



U of M Horse Newsletter

Providing research-based information to Minnesota Horse Owners

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EXTENSION

Common Hoof Problems

By: Mary Boyce, DVM, U of M

There are many different hoof problems that can occur in horses. To reduce hoof problems, follow these recommendations:

1. Regular trimming or shoeing
2. Maintain good hoof balance
3. Maintain the correct hoof pastern angle, break over, and medial-lateral balance
4. Give heel support if needed
5. Use appropriate shoeing for different weather and footing conditions
6. Use appropriate treatment if disease process occurs.

Poor Shoeing or Trimming. Long toes can result in strain on flexor tendons, the navicular bone, and collapsed heels. If the horse is "too upright" it can cause trauma to the coffin bone. An imbalanced hoof can cause stress on the collateral ligaments and joints.

Hoof Cracks. Horizontal cracks or blowouts are usually caused by an injury to the coronary band or a blow to the hoof wall. Horizontal cracks or blowouts do not usually cause lameness. Grass cracks are usually seen in long, unshod horses, and can be corrected with trimming and shoeing. Sand cracks result from injury to the coronary band or white line disease that breaks out at the coronary band. Sand cracks can be a cause of lameness. Treatment for sand cracks includes determining the cause and removing it, floating, and/or fixation or patching. It usually takes nine to twelve months for the hoof to grow out.

Thrush. Thrush is a foul-smelling black exudate usually found around the frog that is associated with wet, soiled conditions. Thrush can invade sensitive tissue and cause lameness. Keeping stalls or barn clean and dry can help eliminate thrush.

Solar Abscess. Solar Abscess is an infection in the sole of the hoof that can lead to acute or severe lameness. Solar Abscess can be caused by trauma, bruising, or a foreign body. Treatments include removal of the foreign body (if possible), soaking the hoof in warm water

and Epsom salt, and keeping the hoof bandaged, clean and dry.

Hot Nail or Street Nail. A hot nail is a horseshoe nail that is driven into the sensitive structures of the hoof wall. Hot nails will usually cause lameness. Treatments include flushing nail hole with antiseptic, packing the hole or bandaging the foot, and Tetanus booster. A street nail is any foreign object that enters the foot. This is an emergency, and your veterinarian should be called immediately. Treatment depends on what hoof structure is affected.

Laminitis. Laminitis is inflammation of the sensitive laminae. Founder is rotation (coffin bone rotates downward inside hoof capsule) and/or sinking (coffin bone sinks downward) of the coffin bone. There are several causes of laminitis. Treatments include regular shoeing or trimming, maintaining short toes, using heel wedges, and frog and sole support.

Navicular. Disease process involving the navicular bone, bursa, ligamentous, or soft tissue structures. Horses will usually land their toe first due to pain in the heels. Causes of navicular include hereditary predisposition (Quarter Horses and Thoroughbreds), faulty conformation, hoof imbalance, and exercise on hard surfaces. Treatments include shoeing, maintaining a short toe, elevating the heels and good break over, and pads.

Finally, in the winter, special care should be taken if your horse lives outside or is turned out. If your horse is normally barefoot, leave the shoes off in the winter (horses usually slip less when barefoot). Horses that are prone to sole bruising may need shoes. If your horse is shod through the winter, have snow pads placed under the shoes and small cogs or nails placed at the heels. Winter weather can dry out the hoof wall, so a hoof moisturizer may be needed.

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Up Coming Events

Horse Short Courses

Elk River, MN

(Government Center)

November 5: 6 to 8 pm

Barn Safety & Equine 1st Aid

November 13: 6 to 8 pm

Hay 101 and Tack Fitting

Contact 800-433-5236 with questions or to register.

2008 Regional Horse Owner Programs

St. Paul, MN

Equine Center

February 2

North Mankato, MN

South Central College

February 9

Morris, MN

UM - Morris Science Bld.

March 1

Bemidji, MN

Northwest Tech. College

March 8

St. Paul, MN

Advance Program

Equine Center

March 15

Contact Kristi for more information 763-767-3837.

Poisonous Plant Book Now Available

44 pages, 70 photos.

Weed control and horse treatment discussed.

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Bowed Tendons

“Bowed tendon” is the common name for superficial or deep digital flexor tendonitis. The superficial digital flexor tendon (SDFT) runs down the back of the leg and attaches to the long and short pastern bones. The deep digital flexor tendon (DDFT) runs to the SDFT and attaches to the coffin bone. Together, these tendons aid in flexion of the lower limb.

When either of these tendons becomes inflamed, it swells, causing it to look “bowed.” The bow can appear anywhere from the carpus/tarsus (knee/hock) to the pastern region. The SDFT is much more commonly affected than the DDFT.

Bowed tendons can occur as a result of chronic stresses on the flexor tendons or as a result of a single traumatic incident. Racehorses, polo ponies, and jumpers are at higher risk than other equine athletes for developing this condition. Placing bandages on the lower leg that put uneven pressure on the tendons can also lead to inflammation.

By: Annette McCoy, DVM, U of M

Bowed tendons can vary in severity, but because of the type of tissue involved in the injury, complete healing takes a long time. Clinical signs may resolve within days if the horse is rested and given anti-inflammatory drugs (i.e. Bute), but generally return when the horse is returned to work. It can take 8 to 11 months for the tendon to repair itself completely.

Treatment primarily consists of complete rest followed by a controlled, gradual return to exercise, anti-inflammatory drugs, and occasionally, surgery. Prognosis for return to athletic work depends on the severity of the original injury, and the condition can recur, particularly if stresses are added to the leg prematurely. Repeat ultrasound examinations are used to monitor healing and allow return to exercise as fast as possible without re-injury.

There are many new treatment options for bowed tendons on the

market, including injecting the tendon with cells taken from fat or specially treated blood, and shockwave therapy. These, and a variety of other treatments, have become popular over the past decade but unfortunately, most are eventually shown to be useless or even damaging.

For example, a product taken from bladder mucosa was popular last year; it is now avoided. Fat cell injections are currently popular, but scientific research has been done on only four horses. Shockwave therapy has been shown to assist with arthritis pain and newer treatments are still being tested. Currently, research is being conducted on stem cells, special antibodies, and platelet rich plasma along with specialized rehabilitation programs.

If you decide to pursue a treatment, take time to become informed on the pros and cons and count on a prolonged rehabilitation period.

Research Update: Composting Carcasses

Thousands of horse carcasses are disposed of every year in the US. Burial, rendering, and use of landfills were once the most frequently used means of carcass disposal, yet environmental and water quality regulations have limited their use.

Research exists regarding composting of poultry and swine carcasses, yet little data has been obtained for larger ones. The equine industry needs to explore alternative disposal methods.

The objective of this research, conducted at West Texas A & M University, was to determine the length of time needed to complete the compost process, and the types of composting materials best suited for degrading equine carcasses.

Three treatment materials were used; stall cleanings (SC), cattle manure (CM) and a mix of cattle manure and hay (CM+H).

Compost pile temperatures during the study indicate that SC

was more effective for composting. Treatment CM+H had a higher moisture content as compared to SC and CM. Upon visual inspection, carcass decomposition appeared more complete in SC piles when aerated at 90 days as compared to CM and CM+H.

Results indicate that properly monitored compost piles made with SC maintain a temperature more conducive to composting as compared to CM and CM+H, resulting in a more effective and timely disposal of equine carcasses.

nutritionists are needed to ensure proper horse nutrition.

Research has shown that horses with poor quality hooves can benefit from commercially available hoof care products that contain Biotin (20 mg/day), Iodine (1 mg/day), Methionine (2500 mg/day) and Zinc (175 to 250 mg/day).

Ask the Expert

Q: How can nutrition affect hoof health?

A: Maintaining your horse’s nutrition can help alleviate some hoof problems. Feeding good quality hay, supplementing vitamins and trace mineral, and making sure your horse has constant access to fresh, clean

By: Mary Boyce, DVM, U of M

water is important for hoof health and overall horse health.

Poor nutrition can lead to future hoof problems, and correcting a horse’s nutrition can gradually improve hoof health over time. Cooperation between horse owners, veterinarians, and equine