Boots and Pads: A True Breakthrough in Healing

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When I started my own journey away from fixed metal shoeing and into the "barefoot world" in '98, I looked at hoof boots simply as a crutch to help me through "transition". When you pull shoes off a horse with truly healthy feet, or if you start natural hoof care early, with a foal there is little or no need for boots. In fact, we usually only need them long-term, when the riding terrain varies wildly from the living terrain. When you pull shoes off a horse with unhealthy feet, though, the boots are wonderful for keeping the horse and rider happy while we wait for the hooves to become healthy.

I've made a lot of mistakes in my career. At this point I have realized my biggest one has been under-use of hoof boots. I was in so much hurry to get to the unequaled traction, health and energy dissipation of the barefoot horse, I was overlooking the quickest way to get there! I used to feel defeated when I had to use boots. I never realized how much I passed this feeling to my horse owners until I, myself, started looking at boots differently. At some point, I started considering hoof boots to be the 21st century horseshoe. They allow us to have our cake and eat it too. We can provide the health and function of barefoot turnout and still protect the hooves when the demands of the rider exceed the health and capabilities of the hoof. The owner continues using the horse while watching the health of the hooves steadily improve, rather than steadily becoming less healthy over the years as is often the case.

Our own imaginations are the limit. Any traction device or traction reducing device that could possibly be attached to a hoof, can be attached to a hoof boot. I started requiring that customers buy boots when I pull shoes off unhealthy hooves. When they don't need them any more, I often buy them back and sell them "used" to someone else. When I shifted my business this way, my customer satisfaction increased dramatically. I came to consider it a challenge and a personal responsibility to ensure that if the horse was rideable in its shoes when I arrived, it would be performing the same or better when I left. This attitude and added responsibility I took on sent me on a whirlwind of new learning. Often the boot alone wasn't enough to achieve this, so I started experimenting with foam insoles and frog supports. I wasn't alone; I've picked up valuable information from others who have been experimenting with similar systems; like Gene Ovnicek and Tommy Lee Osha. To my excitement, I started finding that the boots could not only match the comfort level provided by fixed shoeing, they almost always exceed it dramatically.

I found that these methods could get horses comfortable enough to ride when no fixed shoeing methods seemed to help. Of course once we get a lame horse working, the stimulation speeds growth and increases circulation. It speeds up everything we're trying to accomplish in growing healthy hooves, taking rehab times to amazing new speeds. I used to be very happy if I could start with a horse with a 15 degree P3 rotation or a navicular horse, and get the owners riding the horse in a year. These days, I am really scratching my head if I can't do it in a month. Basically, if there is not an abscess, chronic internal pathology or current acute laminitis we can find a boot/pad combination that puts the hooves to work (and sometimes when these situations are present, we still can).

I put a lot of pressure on the profesional trimmers that come to my clinics. In front of the horse owners attending, I say that a competent natural hoof care professional must carry a full stock of hoof boots, a variety of pad material, and all the tools, materials and knowledge to customize the fit. The professional should leave the customer with a properly fitting boot that suits their needs and discipline. As the hoof changes the professional should automatically modify the boots to keep them fitting and providing for the support needs of the horse. This way, boot use adds 20 seconds to the tacking up process for the owner, and the rest is just pure enjoyment.



Pete's corner office with a view: The other side is filled with a variety of densities and thicknesses of foam, epoxies, and casting material.

A horse owner who knows nothing about hooves or boots and orders them off the internet is only slightly more likely to have trouble-free riding than if they had ordered a box of keg horseshoes! They should be fit by someone who understands them and has experience with making them work. Improperly fit hoof boots rub, fall off, make "flopping noises" and are hard to get on..... Properly fit boots are luxurious; a dream to ride for the horse and the owner. Now with all this talk about how hard I push boots on my clients, you might think that my clients are all riding in boots, now, rather than barefoot. This is not true. If you take away my new clients that have come along in the last six months, I have very few that need boots at all. Miles of riding in boots and pads, combined with barefoot turnout and routine trimming quickly gets the hooves so healthy there is usually little or no need for the boots after the hoof has grown through one growth cycle. I never realized what an incredible tool they could be. It was right under my nose for years and I just recently "got it".

I'm going to lay out some of the treatment options I use. The primary boot I use is the Easyboot Epic. I'm no boot salesman, and I'm not going to become one. I like the Epics because their low profile design eliminates almost all chances of rubbing and the thin, light, compact construction doesn't bring breakover forward and interfere with my trim mechanics. [I almost always cut out the back straps and the tooth covers and then mash the teeth flat with large pliers and file them smooth. I then usually cut $1/_2$ inch off the tongue (It makes them 10 times easier to get on), rasp a very large mustang roll on the front half of the boot and drill one or two $1/_2$ inch drain holes in the bottom.] When someone produces a boot I like better, I'll start using it. This said, there are many boot designs out there now that work, so I'm not pushing a product here, as much as I am "the idea".

The biggest problem with all boots is that they cause peripheral loading, just like a metal horseshoe. This means that the hoof walls are forced to bear all of the impact force without the help of the sole, bars and frog as nature intended. The laminae were never intended to have all the horse's weight hanging from them. In fact this is so important, the only advantage I see in stock hoof boots at all, is that they aren't on the horse 24-7; just when we ride. I started seeing big smiles on horse's faces when I started putting foam rubber insoles in the boots. This allows all the structures on the bottom of the foot to work in unison like they're supposed to.

I had trouble finding the right pad for this, though. Most foams that are flexible enough to do this correctly, wear out very



quickly. Most materials that are durable are too rigid. Luckily, Garrett Ford, the President of Easycare stepped up to the challenge. We started mailing material back and forth and I was trying them on my customer's horses. After a dozen or so attempts, he finally

sent me the right stuff. A new (and thankfully cheap) product was born; the Easycare Comfort Pads. (available by the end of Jan '06) To save money for the customer, they come in two sizes; #3 and below, and #4 and up. On one side the Epic sizes are stenciled; Boa on the other side, so the customer can just cut out the correct size with a razor knife or heavy scissors. (I know, I'm sounding like a salesman again, but we worked hard to find this stuff, so I would be doing you an injustice not to tell you about it.) Basically, I like to use them in the boots always; it just creates more natural mechanics. From that foundation, I'll show you some of the other methods that have been revealed during this learning process:

Navicular Horses: Developing the back of the foot

If you will please read the article on my site www.hoofrehab. com "Digging for the Truth About Navicular Syndrome", you will see that whether a horse with pain in the back of the foot has radiographic changes to the navicular bone or not, our goal is always to develop the digital cushions, lateral cartilages and dense frog callus. Successfully developing the lateral cartilages requires many miles of movement while the hoof capsule is free to twist and flex. Developing the digital cushions and frog callus requires many miles of movement while providing pressure and release (not constant pressure) to the entire length of the frog. (Dr. R.M. Bowker, MSU)

Previously, we had two options with navicular horses:

#1 We could shield the back of the foot from impact with fixed shoeing and pads. This often made navicuar horses feel better, but was a double-edged blade, because without pressure and release to the inner structures, they fall further out of function and eventually even the shoes and pads don't work any more and the navicular horse is put down.

#2 We could keep the horse barefoot until the structure develops. This served us well and natural hoof care practitioners have brought comfort and total usability to many navicular horses this way, but the problem was that the horses were often "unusable" for a year or more. These horses are usually perfectly happy barefoot in the pasture, but when you add a rider and concussive terrain, a hoof boot alone is almost worthless. The vibration to the underdeveloped inner structures causes pain, even when the boot is preventing ground contact through the frogs.

True frog pressure necessary to develop the inner structures is hard to obtain in these horses. (Please read "Heel Height: The Deciding Factor" on www.hoofrehab.com) The back of the foot is very sensitive and often if you provide what appears to be adequate frog pressure while the horse is standing on concrete for trimming, the pressure will be too much in the terrain the horse lives and works in. This will cause the horse to just run around on its tiptoes. Moving this way for ten years will not develop the structure at all. We often have to leave the frog off the concrete a bit, so that it gets a reduced pressure the horse will bear as the "long heels" sink into the terrain.

This situation is where the boots and pads become truly magical. We make a horse owner cry big "happy tears" at almost every clinic we teach. Occasionally it is because of the way a foundered horse steps out after my setup trim, but usually it is because of lvy playing around with different pad combinations on someone's navicular horse. Very consistently, these horses will stride out long, happy and comfortable for the first time in years when you get the pads right. Often this is the first true frog pressure they have received in years; their very first chance to heal, in spite of the best farrier care available.

So what do we do? First we have to determine where the pain is coming from and either add to or take away from pressure in that region. Usually these horses with inadequate structure in the back of the foot will have shriveled weak frogs, and digital cushions that feel soft and squishy because of the lack of fibrocartilage. The horse will stride out nicely on the grass, but if you lead it across gravel or any firm footing it will shorten stride and land on its toes. Don't accept this destructive movement! This should automatically start you on a search for proper movement that can heal the situation, and you can find it if you insist on it.

Sometimes the foam insole alone will do the trick. If the heels are contracted and the frog is deeply recessed between the heels, you may need to build more material under the frog. I usually use the softer neoprene saddle pads for this, but sometimes the denser insole material is right. You just have to ask the horse. I use two methods for this, depending on the situation. Sometimes I cut the owner a bunch of frog shaped pads. They then put the frog pad





over the frog, tape it in place with one piece of duct tape; then put it in the boot.

I know this may sound like a lot of trouble, but actually only takes seconds to do. Also remember we're often talking about horses no one else has been able to get comfortable enough to ride; let alone provide a way to heal. It's worth the trouble!

Another method that works well is to tape the frog shaped pad to the insole with double-sided carpet tape or glue. I use a glue called Goop, available at auto parts stores. It saves the owner a step while tacking up, but tends to cause people to not change the frog pad often enough to keep proper pressure to the region and it is not quite as "idiot-proof" for getting proper placement.

Sometimes it works the other way and we need to reduce frog pressure for a while. Especially if the horse has been routinely shod without frog support, the inner structures including the frog corium will prolapse or sink between the shoe heels. The frog was



yearning for more natural pressure and moved into that pathological position trying to adapt, but pulling the shoes leaves the frog standing too tall and usually receiving more pressure than it can comfortably bear on firm footing. Since

the inner structures themselves have moved downward, trimming the frog "out of harm's way" tends to over-thin the frog material and increase sensitivity. If you just turn the horse out on yielding footing, the frog will quickly remodel itself into a more correct position, but this usually means a month or so without riding for the owner. Again, a little bit of thinking can usually fix this problem, too. Just cut the frog shape out of the insole and riding usually continues without missing a minute. This one is always a very temporary measure.

All of these systems and the countless ones we haven't thought of yet, usually need to be tweaked and changed as the situation changes in the feet. For instance the increased frog pressure pads will dampen vibration and start to allow the horse to work the back of the foot, often for the first time in many years. As with any other weak, living thing we start to exercise, we can overdo it and create soreness. Don't be discouraged; change your system. Usually switching to a softer or thinner frog pad, or switching back to a flat insole will "rest" the back of the foot while the horse stays comfortable for riding. This is one of the main beauties of the whole system. We don't have to make all of our support decisions and then live with them for six weeks as we did with fixed shoeing. Any owner can easily be taught to change the insoles as the horse requires; as the situation changes throughout rehabilitation.

The lack of the development of the lateral cartilages, the digital cushions and the frog callus are at the very heart of long-term under run heels, severely contracted heels and also most negative palmar angle coffin bones. All of this new knowledge is just as dramatic for these cases as it is for navicular horses; usually bringing immediate comfort for riding while accelerating true healing beyond anything I've previously seen.

Same goes with club feet. If you read the article on my site "Club Foot", you will see that I rarely look at club feet as hoof problems, but as adaptations to another problem, usually way above the hairline. To truly fix a club foot you have to identify and fix whatever is shortening stride on that side. If you can do this, the hoof will adapt back toward a natural situation with just normal trimming to the live sole plane. However when a club foot has been around for a long time, we'll see the same severe lack of structure in the back of the foot we've been describing here. If you whack the heels off the club foot, the sensitive structures are overexposed and the horse runs around on its toes anyway, often with steeper angles than before the trim. This is a very dangerous mistake to make. Instead, use the same miles and miles of riding on the frog pads to develop the inner structures into something useable by the horse.

Foundered Horses: Support, Stimulation and Pain Relief

The second key area I've seen the boots and pad combos speed healing up to an "impossible" level is with foundered horses. Please read the articles "Laminitis Update" and then "Breakover" on www.hoofrehab.com for all of the protocols I've found to be effective. This article simply expands on one tiny piece of the whole picture. The boots are by far the most effective means of maximizing both current protection and healing mechanics I can imagine.

There are some very important problems inherent to fixed shoeing when you are faced with a horse that has lost its proper attachment between the hoof wall and the coffin bone. Our only option is to stabilize the relationship between P3 and the hoof wall long enough to grow an entire new hoof capsule from top to bottom that is well connected. Traditionally, farriers have used many different means to try to stabilize the situation, but the one thing they all have in common is that this P3 support is rigidly attached to the hoof wall itself. [This is not to say that competent farriers have never helped a foundered horse. I know I made foundered horses feel better and improved their situation with several different fixed shoeing combinations I once used, and was proud of my work. No one can take that good feeling away from me, so I truly understand why farriers get so defensive when "evangelistic barefoot people" act like they are evil boogie-men.]

But we can always learn more. In a foundered horse, the walls themselves are not properly attached to anything except perhaps the coronet and even the coronet is usually in the wrong place relative to P3. This means that any P3 support attached to the walls is not truly stable, either. The resulting shift and movement is enough to keep the new growth constantly "aggravated" and stressed just enough to make the growth of a new, perfectly attached hoof capsule in shoes almost impossible. (Perhaps actually impossible, but I threw in the "almost" to give all the farriers who's work I have not seen, the benefit of the doubt)

Even worse, the hoof wall is constantly growing, so even if someone does apply a fixed shoe that provides perfect P3 support today, by tomorrow, this support has crept away a bit with the growth of the wall. By the time four weeks have gone by, this "support" has moved away ¼ inch or more, and there is nothing to stop P3 from sinking right along with it. Again, the horse was never intended to hang from the laminae without sole support from below, but they do get by when people routinely force them to do it. When the laminae are weakened and inflamed, though, it is a prescription for disaster.

The simple concept of supporting P3 through a heavily callused sole and relieving the walls in the front half of the foot from active ground pressure has served natural hoof care practitioners well, and 20 degree rotations are being routinely grown out all over

the world, while most shoers still think that a 5 degree rotation is incurable. Now you know the main reason why.

Not that the "barefoot way" is without its own problems.... The thick callused sole was designed to help support the horse and it manages to temporarily do it alone very well, until the well attached walls grow in to aid in the task. Very often, though, the previous farrier or trimmer has been rasping the sole out from under P3 (Please read "Reading the Soles" on my site. Everyone who touches a hoof or owns a horse should be aware of the "electro-shock rasp"!!!). The sensitive corium may be exposed or only protected by 1/16th inch of sole. Also, if the horse is still in acute laminitis, the sole's corium may be inflamed and hypersensitive; just like the laminae. The quickest way to build sole material, like frog material, is with miles of pressure and release. Exercise is also one of the best ways to counteract the pitfalls of excess nutrition in these cases. But this is easier said than done with a foundered horse, plus it's dangerous. If you do force-walk a lame, foundered horse with a thin inflamed sole, you are not only being shamefully cruel, you also risk the bruising of the sole's corium. This will lead to abscessing and to the horse having to start a new sole from scratch.

Also, much of the sole's blood supply comes from the circumflex artery that wraps around the distal perimeter of P3. If the soles are thin, pressure to the region can pinch off blood supply and reduce the growth capabilities of the sole through simple starvation. So again, even though we have set up mechanics for well attached growth to move in we can also set up a situation where movement is uncomfortable and even dangerous. Many, including me, have previously taken these facts as "a risk we have to take", as the only other option is often simply destroying the horse. We fixed hundreds of chronic founder cases that way; by keeping the horse on firm, but yielding footing (free of rocks) and patiently waiting for enough structure to form to increase comfort.

This is where the boots and pads came to the rescue again and took it all to a much higher level. Like with the navicular horses, we can have our cake and eat it too. We can provide perfect "new growth mechanics" while at the same time offering protection better than the world has ever seen. They will make almost (That "almost" is just simple honesty.) all foundered hooves ready to exercise; sometimes even comfortably ride as soon as the diet is stabilized well enough to bring the horse out of the acute phase; regardless of the amount of rotation or vertical displacement (provided there are no accompanying abscesses already present). [Never ride or "force-walk" a lame horse. Wait until you achieve comfort for each!]

Usually the padding is much simpler with foundered horses; just a flat insole is all you'll usually need, though you may find an individual horse needs two of them, in which case the Epics won't work. You'll have to use the Boa or another "top loading" boot like the Old Mac and others.

We do, however, often need to turn the horses out in the boots

at first, which creates a few more "hassles" you need to know about. The boots were designed to be on for riding only and many models do very well for this. When you leave a hoof boot on for long periods, rubbing or chaffing becomes more likely. Now a little chafing may not seem like a big deal when you are talking about full recovery from a P3 rotation, but we need to do everything humanly possible to help the poor horse. The best ways I know to eliminate this are:

- #1 Use Epics. (There I go sounding like a boot salesman again. I'm sorry, but I'm just delivering you the facts as I know them.) 24-7 turnout can be successfully done with many boot brands, but with the Epics, the only thing that even touches skin is the soft, snug upper gaiter.
- #2 Make "socks" that cover the hair/skin with vet-wrap.
- #3 Sprinkle Gold Bond Medicated Powder on the whole foot before you boot it. This also drastically reduces the "funk" in the boots.
- #4 Be sure the boot fits properly. If it can twist on the foot it will rub.
- #5 Pull the boots off every day to clean, sanitize, dry out and inspect. If you do see a rub starting, put duct tape over the rub before you apply the vet-wrap sock. This will ensure any further movement will be on the slick tape, not on the horse.
- #6 Stop using the boots for turnout as soon as the horse is moving comfortably in its paddock without them, but continue using the boots for riding and in-hand exercise until there are no separated laminae left at all, and the callused sole has reached optimum thickness.

This is a lot of trouble, I know. It places most of the responsibility and care on the shoulders of the horse owner. Fixed shoeing will always be more convenient. The farrier comes by every 4-6 weeks, resets the shoes and the owner has no more responsibilities other than to pay the bill. But guys, this works better so it has a place too, with the conscientious horse owner who really wants to fix their foundered horse permanently.

I need to tell a story that happened to me and few of my customers (two vet students and a vet tech) several months ago. They had a horse that had been in acute laminitis, lame and in a stall for three weeks. I trimmed the horse for them, and then suggested they turn it out in a paddock to allow her to start moving around. They immediately said the attending vet had told them to leave it in the stall until it felt better and had no elevated digital pulse or elevated hoof temperature. I knew I needed to get the horse out, but I never undermine veterinarians (bite the hands that feed me). So I asked them if it would be within their vet's prescription to turn the horse out if I could make her comfortable and make the temperature and digital pulse normal before I left. With understandably skeptical smiles, they said, "Sure". So I set the horse up in boots and full pads and asked the owner to walk the horse for fifteen minutes. I asked her to come back immediately if the horse showed any lameness at all, but otherwise to keep on walking continuously the whole time. The horse strode out of there perfectly comfortable, and then came back fifteen minutes later with normal digital pulses and no elevated heat. Okay, I was "playing cool" a little bit. I didn't know for sure the digital pulses would be normal, but new from experience there was at least a 90% chance of it. The horse relies on movement and hoof function to aid in circulation. When those ladies become doctors, they will remember that day, too. If you don't believe my story, that's okay. Go try it on one horse; the pads are magic.

Although I have been booting horses ever since I stopped shoeing, I really only started this "pad journey" three or four years ago. There is so much left to learn about it, so please take this start I've given you and then keep thinking; keep learning! Don't accept a lame foot as an option; not for a day. Movement equals growth and development. Proper movement forges a proper hoof form. Proper hoof form equals little or no need for hoof protection and optimum performance. Patient experimentation with different pad options will accelerate your rehabilitation time beyond your wildest dreams.



Since the writing of this article, Easycare has produced an exellent line of pads to make life easier for the professional. Each color is a different density and they can be combined to add or reduce frog pressure and solar support/stimulation. You can find them at www. easycareinc.com



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