



Foot problems are one of the most common causes of lameness in horses. However, the care of horse's feet is often overlooked by owners. Neglected feet can develop many conditions which, if left untreated, can result in severe lameness with loss of use of your horse. Maintaining your horse's feet in good condition is of primary importance. It is also necessary that you are aware of the conditions that can affect your horse and how to recognise them.

Why is the foot prone to so many problems?

Horses' feet are remarkable. They support the entire weight of your horse (on average, 500 kg) and yet are only in contact with ground over a very small area. This means that the structures in the foot are carrying the equivalent of 125 kg at rest, and this figure increases substantially when the horse is exercising. The structure and shape of the foot is very important for bearing such heavy loads.

Basic structure of the hoof

The hoof wall

This is made of a horn-like substance similar to your fingernails. It grows from the coronary band and also from underneath the sole and frog. Growth from the coronary band is slow, only about 0.5 cm (? inch) each month. The hoof wall encases the soft tissues and bony structures of the foot.

In the fore foot, the angle of the hoof wall (at the toe), should form a straight line up to and including the pastern bone. The hind foot should be of a similar shape with a slightly more pointed appearance. The hoof wall should wear evenly.

The sole

This is the undersurface of the foot. It should be slightly concave, somewhat elastic and not touch the ground during weight bearing. In the centre of the sole is the raised frog.

The frog

This is the raised triangular-shaped structure in the centre of the sole. Its purpose is to provide grip and so prevent slipping when moving on soft ground and also to provide some shock absorption (hence, it's rubbery-like texture). The frog should divide the sole into equal halves and it should not be tender to any applied pressure.

How should I care for my horse's feet?

There are very simple measures which you should take to help maintain your horse's feet in good condition. These include:

- Clean the feet daily with a hoof pick. As well as being essential for the health of the feet this gives you an opportunity to check the feet and make a note of any cracks, discomfort and the condition of the shoes (if shod).
- Apply hoof oil to all structures of the feet at least once a week.
- Feed a well-balanced diet as this will ensure healthy hoof growth. If your horse suffers from 'weak' hooves you may wish to feed a hoof supplement - ask your vet or farrier for advice.
- Ensure regular appointments are arranged with your farrier. As a general rule your horse may need to see the farrier every 4-8 weeks.
- Contact your vet for advice at the first sign of lameness - a problem in the foot is the most likely cause.

Why are visits by the farrier so important?

Regular visits by the farrier are as essential to your horse as regular vaccinations and worming. They will ensure that any problems with your horse's feet are identified early. Choosing a good farrier is essential. Ask your vet or friends who they recommend. Different levels of skill and craftsmanship are recognised by qualifications issued by the Worshipful Company of Farriers.

What does the farrier routinely do?

Caring for your horse's feet



- If your horse is unshod, all four feet will be trimmed and rasped to the ideal foot shape. The frequency of this will depend on how quickly the hoof grows and also the time of year, but it generally varies between every 4-8 weeks.
- If your horse is shod, the feet will be trimmed before fitting new shoes. Shoes should always be made and shaped to fit the foot, and not the foot shaped to fit the shoe.
- When trimming the foot, your farrier will aim to 'balance' the foot by removing excess growth (especially from the toe) and rasping to ensure a level bearing surface. Balance is achieved when both heels contact the ground simultaneously, encouraging break over of the foot in the centre of the toe. This symmetry of motion helps the foot deal evenly with the forces it is subjected to, thereby reducing abnormal strain on other parts of the limbs.

What shoes are correct for my horse?

Shoes are fitted to enable the horse to work longer and without causing injury to the foot, particularly on hard surfaces. They protect the foot from wear and tear. As a rule, the lightest shoe that is appropriate for your horse's work load should be used. When heavier shoes than necessary are used, gait abnormalities and fatigue can result. Your farrier will be able to advise you on the most appropriate shoes for your horse. Generally, hot shoeing is preferred as it allows the best fit to be obtained. Unless there are specific reasons not to use them, flat shoes are the most acceptable. If studs are used they should be taken out when not required.

What warning signs should I look for?

The following list explains the more common conditions that affect the feet:

Hoof wall cracks

These usually start as small cracks on the edge of the hoof wall ('grass cracks'), but some can appear at the coronary band or further up the heel ('sand cracks'). They can be horizontal or vertical. They can cause lameness and, if left untreated, can worsen and become infected causing further pain to your horse.

Cracks can be caused by nutrient deficiencies, inadequate or no shoeing and poor foot maintenance. They require prompt veterinary and farriery treatment.

Subsolar bruising

Bruising will not be immediately evident unless the sole is pared away. Bruising results in inflammation and pain resulting in lameness.

It is usually the result of overwork, trauma to the foot, thin/flat soles or poor shoeing. Treatment involves veterinary attention and rest.

Subsolar abscesses ('pus in the foot')

This condition is extremely painful and often your horse will be reluctant to bear any weight on the affected leg. It is quite frightening to see your horse trying to walk on three legs and it is not uncommon for owners to think their horse has broken its leg! However the pain is due to a build up of pressure inside the hoof wall and as soon as the pressure is relieved your horse will be much more comfortable. Abscesses occur when the sole is punctured, allowing infection to enter.

This condition is potentially very serious so you should contact your vet promptly. If the infection is left untreated it can spread to the bones and sensitive areas of the foot. The abscess may burst around the coronet with evidence of draining pus - the lower limb may also be seen to be hot and swollen.

Penetration injuries

Puncture wounds of the foot are quite common. If a sharp, penetrating object, such as a nail, is trodden on, it is very important to establish what part of the sole was injured and how far the object penetrated. This is because if the underlying bone (pedal bone or navicular bone) or joints (coffin joint or navicular bursa) are penetrated the outlook can be very poor unless immediate veterinary treatment is given.

Generally, if a puncture wound occurs in the sole or frog, emergency attention is essential. If possible, you should leave the penetrating object in place until your vet arrives.

**Corns**

Corns result from pressure on the sensitive tissues at the angle formed by the wall of the foot and the bar. They are most commonly found on the inner angle of the front feet. Corns are caused by improper or infrequent shoeing and result in lameness. They require veterinary attention and rest.

Thrush

This is an infection which affects the frog and sole, producing a foul-smelling greeny-black substance particularly in the crevice between the frog and the sole. It is most commonly seen in horses kept on water-logged ground or wet bedding, or caused by infrequent picking out of the feet.

Thrush requires treatment available from your vet and good management to ensure that feet are kept dry.

What warning signs should I look for?**Quittor**

The signs of this less common condition are an open wound with a blood/pus discharge at or above the coronet on the inside or outside edge. It can be caused by a wound or trauma, eg being stood on by another horse. Quittor needs prompt attention by your vet as surgical treatment may be required.

Laminitis

This is a very painful condition of the feet resulting from the disruption of the normal blood flow to the foot. The signs of laminitis are:

- Lameness - most commonly in the front feet.
- 'Heel before toe' gait.
- Characteristic stance - weight is shifted to the hindlimbs with the forelimbs stretched out in front.
- Rings in the hoof wall.
- Bruising of the soles.
- Widening white line with abscesses.

Laminitis is a medical emergency and you should contact your vet immediately if your horse has more than one of these symptoms. **The signs and treatment of laminitis are covered in more detail in the laminitis factsheet.**

If you want any other information on health issues concerning your horse please contact Hampden Veterinary Hospital on 01296 423666 and we will be happy to advise you.