

The Thoughtful Horseman

May 2009 Issue 11

Progressive Horsekeeping

NEWSLETTER

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On the Verge of New Research

It may be the end of the world as our domestic horses have long known it.

Dr. Chris Pollitt is well known in the equine foot world: he is the director of the Australian Equine Laminitis Research Unit, the world's leading center for laminitis research at the University of Queensland, and also collaborates with the Laminitis Institute at the University of Pennsylvania. After many years of studying the equine foot, and laminitis, Pollitt remained frustrated that his research was hamstrung by the lack of a model of a truly healthy hoof. So he set about creating the Australian Brumby Research Unit: a project to track, monitor, and study the wild horses roaming the Australian outback, with a special focus on the form and function of the feral horse hoof.

The study includes but is not confined to:

- GPS tracking of distance, speed and habitat.
- Sentinel image capture technology.
- Photo and x-ray analysis of hoof measurements.
- Measurement of hoof capsule growth rate.
- Pressure and force plate analysis of foot biomechanics.
- Analysis of terrain, soil types and vegetation in habitat.
- Nutritional analysis of diet and determination of plant selection.
- DNA analysis of breed type and parentage



Sweet Freedom

Natural hoof care has long sought to emulate the robust feet of the feral horse. Now, Dr. Chris Pollitt is about to publish the early findings of his research on the Australian Brumbies, the feral horses roaming the Australian outback.

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The Brumby Research Unit is preparing to publish their results so far. According to preliminary reports, their findings may prove to be ground breaking.

Also hard at work are Dr. Debra R. Taylor at Auburn University College of Veterinary Medicine and barefoot hoof care specialist (and our hero), Pete Ramey. Their initial study focuses on chronic laminitis; subsequent studies will document long term restoration of soundness in horses with navicular syndrome. Both studies focus not only on trimming technique, but also on appropriately balanced diet, as well as turnout environment.

Stay tuned...traditional hoof care and horsekeeping are about to be heartily challenged. As the REM song says, so our horses will be saying: "It's the end of the world as we know it, and I feel fine!!!"



Finally...the Science behind the trim.

To learn more about the studies being conducted by Dr. Debra R. Taylor at Auburn University College of Veterinary Medicine, visit Pete Ramey's website here:

<http://www.hoofrehab.com/AuburnUvetschool.htm>

Shoeing is a symptom of our failure to understand how to keep the hoof -- and the horse -- truly healthy.

Indeed, the hoof is quite literally a mirror of the overall health of the horse. Instead of masking the discomfort and disease created by unhealthy horsekeeping situations, we should be listening closely to what the hoof tells us about the horse's overall well being.

The Tender Footed Horse: Some Common Causes

It never ceases to amaze me how quickly vets and farriers will recommend shoeing a horse that is tender footed. While nailing on a shoe does indeed often mask the horse's discomfort, it fails miserably to address and heal the underlying cause of the problem.

There are many reasons why a horse may be sore footed, some far more complex to rectify than others. But very often, the problem is easily addressed with hygiene, diet changes, or simply giving the horse time to heal. Here are some of the common causes of tender feet:

THRUSH.

This is absolutely the most common problem I see. Even a mild case will cause the horse to wince if he steps on a pebble, and advanced cases will cause a horse to favor his heels even on very forgiving terrain. It is likely the leading cause of heel pain in the domestic horse. Unfortunately, the severity of the problem is frequently trivialized -- most farriers will only mention that your horse has thrush in a sort of offhand way, and even vets will overlook thrush as being a major contributor to lameness. The fact is that thrush

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What's wrong with these pictures?

Top photo: Bayou's frogs are full of thrush.

Bottom photo: Leo has very, very little sole material under the coffin bone.

(which is also known as foot rot; perhaps if we just called it that, more folks would take it seriously!) in the hooves of cattle and sheep is considered the #1 cause of severe, devastating lameness. Incidentally, it has been conclusively shown that a lack (either primary or relative) of zinc and/or copper in the diet predispose cattle to foot rot. The solution? Aggressive hygiene, appropriate footing at all times, movement, movement, movement, and diet balancing.

WHITE LINE SEPARATION.

Ever gotten a splinter up under your fingernail? Or simply bent the nail back to the quick? It's not a pleasant experience. Horses with white line separation (stretched, poorly connected laminae) experience something very similar with each step, and particularly if they get pebbles wedged in the gap between wall and sole. White line separation in an otherwise well-maintained hoof is almost exclusively diet related. Serious in and of itself, white line separation also predisposes the horse to white line disease, a fungal infection of the

laminae which can be devastating. The solution? Diet balancing, timely trims, and boots and pads until the separation is grown out.

THIN SOLES.



White line separation, as seen in this hoof, is usually a diet issue.

Usually, horses are thin soled because they have been trimmed that way. Occasionally, the problem is diet related. And sometimes, a horse will blow an abscess and slough sole dramatically. In any case, thin soles leave the underlying structures precariously close to the ground. Thin soled feet are in danger of bruising and even coffin bone

fractures. The solution? Pinpoint the cause and take steps to mitigate the problem. This may require diet changes, or simply allowing time and proper trimming to build sole material.

With any of these issues, as with any injury or infection, good circulation is critical to healing. Movement -- pressure and release to the load bearing aspects of the hoof (sole, wall and frog) -- is as crucial as diet, hygiene and trim.

WANT TO LEARN MORE?

Host a Clinic or Lecture for your facility, riding club, or friends!

Contact me today for rates and availability.



Refine your control of the feet on the ground.

Horsemanship

When Things Fall Apart, Go Back to the Basics!

I'll admit, one of my personal pet peeves is folks who seem to do endless groundwork with their horses, and never get on and ride! Too often, an owner's lack of confidence winds up getting the horse drilled, over and over and over. Pretty soon, you've got a really sour, resentful horse. Once they get it -- trust me, they've got it.

But an occasional refresher on basic groundwork is never a bad idea. In fact, when things go south in the saddle, chances are really good that if you check back on your groundwork, you'll find something missing. Lose a canter lead? Check for softness in the neck, poll and jaw, and then check to make sure the horse can step his hind feet across under himself. Refusing to go forward on trail? Betcha \$10 you can't get him to lead up and back freely on the ground.

The same holds true for some things you wouldn't really equate with ground work, like picking up the feet. Feet stuck to the ground when you want to clean them? Work on refining your control of the feet from the end of the lead rope; focus on moving one foot, only one foot, and only the foot that you want.

More Reasons to Evaluate & Balance Your Horse's Diet

Diet balancing: it's not just for elite performance horses anymore.

It's inexpensive to do, and custom supplement formulas are surprisingly cost-effective. I've said it a million times already, but I'm going to say it again here: if you do nothing more than balance the trace minerals, you'll see big differences in your horse's overall health.

The trace minerals are iron, copper, zinc and manganese. Most forages provide as much as 5 times the horse's requirement for iron, but fall far short of meeting the minimum requirements for copper and zinc. The problem is compounded by the fact that the overabundance of iron in the

typical domestic horse's diet quite literally competes with what little copper and zinc is available: too much iron blocks absorption of these other very important trace minerals.

That might not sound alarming...right up until you take stock of what a lack of these minerals can mean to your horse's health. While studies in horses and their hooves is sparse, we have scads of studies on the same deficiencies in cattle and sheep, as well as other species. Some of the problems linked to primary (simply not enough) or relative (not in proper ratio with the other trace minerals) deficiencies of copper and zinc include:

- *Exaggerated inflammatory or allergic response*
- *Joint problems*
- *Tendon & ligament problems*
- *Poor hoof quality*
- *Skin and coat problems*

More specifically, copper and/or zinc deficiencies have been linked to the following hoof problems in cattle:

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- *Cracks*
- *Sole hemorrhaging*
- *Abscesses*
- *Laminitis*
- *Thrush*

I'm offering a 10% discount on the usual price of \$100 per diet during the month of July.

That price includes calculating the horse's daily energy requirement, protein and amino acid requirements, as well as major and trace mineral requirements, dependent upon the horse's age, breed, level of work, and any metabolic or disease challenges. Once we have the horse's requirements calculated, the best approach is to analyze the hay or pasture the horse is currently eating, and balance to that. Hay analyses generally run around \$30 per sample; I will help you take the core samples and send them off for analysis. Alternatively, typical averages for the area and the type of forage can be used.

Diaper Ointment!!

Seems like an odd topic for a horsekeeping article, right? But the virtues of this very simple and easy to find product can't be overstated!

In my ongoing quest to find a better way to combat thrush, I'm constantly experimenting with different things. It's not terribly difficult to get rid of a stubborn thrush infection, but the problem is that it rarely stays gone...a couple of weeks later, or a couple of days of neglecting to clean the horse's feet, and it's back. The speed with which it attacks the frog is astonishing, and in fact, just the presence of manure in the collateral grooves, with no overt thrush, quickly eats away at the frog.

Just picking out the feet helps, but bacteria remain. Scrubbing with dish soap and a good bristle brush (just like one you would use to do the dishes) is probably the most effective way to thoroughly clean the horse's foot, and this procedure alone will help keep thrush at bay. Several times a week is best; sounds labor intensive, I know, but it truly takes about five minutes to scrub all four feet, and this "ounce of prevention" is well worth the effort. Added bonus: horses LOVE it -- it's like a foot massage -- and I'm beginning to believe the scrubbing stimulates circulation in the hoof, as well.

Now what if we could somehow protect the frog once it's scrupulously clean? Enter zinc oxide, the active ingredient in diaper ointment. It's no secret that diaper ointment effectively protects the delicate bottoms of babies from what's in their diapers. Why not



Fabulous Foal Feet

Little Aliyana made her debut on Sunday, May 3rd. Check out her perfect, amazing little hooves! Read more (and see more photos) on my blog here: [More Foal Feet Photos](#)



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a horse's hoof???? Coating the frog, central sulcus, and collateral grooves liberally with either straight zinc oxide or 40% zinc oxide diaper ointment provides an effective barrier. Picking the feet out even two days later, the layer of zinc oxide is still apparent.

Interestingly, foot rot in cattle and sheep is treated with a zinc "bath"...it's possible that the zinc oxide not only provides a barrier, but even combats the bacterium responsible for thrush.

Here are some before and after pictures; these hooves were scrubbed every other day with Dawn dish soap and a bristle brush, then the frogs were coated liberally with generic diaper ointment comparable to original formula Desitin:

On the left, before scrubbing and zinc oxide ointment; on the right, after ten days of treatment:



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About Maria Siebrand

& The Thoughtful Horseman...

With a background in the life science and pharma industries, and a determination to make life better for our domestic horses, Maria brings a science-based approach to horsekeeping, equine nutrition, and the field of barefoot hoof care. She offers barefoot hoof care services, nutrition consultations and diet formulation, and horsemanship coaching, as well as a line of supplements formulated to fit the typical Southern California equine diet.

Maria is available for clinics, lectures, and mentorships on barefoot hoof care and progressive horsekeeping practices.



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