Univ. of Minn. Equine Research

The Univ. of Minn. has two equine research projects that need your (and your horses') participation.

Project 1. Do you have an "easy keeper" or overweight horse with a body condition score at least an 8 or 9 that has been diagnosed with insulin resistance by a veterinarian but is otherwise healthy? Are you willing to make your horse available for a research study that will help to advance our understanding of obesity and horse health? If so, please contact Dr. Christie Ward at 612-625-6733 or malaz002@umn.edu.

Project 2. Equine metabolic syndrome (EMS) is a devastating disease. EMS is characterized by three main features: obesity, insulin resistance, and laminitis. Certain breeds or individual horses are predisposed to EMS, and are often referred to as "easy keepers". This tendency to be an easy keeper likely

begins with a genetic pre-disposition.

It is our goal to better understand the role of genetics in EMS. To achieve this goal, we need the help of horse owners to accumulate data on as many horses with EMS as possible. Once susceptible horses are identified, management practices can be initiated to better protect them from developing disease. By assisting in our project, you will provide us with information essential to further understanding EMS and ultimately determining ways to better manage and treat horses suffering from EMS.

To learn more about the equine metabolic research project and how you can get involved, please visit our webpage at: www.extension.umn.edu/horse/components/ems.htm. The website includes an initial survey to determine if your horse is a candidate for participation in the EMS research project.

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Upcoming Events

2009 Fall Regional Horse Owner Programs

Saturday, November 14th
1:00 to 4:00 pm
Howard Lake Middle School
Howard Lake, MN

*Pre-registration required.
\$20 registration fee includes meeting proceeding and light refreshments.*

Register now at www.extension.umn.edu/horse

2010 Winter Regional Horse Owner Programs

Saturday, January 16th
1:00 to 4:00 pm
Heintz Center - RCTC
Rochester, MN

Saturday, March 27th
1:00 to 4:00 pm
Cloquet Forestry Center
Cloquet, MN

*Pre-registration required.
\$20 registration fee includes meeting proceeding and light refreshments.
Registration available in December.*



Drug Compounding—Horse Owners Should Use Caution

Every horse owner has the right to know the safety and efficacy of medications a veterinarian prescribes for their horse. But even the most experienced horse owners may not be aware of the health risks involved with using compounded drugs. Compounded drugs are unregulated drugs produced by altering or combining other drugs to serve a patient's particular need. Recently, compounded drugs have been linked to tragic incidents in the horse industry, including the sudden death of 21 polo ponies in April and the deaths of several horses in Louisiana in 2006. Because compounded drugs are not regulated, other incidents remain unreported.

Reputable pharmacies produce legitimate compounded drugs to improve the health of horses when a Food and Drug Administration (FDA) approved option doesn't exist. However, when inappropriately compounded and used, these drugs may pose a serious threat to the health of your horse. Knowing the facts about legitimate and illegitimate compounded drugs will help you and your veterinarian decide on the best treatment option for your horse.

Compounding is a process to produce a medication by combining or altering ingredients for the special needs of an equine patient. Only a licensed veterinarian may write a prescription for the compounded medication. Because there is a scarcity of approved medications for use in horses, there is a legitimate need for compounding in equine veterinary medicine. Some examples of legitimate compounding would include crushing a tablet and creating a paste or gel to aid in the administration to the patient or mixing two anesthetics in the same syringe for use in your horse.

Compounded drugs are not approved by the FDA and can vary in potency, stability, purity and effectiveness. And because these products are unregulated, compounded drugs have the potential to pose serious safety risks to horses.

Because compounded drugs are generally cheaper than FDA approved medications, horse owners often confuse compounded drugs with generic drugs. Generic drugs are biologically equivalent to a brand-name drug. Unlike compounded drugs, generic drugs go through an FDA approval process and are manufactured in an

FDA-approved facility.

A compounded drug should never be requested, used, or prescribed as a cost-saving measure. Putting your horse's health at risk could end up costing your horse's life. Stay on the safe side and request FDA-approved medications. In the interest of horse welfare, it is advised that horse owners use legal, FDA-approved medications when such a drug exists. FDA-approved medications undergo years of testing and are closely monitored by the government to ensure a consistent, safe performance.

It's important for horse owners to communicate openly with their veterinarians about the use of compounded drugs. Though your veterinarian should always notify you when a compounded drug is being prescribed, be sure to request FDA-approved treatment options for your horse. If your veterinarian recommends a compounded drug, ask why the compounded drug is the best treatment option for your horse. Understanding the potential risks and benefits of your horse's medication is part of your role as a responsible horse owner.

Authors: the American Association of Equine Practitioners. Reprinted with their permission.

Ask the Expert

By: Stephanie Valberg, DVM, PhD, Univ. of Minn.

Q: I have an off the track thoroughbred who collapses periodically. I have had him since November and he has gone down twice in the cross ties and once by the mounting block. He is 8 years old and approximately 17 hands. I recreated the situation and discovered that if I tighten the girth he goes down. He has not done

this with me riding him. I do not think this is behavioral. I am just looking for directions and answers.

A: Some horses develop this odd form of collapse when they elevate their heads or when the girth is tightened without it being a specific medical issue. Sometimes muscle soreness is involved. The collapse could also be a result of sore

withers, ribs fractured, or fainting from cardiac issues. I would recommend a complete physical for the horse. During the physical, I would also recommend you tightening the girth while the veterinarian watches to see if there are other areas that need exploration.