



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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Importance of Colostrum

Jennifer Johnson, DVM, U of M

Colostrum, or “first milk”, is the first milk that a mare makes to feed her foal. Consumption of an adequate amount of colostrum is critical to the health and well-being of the newborn foal. Colostrum provides infection-fighting antibodies, vitamins, minerals, energy, protein, fat and acts as a laxative to help the foal pass the meconium (first stool). Unlike human babies, when foals are born they have no disease-fighting antibodies in their blood. Therefore, a foal must ingest colostrum in order to absorb the antibodies needed. These antibodies are made by the mare and will hopefully provide specific protection for the bacteria and viruses in the foal’s environment. This is called passive transfer. After 3-6 weeks of age, the foal will start making her own antibodies but often retains some protection from the mare until 4-5 months of age. Once the foal is born, it is critical that she begins

nursing as soon as possible, because she is only able to absorb the antibodies from the colostrum for a finite time period. Each hour the foal is alive, her ability to absorb the colostrum lessens. Therefore, the maximum benefit from colostrum is obtained when your foal nurses soon and often. The easiest way to track passive transfer in your foal is to use a Foal IgG SNAP test, which measures the antibody level in the foal’s blood. The goal is for the reading to be greater than 800 mg/dl. 400-800 mg/dl is considered partial passive transfer. Anything under 400 mg/dl is considered complete failure of passive transfer. There is always debate about when to perform these tests. Some breeders like to draw the blood at 12 hours. This way, if the test is low, the breeder can supplement the foal’s colostrum intake. However, this will overtreat some foals who just haven’t had time to absorb the antibodies yet. Others prefer to wait 18-24 hours to draw the blood. This way, there is

no chance that the foal’s levels will go up. However, if you discover that your foal is below the cut-off level, the steps to remedy the situation are more invasive and costly. Failure of passive transfer isn’t a disease, and there are no clinical signs to diagnose it. However, foals with failure of passive transfer are at an increased risk of pneumonia, diarrhea, infected joints, infected umbilical cords, and other diseases. Therefore, if you know your foal has failure of passive transfer, we recommend you seek the assistance of a veterinarian. The most common treatment for failure of passive transfer is to administer a plasma transfusion. This involves placing an IV catheter in your foal’s neck, and slowly administering a unit of equine plasma through that catheter. Unfortunately, even successful passive transfer can’t guarantee a perfectly healthy foal, although it should help!

EHV-1 in MN

By: MN Dept. of Ag.

A case of Equine Herpesvirus 1 (EHV-1), the neurologic form of EHV-1 has been confirmed in Wright County, MN. This is the first time neurologic EHV-1 has been diagnosed in MN. EHV-1 affects horses worldwide, but does not affect humans. It

usually causes a respiratory infection in horses and can cause abortion in pregnant mares. The virus is spread when infected animals cough or sneeze, and can be transmitted in contaminated water and feed, or on the hands and clothing of people who work with an infected

horse. Horses that have been exposed to the disease should be isolated for at least 21 days. Although vaccines for EHV-1 are available, none of the vaccines are labeled to protect against the neurologic form. Horse owners should contact their veterinarians for more information and treatment options.

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Up Coming Events REGIONAL HORSE OWNER PROGRAMS

March 10th, 2007

Foley, MN

Foley School

March 24th, 2007

Cloquet, MN

Cloquet Forestry Center

March 31st, 2007

rescheduled date due to weather

Rochester, MN

Heintz Center

Pre-registration is required for all programs and registration is limited.

On-line registration is available at:

www.cvm.umn.edu/outreach.

The cost to attend each program is \$35/person.

For more information contact Kristi at 888-241-0719

HORSE OWNER SHORT COURSES

New Prague KC Hall
Saturday, March 24
10:00 am to 2:00 pm

Independence City Hall
Saturday, March 31
10:00 pm to 2:00 pm

Contact Betsy at 612-596-1175 with questions



Equine Compulsive Behaviors Continued

By: Margaret Duxbury, DVM, U of M

Last month, two compulsive behaviors, crib biting and weaving, were discussed. These behaviors serve no apparent function and occupy a significant portion of an animal's time. Treatment of compulsive behaviors can be difficult. Lack of environmental enrichment may encourage stereotypic behavior. However, ensuring a rich environment for a horse with an established problem may not be curative. What

may start as a thwarted effort to accomplish a natural behavior may actually release tension for the horse. This release of tension reinforces the compulsive behavior making it more likely to occur again. The longer a compulsive behavior has been exhibited, the harder it is to treat. The behavior makes the horse feel good – and nothing we can do after the fact changes this. We can and do try, but prevention is our best tool.

Devices such as anti-weaving bars and crib straps can physically prevent the horse from performing the stereotypic behavior, but do little to address the reason the horse began to weave or crib in the first place. Is it humane to simply bar the horse from behavior that may help it cope with an unsatisfactory environment? Environmental enrichment including

increased foraging opportunities (offer a variety of hay types and ensure hay is available over night), adequate exercise and social interactions with other horses are important for both treatment of the problem and the welfare of the horse.

For more information on compulsive behaviors, please contact Dr. Duxbury at mduxbury@umn.edu.

In recent years, researchers at the U of M Veterinary Medical Center have identified a crippling form of arthritis that seems to primarily affect Arabian horses, at least in the upper Midwest. This syndrome involves apparent instability of the carpus (foreleg "knee"). This eventually leads to a bony reaction that resembles the callus from a healing fracture and can be seen on the inside of the leg. The bone tries (and occasionally succeeds) to bridge the lowest joint in the carpus in order to increase its stability. This is a low motion joint and would not be missed if it were to fuse but the inflammation affects the upper joints. In other words, by the time the lower joint fuses, the upper joints are also arthritic. Horses have a gradual onset of increasingly severe lameness that seems to coincide with the development of the bony protruberance on the inside of the carpus (see

Carpometacarpal Syndrome

By: Erin. Malone, DVM, U of M

photo). The affected horses resent flexion of the carpus (i.e. can be sore after farrier work). Most affected horses are lame enough that they cannot be ridden. To further investigate this, we found 31 horses with the unusual form of carpometacarpal joint arthritis. 74% of the affected horses were Arabian. The problem affects older Arabians, and the average age at presentation for the initial diagnosis was 14.4 years. It seemed to affect mares and geldings at even percentages. In 7 horses, both forelegs were affected. Two horses were still in work when evaluated but the others were too lame for riding. None of the horses had previous leg surgery but 8 had known episodes of trauma to the carpus. At the time of the study, 10 horses had been euthanized for

severe lameness. Five horses lived over 5 years after being retired from riding. Four of the affected horses were necropsied (autopsied), and the anatomy of the carpometacarpal joint was examined. During the necropsies, two different types of connection between the medial splint bone and the cannon bone were found. In most horses, these bones contact each other at two sites. In some, the caudal articulation (back connection) is missing, leaving a gap between the bones. In Minnesota, 46% of Arabians and 13% of non Arabians are missing this articulation and have the gap. When horses in California and Florida were examined, this type of anatomy was not seen. When the bones were examined, the Arabians in California did not have a missing connection. Based

upon our work, we suspect that horses having a gap in the back part of the carpometacarpal joint cannot withstand trauma to the carpus as well as other horses. Injury could then lead to instability and arthritis. Obviously injuries cannot be prevented (particularly in horses) but the increased risk in Arabians makes it important that we recognize the problem and deal with carpal injury more aggressively than is routine. Surgery to fuse the lower joint may help prevent the continued joint degeneration and allow these horses to remain in work.

