

Got Healthy Hooves? Here's How to Keep Them That Way

Consider the big picture—from farrier care and diet to environment and genetics—when working to keep horse hooves healthy.

Posted by Heather Smith Thomas | May 22, 2019 | Article, Diagnosing Lameness, Farrier Issues, Hoof Care, Horse Care, Lameness, Lower Limb, Older Horse Care Concerns, Shoeing



Daily hoof hygiene practices are key to keeping hooves mud- and rock-free, as well as identifying signs of problems such as thrush or abscesses. | Photo: Alexandra Beckstett/The Horse

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My horse is barefoot. And sound. And his feet look pretty great, if you ask me. What can I do to keep them this way? Are there special products I should be using or certain ways I should be managing them? What if someday he needs shoes?

These are just a few of the many questions horse owners ask about their horses' feet. They've heard about or have managed less-ideal feet, so it's only natural to want to keep things going the way they are and stave off problems. We gathered advice from two farriers on how to have the healthiest of hooves, with or without shoes.

Paul Goodness, CJF, a farrier at the Virginia-Maryland College of Veterinary Medicine's (VMCVM) Marion duPont Scott Equine Medical Center, in Leesburg, Virginia, says horses' feet are fairly resilient and can adapt to many conditions, but sometimes they need a little help. Travis Burns, CJF, TE, EE, FWCF, assistant professor of practice and chief of farrier services at the VMCVM, agrees, and says horse owners can do many things to help their horses maintain healthy hoof capsules.

Genetics: Start With Good Feet and Legs

"If I could give one piece of advice, it would be simply to buy or breed horses based on conformation and hoof quality," says Burns. "It's far easier to have healthy feet by buying/breeding horses that already have good feet."

If a horse has poor hoof quality, then the owner is fighting that problem for the rest of the horse's life, he explains. It can be a constant challenge to keep the feet healthy and sound and/or shoes on.

Indeed, hoof conformation, strength, and durability are mainly genetic. Some horses just have much stronger feet than others. Environment, hoof care, and nutrition can make a difference, but the horse that starts out with strong, well-conformed feet is less apt to be adversely affected by poor conditions.

Goodness says horses are born with certain attributes that dictate basic hoof angle and shape.

For instance, "the shape and density of P3 (the third phalanx, or coffin bone) has a direct influence on the outer structure of the hoof," he says. "The angle and length of the pastern bones also help determine the angle and shape of the hoof. If a horse is born with upright

pasterns, he may have a propensity to be club-footed. If he has long, sloping pasterns, he'll have a more sloping hoof and longer toe, with lower heels."

The No-Brainer: Farrier Care

The most important thing you can do for your horse's hooves is to schedule regular trims to keep them in proper shape and balance.

While some owners think bare feet only need trimming once or twice a year, most horses need much more frequent trims to keep the hoof capsule properly balanced (so structures are stressed evenly) and to keep the edges from cracking and chipping, Burns says. Trim cycles can span four to eight weeks, depending on the horse, he adds.

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"Each horse ... has a unique rate of hoof growth and a different need for trimming frequency," says Goodness. "This can also vary due to the type of work and the time of year." Hoof horn tends to grow faster during summer, perhaps due to optimum nutrition in green grass, and slower during winter.

"Most horses should be checked by a farrier or hoof care specialist regularly, if for no other reason than to check for abnormal conditions that might benefit from some kind of action," he continues. Your farrier might discover problems, such as thrush, white line disease, bruising, or a chip or crack in the hoof wall, in the early stages and intervene before the situation becomes serious—and more expensive to fix.

"The farrier is in a good position to help keep the feet healthy and to answer any questions the owner might have, especially a new owner," Goodness says.

Environmental Influences

Horses have an incredible ability to adapt to wherever we put them. It takes time, however, for their feet to acclimate to wetter, drier, softer, or harder conditions.

"Not all horses can adapt on their own, so the horse owner can play an important role in assisting with that adaptive period," Goodness says. "If horses are living in a moist area, or

there's a time of year when the footing is very wet and feet become too soft, we need to give them an area in their paddock that's higher and drier where they can get out of the mud and enable the foot to dry out a bit." As a general rule of thumb, feet are healthier when they are not constantly wet.

"Moisture is an enemy of the hoof capsules and predisposes them to abscesses, cracking, white line disease, and many other problems," says Burns.

Some horses' feet deteriorate readily when wet; the hoof horn becomes softer and tends to lose its structural integrity. The hoof wall might splay out more than it should, which makes the foot more likely to develop flares or cracks. Softer soles are more prone to bruising.

Moisture is horse hooves' nemesis; frequent bathing and muddy footing can lead to cracks, abscesses, white line disease, and more. | Photo: iStock

"Even worse than constantly wet is an environment where the horse goes from wet to dry to wet ... over and over again," says Burns. "Here in our mid-Atlantic states, even in summer when it is bone-dry because of drought, people think the feet are too dry, but they get wet with the morning dew. Then the feet are dry again by afternoon and the horses are stomping flies," which can cause the now-brittle horn to crack.

Use pest management methods to control flies and the stomping they trigger, and take good care of pastures, using rotational grazing to ensure fields stay grass-covered and managing high-traffic areas around gates and waterers so they don't become mud bogs.

Hygiene and Hoof Dressings

Check your horses' feet frequently to make sure they are not packed with rocks or with mud, which can also exacerbate the wet-dry cycle, and that the frog is healthy, says Burns. Doing this you'll notice problems such as **thrush**, evident as a black, foul-smelling material, or **white line disease**, seen as a chalky powder that spills out when scraped with a hoof pick, as soon as they appear and can treat them or call your farrier or veterinarian for help. You might also see clues that a **hoof abscess** is brewing.

It's important to keep feet clean—but also dry in the process. Horses that are bathed frequently often experience the wet-to-dry problem, which can result in cracked hooves, just as getting your hands wet frequently can lead to dryness and chapped skin. If you have to bathe a horse a lot or his feet are starting to dry out and crack from the wet/dry cycle of

walking through morning dew, ask your hoof care professional to recommend a nondrying hoof dressing that can help protect feet from the effects of excessive moisture.

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The hoof wall is made of connective tissue—similar to skin, except much harder, like human fingernails. And also like fingernails and skin, hoof horn must contain a certain amount of moisture to remain resilient and pliable, says Goodness. Too much moisture and the horn becomes soft and wears away quickly or won't hold nails. Too little moisture and hooves become brittle, chipping and cracking.

You can't add moisture to a hoof because moisture comes from a healthy blood supply within, says Goodness, but you can apply a good hoof coating to help retain moisture that's already there. The hoof's natural protective coating, the waxy periople protecting the outer surface, can become damaged not only by wet/dry cycles but also by urine and manure (acid in manure eats away the coating, and ammonia from urine-saturated bedding breaks down horn tissue). A hoof dressing can serve as a temporary covering to protect the horn and minimize moisture loss, says Goodness.

A hoof sealant can help if continual moisture changes have caused tiny surface cracks in your horse's feet. Hoof sealants keep external moisture from damaging the hoof, keep internal moisture from evaporating, and counter the effects of the aforementioned environmental changes.

Follow label directions for proper application and frequency of use, as products contain a variety of ingredients that affect the tissues in different ways, and some stay on the hoof longer than others.

If your horse is ever at risk of bruising, you can apply "toughening" products to the sole, frog, and heel bulbs to help harden these tissues and prevent bruising and soreness, says Goodness. Some products even form a living pad over the bottom of the foot.

Feeding for Good Feet

"Optimal hoof health depends on a balanced diet and a steady stream of nutrients," says Goodness. "Although it's fairly easy to provide adequate levels of nutrients, overfeeding any one of those can have a damaging effect—and not just on the feet but on the horse in

general.”

For most horses, green pasture is the ideal meal, containing protein, vitamins, and minerals, generally in proper balance (unless soils are extremely deficient in copper, selenium, iodine, or other trace minerals—which you can check using a soil test).

While we try to mimic nature as much as we can, not all horse owners have the ability to keep a horse at pasture full-time (and some horses have metabolic conditions that preclude this). So when supplementing with harvested feeds, such as hay and grain, make sure they supply a balance of the appropriate nutrients. “This will vary from region to region,” says Goodness, adding that harvest conditions and timing of cutting (maturity) can also significantly affect hay’s quality and nutritional content.

“If you think the horse’s feet may be suffering from improper nutrition, it’s often worth consulting with a professional,” Goodness says. And before you reach for one of the many hoof-oriented supplements out there, talk to an equine nutritionist about its nutrient content and whether your horse really needs it. Because there is such a thing as “overdoing” certain nutrients.

Also monitor your horse’s **body condition**, particularly if he’s an easy keeper. “As Americans we tend to overfeed our animals. If a horse is overweight, this puts extra stress on joints, feet, etc.” says Burns.

Age Matters

Two age groups that generally need more hoof care than the average adult horse are foals and seniors. Some owners don’t do much with a youngster’s feet until the animal is old enough to be ridden or needs shoes. But very young horses are at an age at which routine farrier care can make the most difference in starting the feet out right—with the best chance of correcting lower limb imbalances or crookedness.

“Many people don’t think about the importance of hoof care early on in a foal’s life,” says Travis Burns, CJF, TE, EE, FWCF, assistant professor of practice and chief of farrier services at the Virginia Maryland College of Veterinary

Get the Feet Moving

Besides promoting good overall equine health, exercise also supports condition of the hoof itself.

The more a horse moves around, says Burns, the better the blood circulation to the extremities and inner parts of the foot. “This stimulates the hoof capsule to grow and keeps the feet healthy. The hoof capsule is an adaptive living structure, capable of response to change and the stresses that are placed upon it.”

If the stress is not extreme—that is, to the point of damage and injury—it stimulates

Medicine (VMCVM), in Leesburg. “Foals should be looked at during the first two to four weeks because often they need a little trimming to keep feet growing straight, and then need trimming every month. The foal’s feet are very easily molded and shaped; you can have a huge positive influence during the first three months of life.”

At the other end of the spectrum is the retired horse turned out to pasture. “The feet don’t get much care until there is some sort of crisis,” says Paul Goodness, CJF, a farrier at VMCVM. “I have been shoeing long enough to see many of my client’s horses get into their 30s, and many times their feet deteriorate as they grow old. I have three or four of these geriatric horses that I’ve had to put shoes back on (after years without shoes).”

If you allow the feet to get too long on an older horse with arthritis, you’re just putting extra strain and stress on those already-painful joints.

So don’t just focus on the horses you are riding and working with regularly; also tend to your youngsters and retirees.

—Heather Smith Thomas

stronger, better growth. If the horse is confined in a stall most of the day and doesn’t get to move around, he won’t grow a good foot, says Burns.

Goodness agrees. “Horses that live outdoors in enough space to move around or have a regular work program are the ones with the healthiest feet,” he says. “I work on a lot of show horses that are in their stall more than they are out working, and their feet are just not as strong as those of horses out in the field 24/7.”

So get your horse out and moving as much as possible, particularly if he’s not exercised regularly.

When Does My Horse Need Shoes?

The bare foot functions as nature intended, able to expand as the horse places weight on it and spring back into shape when the weight lifts. This pumping action of the sole and frog helps increase blood circulation within the foot.

It’s better able “to function as biomechanically efficiently as possible, without restriction,” says Burns. This includes self-cleaning; mud, snow, and rocks don’t get caught and packed into a bare foot as readily as they do in a shod foot.

Burns says there are four reasons to shoe a horse:

1. **Protection** If feet are wearing away faster than they can grow and becoming tender, they might need boots or shoes. This is sometimes a temporary measure.
2. **Therapeutic reasons** Some horses need special shoes to treat disease conditions or to manage/compensate for conformational defects.
“Whenever a disease process is involved or a hoof capsule distortion or imbalance occurs

or a lameness develops, often the most expedient path back to healthy hooves is use of some type of boot or shoe," says Goodness.

A shoe can help a weak hoof capsule hold its shape and get back to proper balance.

3. **Proper traction** Horses in different disciplines require different types of traction. Those that run and jump need more traction, while reining horses, which must be able to make sliding stops, need less.
4. **Gait alteration** If a horse is interfering (hitting opposing limbs with his feet as he moves), for instance, the farrier can use special shoes to prevent this. Some people also want to change or enhance a certain phase of the stride and alter animation, especially in some gaited breeds.

"If a horse doesn't fall into one of those four categories, it should be barefoot," Burns says.

"There are some negative consequences associated with shoes, such as lost shoes, stepping on a clip or horseshoe nail, etc. The extra weight and application of a shoe does change the normal hoof mechanics of the hoof capsule and increases shock and concussion to the distal (lower) limb."

Take-Home Message

Now that you're equipped with a thousand-foot-view of the factors at play in your horse's hoof health, you can keep an eye on each and make changes as needed to help those feet continue to be healthy and functional and look fabulous.