

The Ever Changing Environment

April showers may bring May flowers, but what it brings to our horse's hooves doesn't always smell pretty. With spring the urge to ride can become overwhelming. For those of us that have chosen the road of High Performance Barefoot and Applied Equine Podiatry, it can be a very frustrating time. Wet weather and adverse conditions make it very difficult to maintain a strong healthy hoof under our horses.

When it comes to the changing environment, it has become apparent that some horses fair better than others. The horse that goes into springtime with good structure to its hooves is less likely to suffer the ravages of excessive moisture and the adverse affects of daily exposure to mud.

If you are unfortunate enough to have a horse with less than healthy hooves, spring can be a nightmare. Just as a healthy person can handle a spring cold better than a weak, frail person can, the horse with good structure and proper function within the hoof can handle the changing environment spring forces upon us.

For the horse with less than ideal structure, imbalances or loss of equilibrium of function, a mild attack of laminitis or a simple hoof infection can be devastating. Quick and on-going intervention is the best course of treatment.

On a recent trip to Idaho, it was interesting to see that the affects of the environment on the horse's hoof was quite different from that of the East Coast or that of the UK. We were faced with trimming rock hard hooves with very thick, false sole. What was interesting was that most all of these horses had very poor weak frogs. With a little investigation, it became clear as to what was happening there. It seemed that they had a very wet winter and as they entered into spring, it became very dry, some would say a drought had set in. The wet season had apparently caused the frogs to deteriorate, and as the hoof began to dry out, nature laid down large amounts of sole to cope with the added stress of the hard, unforgiving footing. Now the question arises, how do we get a healthy frog back under this foot?

Unlike the horses here on the East Coast or in the UK, the Idaho horses had loads going for them in the form of solid structure to wall and sole. It would now be a simple matter of creating an environment that would eliminate any infection that was present and then exposing the frog to mild pressure to stimulate growth. On the East Coast and abroad, we are not so lucky. Often we have massive loss of structure, not only to the frog, but also to the sole and wall. The reason, longer, wetter times that make it difficult to maintain that ideal environment.

Recent studies indicate that excessive moisture is only one of the problems and that the problem is compounded by extreme changes. For instance, when a horse is stabled part of the day and then turned out part of the day, the horse's feet are exposed to extremes in the environment going from very dry to very wet and back again. This constant wicking and soaking action is very damaging to the hoof wall matrix. So what can be done about this? Do a little investigating of your own and try to determine if you can regulate your horse's movement to limit extremes. Turning a horse out 24 – 7 is great provided the environment is correct. Turn out in very wet conditions for extended periods of time may be detrimental. Common sense is the rule of thumb here.

Here are a few suggestions on how to return loss of structure that an incorrect environment may have caused.

Weak and unhealthy frogs

If your horse has a poor frog, you will ascertain that other structures have suffered as well. Having a good understanding of the frog's function is paramount. Even if you adhere to the traditional beliefs that the frog is a shock absorber and aids in pumping blood, it is important that you open your mind to some of the other roles it plays in foot function. It is responsible for aiding in stimulating the proper growth of the bars, heels, digital cushion and ungular cartilages. This said, it should be clear that addressing the frog should be your first step in achieving your goal of a healthy sound foot. If there is any doubt in your mind as to whether or not there is infection involved, treat the problem. Use a broad-spectrum anti-bacterial, anti-fungal cleanser such as Clean Trax and Silvetrasol. If the loss of frog structure has caused severe instability to the hoof capsule, I recommend light hand walking for 30 to 40 minutes a day on firm flat ground. Uneven ground will cause undue stresses and strain in the unstable foot. Pressure to the frog area can be achieved by applying Sole Mates Therapeutic Pads held in place by duct tape. For severe instability I recommend Perfect Hoof Wear Poly Wraps. Once stability is returned, you can then safely progress to working your horse as you see fit each day to stimulate further growth.

Lack of heel purchase

Heel purchase is crucial to achieving equilibrium of function. Applied research and on going field studies have confirmed that proper placement of the angle of the bar is required for proper neurological function. Under slung heels are helped by walking up to 30 minutes a day on asphalt or other hard surface. Friction generated by the gait when the foot strikes the ground aids in correcting the conformation of the heel's foundation, the ungular cartilages. If your horse is not landing flat or to the heels, it is likely that your horse is feeling pain in this area. Try using Sole Mate Therapeutic Pads and be sure to treat for infection of the frog. With the return of structure, the pain should subside. Keep in mind that internal structures have also suffered and must heal. Soft tissue injury can take a very long time to heal. Inflammation within the foot must be reduced if there is any hope of recovery. Seek the advice of an experienced veterinarian for recommendations on how to deal with inflammation.



This right front hoof exhibits poor frog structure, showing deep central sulcus and lack of heel purchase with under slung heels. Also evidenced is excessive false sole growth, indicated by deep collateral grooves

Thin Viable Sole

A thin live sole can result from improper trimming, which removed needed structure. Another cause is having an excess of improper structure elsewhere in the foot. An example of excessive improper structure would be excessive wall growth or a shoe. Both would cause a lack of needed pressure on the sole. The result is a lack of healthy growth. A thin sole often results in bruising from trauma. This bruising can result in sub solar abscesses, pedal osteitis and even fracturing of the pedal bone; avoid pinpoint pressure at all cost. Very thin soles require protection. Provide protection that will apply uniform pressure in the form of support. I do recommend using an iodine based product to harden the sole provided there is no sign of hoof infection present. With the application of these mixtures, spores responsible for various infections become trapped in the tubules of the sole and surrounding structures. Soak for infections first. Do not use any iodine products on the hoof if you plan to have X-rays taken. Iodine is radio opaque medium and as such, will make it difficult to get a good image on film. Walking a thin-soled horse over asphalt or other smooth hard surfaces will not cause trauma, nor will it aid in proper sole growth. Therefore, you will need to combine your efforts by walking this horse over sand or other soft surfaces that will not cause pinpoint pressure.

Moisture is also of great concern. Excessive moisture will hinder proper sole production. Remove all pads immediately after exercise. Though I do recommend twenty-four hour turnout, I do not recommend extended turn out in a wet environment. Keep the thin-soled horse in a very dry environment until such time proper structure returns. Hand walking in Sole Mates pads or in sand 20 minutes a day will do wonders for the thin-soled horse.

There was a recent article in one of the more popular magazines, the topic: Getting ready for the trails. What was most frustrating about this article, not one mention of hoof care or foot preparation was mentioned, go figure.

Best of luck in all your efforts to achieve High Performance from your horse.

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