



Horse Program

Providing research-based information to Minnesota Horse Owners

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Caring for your horse's feet and hooves will safeguard their long-term soundness. Following are some tips to keep your horse's feet healthy. Remember, no hooves, no horse.

SHOEING OR TRIMMING INTERVAL

Summer. In the summer, horses should be trimmed or shod at least every six to eight weeks. Performance horses may need more frequent trimming.

Winter. Hooves generally grow more slowly in the winter. Because of the slower growth horses should be trimmed every six to twelve weeks. The trimming or shoeing interval depends on each horse, and the amount of hoof they grow.

HOOF BALANCE

A balanced hoof allows the horse to move better, and puts less stress and strain on bones, tendons, and ligaments. The ideal foot has the following characteristics: a straight hoof-pastern angle, easy break over, adequate heel support, and medial-lateral balance (Figure 1).

Straight Hoof-Pastern Angle. There is a straight line from the pastern down through the front of the hoof wall. This allows the bones to be aligned properly from pastern to coffin bone.

Medial-Lateral Balance. The foot lands evenly from side to side as the horse walks.

Easy Break Over. The toe is not too long and is squared, rounded or rolled. This allows easier movement with each step. Too much break over can result in health problems as well.

Adequate Heel Support. The shoe extends back to the end of the hoof wall and supports the back of the entire leg. Ideally, the back edge of the shoe is under a line drawn down the center of the cannon bone.



Figure 1. A balanced hoof.

HOOF WALL CARE

Weather conditions can cause damage to the hoof. During dry weather, or with frequent changes from wet to dry,

horses are prone to having dry, brittle feet that easily develop hoof cracks. Prolonged trimming intervals can cause long toes, and the hoof wall often develops cracks due to the unsupported hoof wall (Figure 2). Unfortunately, some horses are born with poor hoof quality and are more susceptible to problems.

Treatment Tips. Apply hoof moisturizers to the hoof wall and sole during dry weather or if the hoof is brittle or developing cracks, proper nutrition and commercially available hoof supplements can help improve hoof quality, and most importantly, trim your horse on a regular basis.

WINTER HOOF CARE

In the winter, special care should be taken if your horse lives outside or is turned out. Snow can ball up under the sole and cause bruising or imbalance. Ice can be very slippery if the horse is shod with normal shoes.

Winter Tips. If your horse is normally barefoot, leave the shoes off. Horses usually slip less when barefoot or not shod. 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, borium, or nails



Figure 2. Hoof crack caused by long trimming interval.

placed at the heels. Snow pads will prevent snow and ice from building up under the shoe and the cogs or nails will allow for better traction. Finally, winter weather can dry out the hoof wall, and applications of hoof moisturizer may be needed.

NUTRITION

Maintaining your horse's nutrition can help alleviate some hoof problems. Feeding good quality hay, supplementing the appropriate amount of vitamins and trace minerals, and making sure your horse has constant access to fresh, clean 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 nutritionists are needed to ensure proper horse nutrition.



Figure 3. Long toes.

Figure 4. Solar abscess.

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).

COMMON HOOF PROBLEMS

Poor Shoeing or Trimming. Long toes can result in collapsed heels, strain on flexor tendons and the navicular bone (Figure 3). If the horse is “too upright” it can cause trauma to the coffin bone and joint. 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 the hoof wall (not letting it bear weight), and/or fixation or patching of the crack. 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. Treatment includes 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 (Figure 4). 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 the nail hole with antiseptic, packing the hole or bandaging the foot, and administering a 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 which hoof structure is affected.

Laminitis. Laminitis is inflammation of the sensitive laminae. Also called founder, laminitis 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, and frog and sole support.

Navicular. Navicular syndrome includes disease processes involving the navicular bone, bursa, ligamentous, and/or soft tissue structures. Horses will usually land their toe first due to pain in the heels. Causes of navicular syndrome 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.

CONCLUSION

Since most horses have different hoof issues and growth, a good working relationship with your farrier and veterinarian is needed to ensure a healthy, sound hoof and horse. There are many different foot problems that can occur in horses. To reduce hoof problems, follow these important recommendations:

- Regular trimming or shoeing
- Maintain good hoof balance
- Appropriate shoeing for different weather and footing conditions
- Appropriate treatment if disease process occurs
- Maintain proper horse nutrition

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