



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Care of Elderly Horses Continued By: Julie Wilson, DVM, U of M

Team up with your veterinarian to make a proactive plan for your aging horse. Depending on the horse's age and condition, annual or semiannual physical examinations should be done for early detection of problems. This examination should include assessment of dental needs, weight tape and body condition score, soundness check, and vaccine planning. Close inspection for early signs of cancer is also warranted. If the horse or pony is still being ridden, this is a good time to look at saddle fit.

Nutrition. Good nutrition from day one is necessary for all horses. Elderly horses benefit from at least yearly attention to their teeth and a high quality diet. Most feed companies now make "senior" diets, which are typically pelleted, easy to chew, and highly digestible. A horse can be

fed a senior diet in addition to hay or pasture to improve its body condition, if it is having trouble maintaining its weight without an apparent health problem. Senior pellets can be fed in larger volumes as the sole feed for the horse, particularly if its teeth are worn past the point of effectively chewing hay.



Photo 1. Worn-out Teeth of an Elderly Horse

Soundness. Horses need regular hoof trimming throughout their lives. Good hoof balance promotes even weight bearing, and less stress on the joints. Joint friendly supplements like glucosamine with chondroitin sulfate may help some arthritic horses get around. Daily light exercise or

turn out is recommended.

Cushing's Syndrome. If a horse keeps its winter coat longer than its herdmates and starts to grow the winter coat a bit early in the fall, Cushing's syndrome may be responsible. Management consists of clipping the untimely coat, and suppression of the excessive hormone production from the pituitary, using daily medications such as pergolide. **Vaccinations and Deworming.** As the immune system wanes, elderly horses become more susceptible to microbial diseases and parasites. Retirement is no reason to stop routine vaccinations. Yearly fecal exams should be conducted, and a regular deworming schedule followed. More information can be found in the "Care of Elderly Horse" fact sheet.

Equine Carcass Disposal By: Betsy Gilkerson, U of M

With the temporary ban on horse slaughter for human consumption in the US (due to the Horse Slaughter Prevention Act), horse owners nation wide are exploring end-of-life and carcass disposal options for horses. Minnesota horse owners do have some options for disposal of an equine carcass. The State of Minnesota regulates

these options and involves the Departments of Agriculture, Natural Resources, Pollution Control Agency, and Board of Animal Health. The legal options for horses in Minnesota are burial, incineration, rendering, fur farm use, and pet food. Each option comes with stipulations. For example, for burial, carcass have to be 5 feet above the high water

level, covered with 3 feet of soil and not in soils that are within 10 feet of bedrock. Also, some facilities like rendering companies and fur farms may not take animals that have been euthanized as the solution used can be harmful. Contact your local government or the MN Department of Ag for more information.

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Up Coming Events Equine Center Update

To view the latest Equine Center Newsletter, *Equine Connection*, go to www.cvm.umn.edu/umec/news

Open Clinical Trails

Have you ever wanted to participate in a research trial with your horse (or other pet)? Visit the U of M's Clinic Investigation website at: www.cvm.umn.edu/cic

Fact Sheets Available

The following fact sheets are now available for viewing and purchase on our website www/extension.umn.edu/horse

- Common Minnesota Horse Pasture Grass and Legume Species
- The 11 Primary Noxious Weeds of Minnesota
- Care of the Broodmare
- First Aid: What to Have and How to Use It
- Management of Established Pastures.
- Top Ten Things Every Horse Owner Should Know About Nutrition
- Nutrition for Weanlings and Yearlings
- Care of Elderly Horses
- Hoof Care
- Buying and Storing Horse Hay



Low Sugar Forages

By: Ron Genrick, Assurance Feeds and Stephanie Valberg, DVM, U of M

Sugars supply forages with energy required for re-growth, and are a nutritional component needed by both forages and horses. However, some horses, like some humans, are sensitive to the sugar content of hay and pasture forages, which can lead to potential health problems. These problems include: laminitis (founder), equine metabolic syndrome, Cushing's syndrome, or forms of tying-up. In general, horses with obesity, metabolic syndrome, Cushing's disease, and pasture-associated laminitis are unable to take up sugar in the form of glucose into their tissues because they have developed a diminished response to the hormone insulin ("insulin resistance"). Obese or fat horses, and horses over 15 years of age are more predisposed to insulin resistance. Because some forages can contain high sugar content, whether hay or pasture, they may be problematic for horses with these specific conditions. Most cool-season grass forage species, commonly found in horse pastures and hay fields around the upper Midwest, may be high in sugar. These sugars are in the form of fructans as well as simple sugars like glucose. When basic techniques were developed to analyze forages for "sugar", most did not distinguish between the proportions of fructan and simple sugar. The differences

may be important for horses because glucose is absorbed in the small intestine and triggers an insulin response, whereas fructans are passed to the horses' hindgut and fermented without triggering insulin. Diets high in simple sugars, and the type of starch found in grain, are not good for horses with insulin resistance as they result in very persistently high blood sugar. Horses with a predisposition to laminitis should not be fed forages high in fructans. This is because fermentation of fructans in the large intestines by microbes can upset the microbial balance, and makes the gut environment more acidic which releases toxins into the bloodstream which exacerbate laminitis. Unfortunately, there is no grass that is consistently low in sugar. Most cool-season grasses, like orchardgrass and fescue, can have high sugar content. Timothy and crested wheatgrass tend to be medium in sugar content, as are most warm season (native) grasses. However, warm season grasses are usually not winter hardy for the upper Midwest, and cannot compete with cool season grasses in the spring and fall. This creates a dilemma for horse owners with horses who are sensitive to high sugar content or have been diagnosed with one or more of the above problems. Alfalfa hay/pasture is not the solution for horses that are sensitive to sugar content. Alfalfa

tends to be higher in digestible energy, calories, and protein content than grass. More calories can result in weight gain, and high levels of protein can lead to glucose production in the liver. Currently, it is thought that a safe sugar content for sensitive horses is 10% or less. Testing is a good starting point for determining sugar content in hay, but caution should be used to ensure that a representative sample is taken. Just looking at a forage sample or knowing the species will not give you an estimate of sugar content. As a last resort, up to 30% of the sugar content can be flushed from most grasses by soaking in water (60 minutes in cold water and 30 minutes in hot water). Care should be taken to ensure all soaked hay is eaten, as unconsumed damp hay will eventually mold. Determining sugar levels in pastures is extremely difficult because of the many factors that must be considered (see the April 2007 Newsletter). Until more cool-season grasses with low sugar content become available, careful pasture management and forage testing by horse owner with sensitive horses is essential. Currently, a hay feeding research project at the U of M is underway to better understand the role sugars play in sensitive horses.

Additional Aural Plaques Study Participants Needed

There is currently no known effective treatment for aural plaques. Aural plaques are usually considered to be primarily cosmetic, but owners often complain of head shyness, ear sensitivity and difficulty bridling. Currently, we have 13 horses in a study evaluating the use of Aldara for the treatment of aural plaques at the

U of M. The initial results indicate 3-4 months of treatment seem to be sufficient and most horses seem less headshy. With this promising result, more horse are needed to further evaluate the treatment. Please contact Erin Malone, DVM, at 612-625-4762 or malon001@umn.edu for more information, or to enroll in the study.

Photo 1. A horse with aural plaques

