



Horse Hoof Care

The hoof is one of the most important parts of the horse's body and the adage, 'no hoof no horse' is an oft-used saying for good reason. 99% of lameness issues occur within the hoof so this is one part of the horse which owners really should become familiar with.

Anatomy of a horse hoof

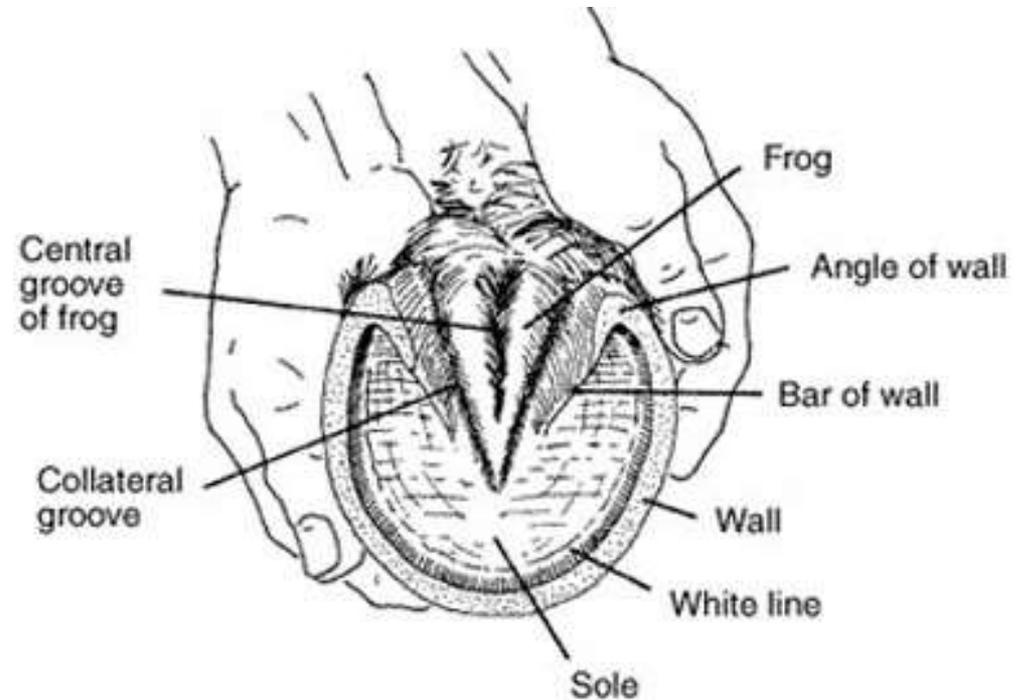


The hoof is a marvel of Mother Nature's most ingenious design, a closed capsule containing bones, ligaments, tendons and blood vessels creating a small but powerful support structure which also facilitates locomotion and acts as a shock absorber.

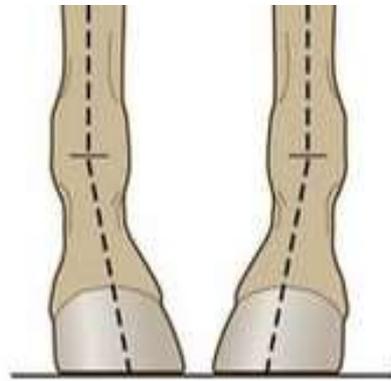
The key parts of the hoof



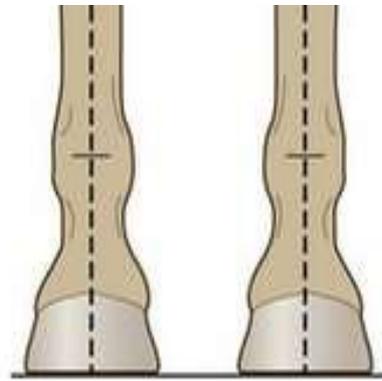
- Hoof Wall
- Coronary Band also called the Coronet
- Periople
- Sole
- Frog
- Sensitive Sole
- Plantar Cushion
- Lateral cartilages
- Laminae



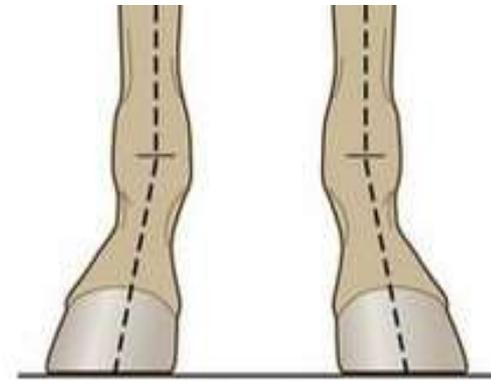
Next, find out how hoof anatomy fits together for correct hoof conformation



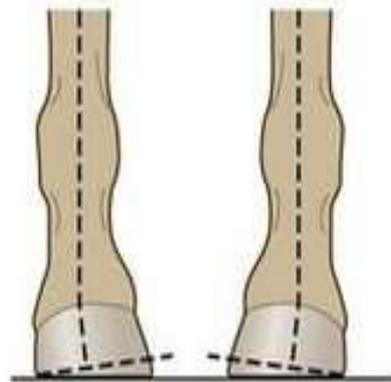
Toe in



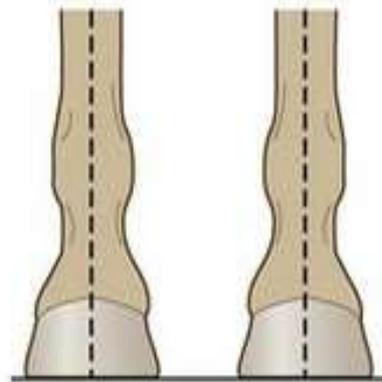
Straight



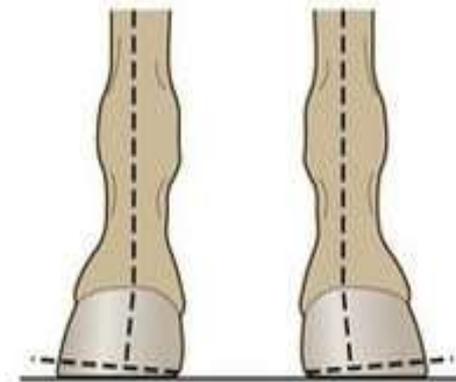
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Broken out



Straight



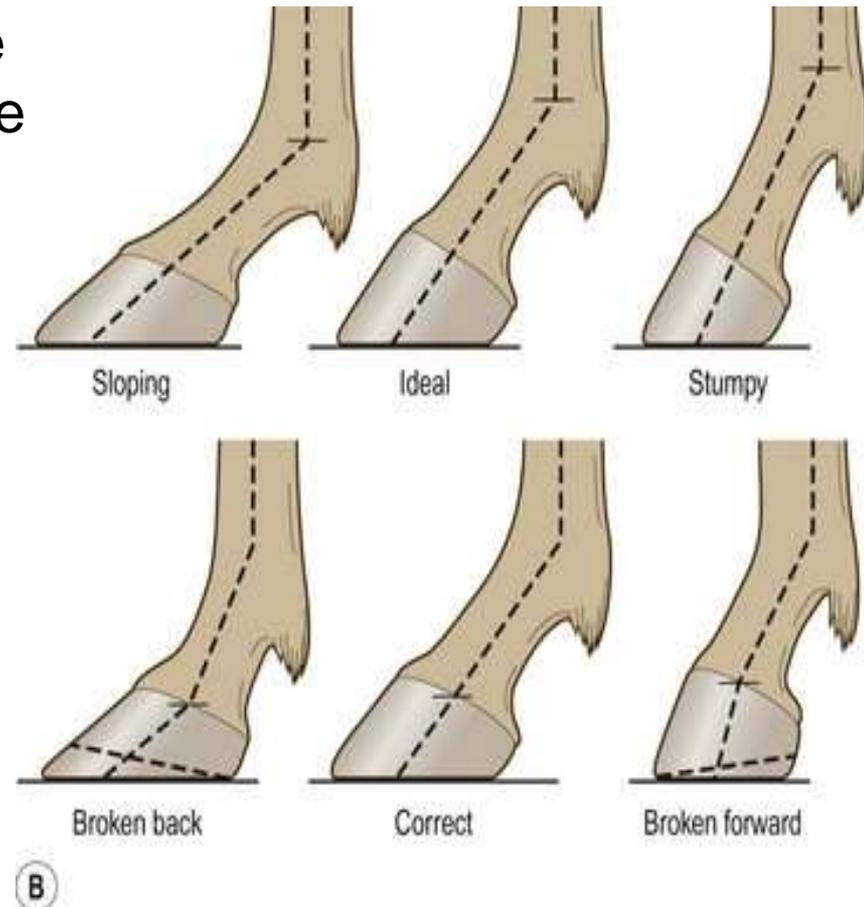
Broken in

A

Correct foot conformation

Apart from good quality horn, in general terms, the horse's feet should be in proportion to the size of the rest of his body. The front feet should appear round and roughly the same size and the hind feet which are a slightly different shape should also appear to be a pair.

Poor horn quality in most cases can be rectified with good care and appropriate nutrition but incorrect hoof conformation can be much harder to manage. A poorly conformed foot may result in strains to tendons and ligaments in the case of low heel long toe horses and will offer poor shock absorbency in horses that predispose to a more upright foot. However, a good farrier and carefully chosen shoes can help support the horse that has some hoof conformation issues.



What can you do to influence the hoof?

Unfortunately, hooves cannot be influenced in terms of conformation in that some horses are born with better feet than others. However owners and grooms can still help a horse with conformation issues by first understanding what they may be. For example, certain breeds tend to predispose to certain types of hoof structure.

Thoroughbreds can often have flat feet with soles which weight bear on the ground and be low/collapsed in the heel area. Whereas, cobs or heavier breeds tend towards a much more upright foot with a better hoof/pastern angle but the lack of angle can increase the concussive effect through the foot and leg which can cause wear and tear issues later on in older horses.



With better knowledge of the conformation challenges of their horse, owners can influence horn quality with proper nutrition and external care. Also, good farriery techniques can impact nature's defects so its always a smart idea to be on good terms with your farrier - perhaps making them a cup of coffee on a cold morning is not such a chore after all.

How can your farrier help conformation issues?

Different types of shoeing can improve undesirable aspects of a hoof such as low/collapsed heels or feet that are too upright/boxy. Horses with a low heel may benefit from a bar shoe, either an eggbar which is essentially completely round or a heart bar shoe which is similar but has a heart-shaped piece of metal which sits over the frog hence the name. Supporting the heels helps to prevent injury from overreaching and also relieves strain on those all-important tendons and ligaments which originate further up the leg.

Corrective or remedial shoeing may be used on a long-term basis for anatomical issues or for a short period after specific injury or illness, for example, laminitis. There has been huge research and development into glue on shoes that offer support for laminitic horses and ponies without the trauma of nailing a shoe onto an already inflamed foot. Good farriery is about collaboration with the owner and the vet and this can be just as applicable to horses recovering from injury as supporting

those participating in the sporting disciplines. A different or alternative shoe is only part of the picture; shoeing intervals, the location of the nails and care of the foot on a daily basis are all part of a good hoof care programme.



Nutrition and hoof health

The second greatest influence on the horse's foot other than genetics is nutrition.

A balanced diet should provide any horse with all the dietary requirements for good horn growth but supplementation can be required in certain circumstances. If the horse is young or resting, he may not be receiving sufficient quantity of rations to ensure coverage of the necessary nutrients. Illness, injury or a change of routine can also lead to the requirement for an essential boost which can be provided with specifically designed hoof supplements.

When looking for a good hoof supplement, it is important to understand that Biotin should not be fed in isolation as key dietary elements do not act independently but are all inter-related. As well as Biotin, a good supplement should contain MSM which is bioavailable sulphur and methionine and helpfully, trace elements such as zinc and manganese.



Using topical hoof products

There are many products available to help support poor horn growth or look after other aspects of the horse's feet.

Hoof dressings have been devised to promote good horn quality and to help prevent and deal with cracking, dry brittle horn and loss of moisture. Most hoof oils and conditioners will contain properties that nourish the hoof and also offer some protection against bacteria. It is important that conditioning products allow the hoof to breathe so do not seal the horn as such so that the moisture level within the hoof can fluctuate as nature intended. It is also crucial that they do not overly soften the horn.

Nowadays, most manufacturers are aware of the criticism levelled against traditional hoof oils and provide products for the show ring which will leave a lasting and deep shine without compromising hoof health. Splitting and cracking can occur when the hoof is too dry and so any products used should support good moisture retention.

There are also plenty of products to treat the underside of the hoof. Iodine and anti-fungal sprays are popular during the winter months when thrush can be more of a problem. There are also treatments which harden the sole of the foot, particularly helpful for thin soled flat-footed thoroughbreds.

Environmental factors and hoof health

Working on artificial surfaces is great for a horse's joints but sand is abrasive and this can impact the horse's hoof over time. Equally, excessively dry conditions can lead to cracking and brittle horn as moisture is continuously evaporated from the horse's hoof. Blood and lymph provide nourishment to the horn cells in terms of moisture but a prolonged dry period can be a red flag to owners who may need to condition their horse's feet with a topical moisturiser. If you have access to water when out hacking, a stream or ford, then standing them in water regularly for a few minutes every day can have the same effect.

Excessive moisture is just as undesirable as excessive heat and long wet winters can cause changes within the hoof because the hoof is wet for protracted periods of time. Stabling horses are the simplest way to minimise the horse's exposure to boggy, wet fields and this is why late winter is traditionally referred to as, 'abscess season'. The horse can develop an abscess at any time of year but following prolonged exposure to wet ground, this time is the favourite. Changes and distortions occur within waterlogged feet and leave spaces and crevices where bacteria can penetrate and thrive in moist conditions leading to a build-up of infection and pus.

Good daily, monthly and seasonal hoof care

routines

Each season will present different challenges in terms of hoof care. The winter is often characterised by waterlogged feet and soft heels whilst the summer months are the time of risen clenches and brittle, cracked feet. Whilst care does to some extent vary according to the conditions, there are some things which never change:



- Pick out all feet at least once per day especially after bringing in from the field and following exercise
- Check shoes for risen clenches and hooves for any cracking or damage when the feet are picked out
- At any suggestion of an unpleasant odour, the feet should be sprayed with an anti-fungal or iodine spray
- Stick to the shoeing or trimming intervals recommended by your farrier; overgrown feet and long toes are far more likely to cause problems with chipping and cracking and can give rise to other problems as well if the correct hoof/pastern

Key hoof care items for the grooming kit

1. Hoof pick, at least one, some have brushes on the back of the pick to help the removal of dirt and other debris
2. An iodine spray, a clear iodine spray is more helpful as purple spray stains red after a day or two and it can be hard to see bruising on the sole
3. A hoof food which will offer support and nourishment in dry conditions as well as look smart for competition
4. Vet wrap and veterinary padding along with gorilla tape are essential items to treat a hoof abscess and should always be present in your veterinary kit



Shod versus Unshod

The great debate over which is better rages on endlessly; some people feel that horses should not wear shoes as this was not what nature intended. However, man has domesticated horses and required them to work for him, more recently in sporting and leisure roles and shoes can assist with these demands.

At the end of the day, some horses cope very well without shoes and are able to perform in a variety of jobs, whilst others just don't. How the horse is kept, the job it is required to do and the local environment all do, to some extent, dictate how realistic it is to go unshod or barefoot.

The most important thing is to look at each horse as an individual and determine based on ridden work and conformation whether it is both desirable and possible to go without shoes. Some horses manage to do without a full set of shoes, usually remaining shod just in front.

Horses which are barefoot or unshod will still require trimming and the attention of a farrier at appropriate intervals of around 6-8 weeks.



Conclusion

Four good hooves are key to the soundness and general health of any horse.

Poor care and inadequate nutrition will be reflected in weak and brittle horn which will crack and fail to hold a shoe as well as other veterinary issues, both minor and possibly major.

Good hoof care should, therefore, be at the top of the list when it comes to stable management priorities.

