



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

Visit our Website at: www.extension.umn.edu/horse for more information and to subscribe to the newsletter.

Volume 14, Issue 11

November 2017



UNIVERSITY OF MINNESOTA
EXTENSION

Research Update: Calming Effects on Horses

Adapted horses have been found to have a calming effect on other horses in fear-eliciting situations. In practice, experienced horses are often used as companions when young horses are introduced to potentially frightening situations (i.e. loading onto a trailer). However, studies of social transmission of adapted in horses are scarce.

This study, conducted in Denmark, investigated if demonstration by an experienced horse influenced the willingness of young Icelandic horses to cross a novel surface. Young horses were allowed to observe the experienced horse being led five times across a novel surface. Immediately afterwards, the young horses were given the opportunity to cross the novel surface themselves to

obtain food on the other side. Controls were allowed to observe the experienced horse eating on the opposite side of the novel surface but not when the experienced horse crossed the novel surface.

All young horses succeeded in the task, but horses who observed the experienced horses crossing the novel surface had significantly lower average and maximum heart rate compared to controls. This result suggests a calming effect of the demonstration, which could be implemented when training young horses in fear-eliciting situations.

For more information on this study, [click here](#). Summarized by: *Krishona Martinson, PhD, University of Minnesota*

Ask the Expert: Estimating Winter Hay Needs

Question: We recently purchased a farm and will be housing our two quarter horses over the winter; they will not ridden during the winter. Because I've always boarded my horses, I'm not sure how to estimate how much hay I will need for the winter.

Response: An adult horse at maintenance will consume between 2 – 2.5% of their bodyweight in feed (hay and grain) each day. For example, a 1,000 pound horse fed a 100% hay diet would consume 25 pounds of hay each day (using the 2.5% recommendation). From October 15 to May 15 (when there is no pasture in MN), the horse would consume about 5,350 pounds of hay or 2.7 tons. This would equal 107 fifty pound small square-bales or six 900 pound round-bales during this time. For two horses, this amount would be doubled. It is critical to know the weight of the hay bales; not all bales weigh the same.

If the same horse was receiving 5

pounds of grain each day, their hay needs would be reduced to 20 pounds each day. From October 15 to May 15 the horse would consume about 4,280 pounds of hay or 2.1 tons. This would equal 86 fifty pound small square-bales or five 900 pound round-bales during this time. Again, double this amount for two horses.

These estimates assume good quality hay is fed in a feeder to reduced hay waste. When [feeding small squares-bales](#), hay waste when a feeder was not used (hay fed on the ground) was 13% compared to only 1 to 5% when a feeder was used. When [feeding large round-bales](#), not using a feeder resulted in 57% hay waste compared to 5 to 33% when a feeder was used. Its always best to purchase extra hay to account for waste and because horses may require additional hay during the cold winter months.

Author: Krishona Martinson, PhD, University of Minnesota

Inside This Issue

Research Update: Calming Effects on Horses	1
Ask the Expert: Estimating Winter Hay Needs	1
Pneumonia in the Adult Horse	2

Upcoming Events

UMN Equine Center 10th Anniversary Youth Horse Owner Extravaganza

November 4, 2017

10:00 am to 3:00 pm

UMN Equine Center

St. Paul, MN

\$25 per person

Registration required by

November 1

Online registration

available [here](#).

Visit our [Facebook](#) page

for "Research Update Monday", "Tip of the Week Wednesday", "Friday Funny" and special events. New in 2017, Facebook Live broadcasts!

Visit (and share) our

[Webinar Library](#) for recorded lectures on over 20 horse-related topics.

Check out our latest horse-related videos on our

[YouTube Channel!](#)

The University of Minnesota is an equal opportunity employer and educator.



Pneumonia in the Adult Horse

Author: Alexandra Moss, BVSc, University of Minnesota

Pneumonia is an infection in the lungs which can be the result of numerous causes, including: bacterial, viral, fungal, and aspiration. Foals develop pneumonia more commonly than adult horses, as they are more susceptible to bacterial infections and are at a higher risk for developing aspiration pneumonia. However, adult horses can still be affected with pneumonia. Pneumonia is most often seen in older horses that have predisposing factors, such as a pre-existing illness or a history of transport.

The most common type of respiratory infection in horses is viral. Most frequently they may contract equine herpesvirus infection, equine influenza, and equine viral arteritis. Viral respiratory infections have clinical signs such as fever, clear nasal discharge, swelling of the lymph nodes in the throat area, poor appetite, and a cough. It is important to understand, however, that viral infections seldom cause pneumonia on their own. A virus can primarily contribute to the development of pneumonia by causing the respiratory system to become vulnerable to a secondary bacterial infection.

Secondary bacterial respiratory infections are most frequently caused by bacteria that live in the upper respiratory tract of the horse. When a secondary bacterial infection develops, the symptoms of the horse can include yellow/cream nasal discharge, depression, and persistent fever, in addition to the previously mentioned viral symptoms. These secondary infections do not always result in pneumonia, but can when they are

more severe. Shipping pleuropneumonia can occur when horses are put under stress of transport and mixed with new horses. This can be a severe condition when both the lungs and the surrounding (pleural) cavity become affected. Therefore, in addition to other signs seen with pneumonia, in cases of shipping pleuropneumonia the horse may stand with their elbows camped out, lie down more often, or be reluctant to move. Pneumonia can also develop secondary to inflammatory airway diseases, such as equine asthma.

Pneumonia is not typically contagious between horses because of the necessity of an underlying condition that makes the respiratory system vulnerable. However, it is possible to end up with multiple horses with pneumonia if a group has been exposed to a virus, as most viruses are highly contagious. Therefore, the most important considerations in preventing pneumonia are good management, including:

- Minimizing stress, particularly when mingling with other horses or transporting horses over long distances. This can be achieved by breaking up long trips, maintaining good biosecurity when away from home, and keeping to a regular routine.
- Checking with your veterinarian if pre-existing conditions may make your horse vulnerable to pneumonia. Examples include Cushing's disease, Equine Metabolic Syndrome, and Inflammatory Airway Disease.
- Maintaining adequate management of other illnesses if previously diagnosed.

- Staying up to date on a comprehensive vaccination program, to protect against common respiratory pathogens.
- Being aware of the possible signs of pneumonia, including yellow/cream nasal discharge, depression, and persistent fever.

Diagnosis of pneumonia, and determining the exact cause, requires a thorough work-up to allow for the most appropriate therapy to be implemented. Diagnostic tests can include:

- Blood work (CBC and biochemistry panels): determine the severity of systemic illness.
- Thoracic ultrasound: visually assess the extent of damage on the lung surface.
- Transtracheal wash: collect a sterile fluid sample from the lungs which can be submitted for culture and sensitivity.
- Culture and sensitivity: determine the exact pathogen responsible for the pneumonia, and its sensitivity to different types of antibiotics

Treatment of mild to moderate cases of pneumonia can be successful, and typically includes antibiotics, anti-inflammatories, and supportive care. But in more severe cases, treatment can be challenging as permanent damage can be done to the lung tissue. The long-term performance of the horse may be affected depending on how much of the lung tissue is permanently affected. Overall, early recognition and appropriate treatment are keys to a successful outcome in cases of pneumonia.