



Environment and Hoof Health —Practical Hoof Care

BY HEATHER SMITH THOMAS

THE ENVIRONMENT a horse lives and works in (wet or dry condition and the types of footing) makes a big difference in whether feet stay healthy, according to Dr. Julie Bullock—a veterinarian/podiatrist in Virginia.

“Having been in Florida for part of the winter and vetting numerous endurance rides all over the world, I see a big difference in the integrity of the hoof wall, and hoof quality, in different environments,” she said.

DRY IS BETTER THAN WET

“Horses living in New Mexico, for instance, in a very dry environment have hard, solid feet,” Bullock said. “By contrast, horses on the East Coast have to contend with more humidity and moisture, and the hoof tubules tend to be a lot

softer. In some regions this is more noticeable than in others,” she said.

“I brought my horses to Florida from Virginia and a couple of my horses’ feet deteriorated in quality,” Bullock said. “I also see a lot more cases of white line disease in Florida, and many toe cracks.

I think some of this is because the farriers who do the hoof care tend to leave the toes long. When you get long, stretched-out laminae at the toe, even the tiniest toe crack opens the way for white line disease.

“I looked at a horse recently that had white line disease in all four feet. I had him cleared up when I left Florida last year, but now it’s back again because the farrier doesn’t open those little cracks and expose them to the air. I’ve seen more white line disease in Florida than in Virginia,” she said.

“I bought a horse in New Mexico and brought him to Florida for a little while, and his feet really changed. Now that he’s in Virginia, his feet have improved from what they were in Florida.”

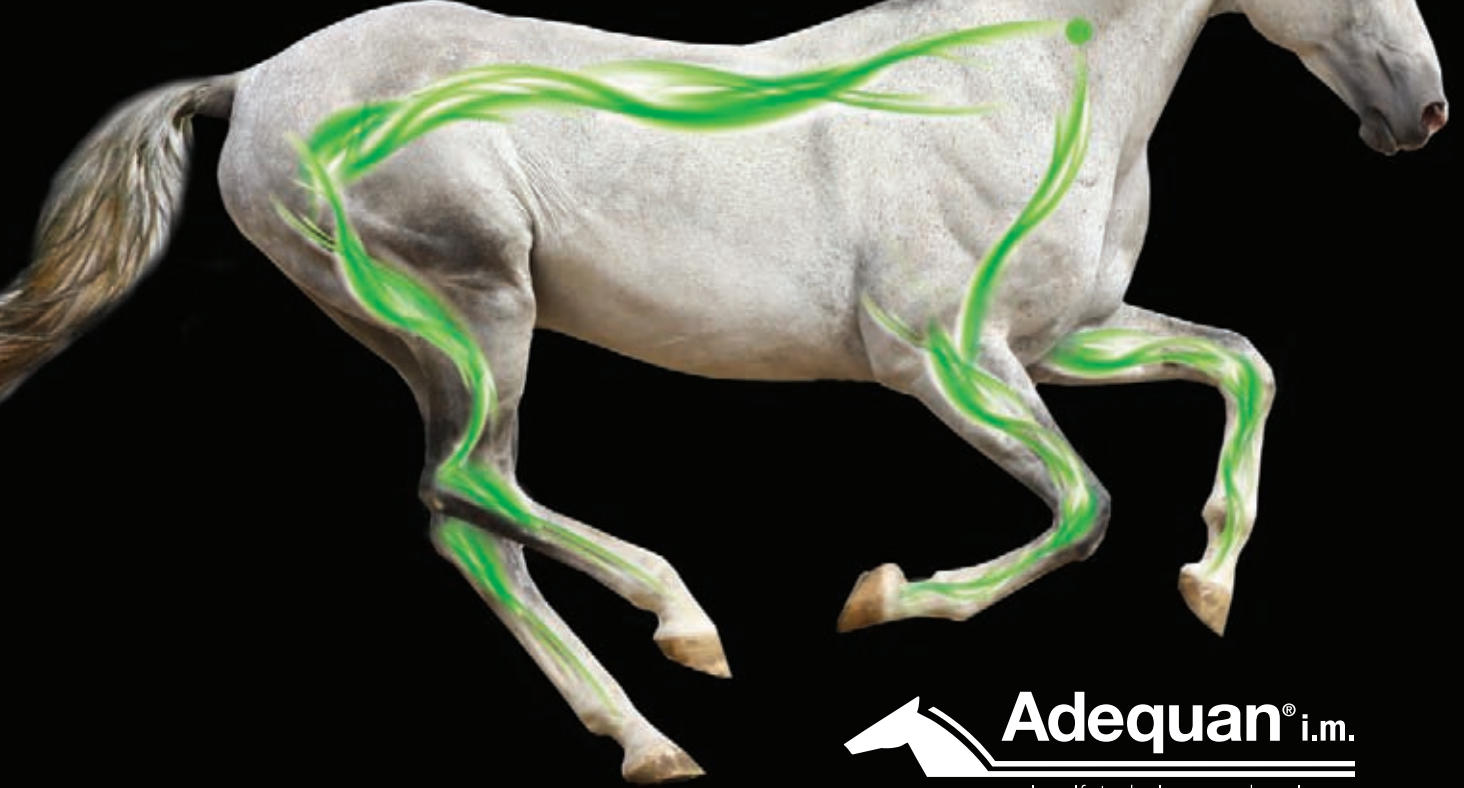
Wet, muddy conditions are also hard on feet if horses are out in paddocks and pastures.


“Horses that live in wet environments, especially if it’s seasonal—such as winter—need an area they can come into and allow the feet to dry out, especially if they are broodmares or yearlings out at pasture,” Bullock said. “A mare that had chronic laminitis and horrific white line disease was brought to my clinic from West Virginia. We resected the foot and cut away all the diseased horn, and put her in a stall where there was nothing but dry footing. Within 24 hours of just having a dry area, there was an amazing difference in her feet.

“Many people think the feet need moisture to keep them from drying out



Wet, muddy conditions in pastures are hard on a horse's feet



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too much. Moisture tends to make the feet too soft, however, and having the feet continually going from wet to dry to wet to dry is even harder on them. We always see more white line disease in horses living in wet conditions or horses that are

paint something on them. Getting the feet wet first defeats the purpose, however. If they could simply brush off the feet, apply the sealant and allow it to dry, and then bathe the horse, this would be best; the horse will end up with a better

paint sealants or waterproofing products on the feet rather than use so many conditioners or moisturizing products.

“Here in Virginia and in Florida I have never seen a foot that is too dry or hard and causing a problem,” Burns said. “Out west in Arizona or in some parts of Texas, there may be some feet that are too dry, but not on the East Coast. We fight wet conditions and humidity all the time. People bring their horses in off the pastures for the night, before the dew hits the grass/ground, and then turn them out late in the afternoon, to try to keep that moisture off their feet. Many people try to keep horses indoors in a controlled environment to help eliminate problems with dampness and with flies. Then the horses are not out stomping flies on hard ground all afternoon—after their feet have been saturated with dew that morning. This is a big stress on the feet.”

Bullock says horsemen need to try to think about what’s most natural for the horse’s feet.

“I compare everything to a more natural environment, such as the arid terrain where feral horses roam,” she said. “They are not standing in water, and their feet are not going from wet to dry so often.

“I had a conversation with (Dr.) Ric Redden some years ago. He studied mustangs in the West, and adopted two of them and brought them home—and remarked on how their feet changed after they came from that arid environment to Kentucky. The hoof quality in his opinion (and I agree) is better on horses in the West than the horses here on the East Coast,” she said.

“I haven’t seen any white line diseases in the horses I’ve looked at in the West,” she continued. “I’ve vetted a lot of endurance rides in Colorado, New Mexico, California, etc. and have never seen white line disease in any of those horses. I see more cases in Florida than I do in Virginia, possibly because Florida’s warm, humid season is a lot longer.”

The hoof is an amazingly tough structure, but it can’t handle constant moisture.



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Feet subjected to wet then dry conditions again and again are prone to hoof cracks

getting bathed every day.” Travis Burns, lecturer and chief of farrier services, Virginia-Maryland College of Veterinary Medicine in Blacksburg, Va., says that feet subjected to wet/dry, wet/dry over and over again are prone to develop a lot of cracks and fissures. Eventually those feet will fail.

“If the foot is constantly wet (in a wet environment), it will expand and also become soft, and the dirt/debris and microbes can infiltrate the hoof and may lead to abscesses, white line disease, thrush, canker, etc.,” Burns said. “It’s better to try to keep the feet dry, if possible.

“When bathing a horse, a person can put the horse’s feet in plastic bags and wrap them—to keep the feet dry,” he said. “Otherwise, constant bathing is very hard on feet. A person can apply some sort of sealant or waterproof coating and let it dry, and then bathe the horse. But a lot of people like to bathe the horse first, and then they rinse off all the feet and

hoof at the end of the season.”

Racehorses might have problems if they are traveling around the country and experiencing different environments—especially when going from a reasonably dry environment to a wetter one.

“If feet become so moist that they lose some of their structural integrity, they tend to pancake or flare out,” Burns said. “In a sandy environment we have to be more careful with packing materials and pads because sand can work in under that material and cause problems.

“Horses come here from drier regions and from Europe and their feet change a lot during the first year. They tend to get bigger and pancake out. Any time they get bigger—here in Virginia or in Florida—there are invariably some openings and spaces for microbes to get into those areas. Unfortunately, I’ve never found anything that can counteract the dampness from our humidity. It alters the foot a lot. So I strongly encourage people to

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Hoof Care

“It needs some big spaces of time to dry out,” Bullock said. “The dry hoof has more protection from external challenges. A soft hoof, especially if it has any flares that lead to cracks, is always more at risk for developing white line disease.”

Winter in a moist climate is harder on feet than winter in dry areas—where the snow is relatively dry. Cold weather in itself is not hard on feet.

“Mud is the worst situation,” Bullock said. “New England has what they call mud season. They get a lot of snow, and then it melts and thaws, and they get a lot of mud before things dry out. Many horse owners in that region have their horses in barns during those times of year. Snow in itself is not much of a problem; the mud is the worst.”

Terrain and footing are parts of the environment issue—whether the horse is living on rocks, sand, grassy pasture, or a dirt pen.

“Horses that live in mud and then walk across a gravel entryway before coming into the barn will pick up rocks in their feet,” she said. “Those horses need to have their feet cleaned out to check for rocks, thrush, and foreign bodies.”

The ideal situation is enough rock in the pasture/pen to have a little abrasion to keep the feet worn down and smoothed when

the horses are barefoot. This is healthier than soft, damp footing that doesn't wear down the feet; they tend to grow too long, splay out a bit, and then crack and split.

“Depending on how much area horses have, some of them do maintain a very healthy foot that doesn't need trimming very often,” she said. “If they don't have enough acreage to move and self-exercise, or not quite as much abrasive surface, they need more frequent hoof care.”

IMPORTANCE OF HOOF CARE

John Welsh, a farrier in Weatherford, Texas, says frequent hoof care is crucial.

“If a horse goes too long between shoeings, then the farrier is trying to fix something, and there's a lot more effort involved, especially if the horse's environment is not ideal for hoof health,” Welsh said. “I've shod horses in Arizona where it's really dry—about 12 inches of total rainfall per year—as well as my part of Texas where we get about 22 inches of rain in a normal year. The good thing is that horses are adaptable and can do reasonably well in nearly any climate, with good hoof care.”

“Many horsemen put a lot of oil products on their horse's feet to try to keep them soft in a dry climate; I've seen people use fish



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Frequent hoof care is crucial, especially if the horse's environment is not ideal for hoof health



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oil, axle grease, bacon grease, and other greasy products on the feet, but I don't think it helps much. The foot is designed to be dry when the weather is hot and dry. They have to become dry and hard, so they won't wear away.

"Some people in dry climates let their water trough in a pasture run over so the horse has to stand in water and mud when he drinks, in an attempt to add moisture to feet, but this just draws flies and makes a mess—and having the feet alternately wet and dry isn't helpful," he said. "At the other extreme, people build concrete pads around the water trough so there is no mud."

The foot is very adaptable, but some environments are harder on feet, as when horses are constantly standing in mud. These horses' feet might need more diligent care.

"East Texas and Louisiana have a lot more moisture issues with feet than we do here, just because of their more humid environment," Welsh said. "I don't think thrush is caused simply by muddy, dirty conditions, however. I have seen horses with thrush on just one foot. If it was just due to environment, the horse would have thrush on all four feet. In some instances the foot with thrush might be a little too upright (club foot) and the frog is not as healthy because it never contacts the ground; it's not as healthy as the frogs in the other three feet."

"Different horses seem to have different susceptibility to thrush," he continued. "I don't think we have any one specific answer regarding what causes certain problems. The most important thing is regular hoof care, doing whatever needs to be done for that specific horse's needs."

Some need more frequent and diligent care because their feet are not as strong

or they are not in a very good environment.

"Some barefoot horses need trimmed every five weeks while others might only need trimming a couple of times a year," Welsh said. "Footing makes a differ-



Paying close attention to a horse's feet can prevent small problems from developing into larger problems

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ence—whether they are on sand, gravel, mud, etc.

"At a hoof symposium a few years ago in Fort Worth, a speaker from Australia had taken a horse from eastern Australia and turned it out in western Australia with a tracking collar. He wanted to see what would happen to the horse's feet, taking it out of the environment in which it was born and raised and putting it into a completely different environment. He had to go rescue this horse after about six months because it couldn't handle the change. It had gone from a very sandy region to a rocky region, and the feet couldn't adapt quickly enough.

"The horse was sore-footed and wasn't traveling enough to find grass. In this region the horses had to travel long dis-

tances between feed and water. They'd go out two days in one direction without water and turn around to come back to water, so they were only drinking every three or four days. The gist of the study was that horses are very adaptable but they do need time to adjust to an extreme change, and hoof care is important when expecting a horse to make that kind of change," Welsh said.

"I don't think cleaning the horse's feet is as important as we are all taught. Every horse care book you read recommends cleaning feet out regularly, but this goes against the natural balance. The frog is designed to collect mud and moisture and the hoof is often packed with dirt (which tends to give some sole support and moisture). It creates a natural hoof pad.

"My own horses are out on pasture and I don't have to worry much about their feet; I just check on them periodically," he said. "This is a better situation for horses than being confined in a stall or small pen."

The conditions they live in and the amount of roaming room they have, as nature intends, make a big difference in hoof health.

The exception would be when horses live in very unnatural conditions with too much moisture, standing in mud.

"Even in those environments, the most important thing is regular hoof care," Welsh said.

Then if a problem starts to develop, you can be ahead of the curve and do something about it before it becomes a big problem. Horses are very adaptable, but we still need to pay close attention to their feet. Terrain and environment are crucial to hoof health. **BH**

Heather Smith Thomas is a freelance writer based in Idaho.

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