By Christy West

Foot Flops and Fixes

hat do Quality Road, Big Brown, Tiznow, and E Dubai have in common? They're all major stakes winners with at least one other commonality—hoof problems that affected their careers. They're certainly not alone; hoof problems strike Thoroughbreds, from Triple Crown contenders to claimers, resulting in lameness, high farrier bills, and lost training days, races, and purses.

We'd all like to avoid sore heels, quarter cracks, sole bruises, wall separations, interference injuries, and other hoof problems in our racehorses. But as these big runners with top-of-the-line care illustrate, sometimes these obstacles are just facts of life for horses whose job is hurtling their 1,000-plus pounds (plus a jockey) down the track at 35-40 miles per hour.

Luckily, there is good news: With vigilance, good horsemanship, and care from experienced professionals, most hoof prob-

Common hoof problems that plague Thoroughbred racehorses and what you can do about them

lems can be prevented or managed so horses can train and race to their full potential.

JUST PLAIN SORE FEET

Tom Curl, a Vero Beach, Fla., farrier focusing on repairing problem feet, hit the mass media spotlight last year as one of the farriers getting Big Brown's cracked feet back into racing shape before the Kentucky Derby Presented by Yum! Brands (gr. I). He said the number one problem he sees in Thoroughbreds across the United States is chronic sore heels/bruising. Affected hors-

es' feet usually have low heels, which often get lower and more painful throughout a hard training/racing campaign.

These compromised feet usually have two major issues: suboptimal biomechanical function and poor shock absorption. The first comes from the harder pull required for tendons and ligaments to break over the low-heeled foot, which can cause pain and injury in these structures and others. For the second, consider that the rear half of the foot contains the fibrous, elastic digital cushion, which true to its name absorbs and dissipates the shock of the foot landing. In the low-heeled foot, the cushion is compressed and can become progressively more so, resulting in a "flat tire" that transfers load and vibrations more directly to other structures within and above the foot. Pain and injury can result, with variable impacts on the horse's racing career.

These sore feet can impact other parts of the horse, too. "The feet are the primary

problem for so many secondary lamenesses," said Curl.

For example, if the horse's heels are sore, he'll change his gait to compensate for the pain, perhaps by landing more on his toes. The change might not be noticeable as a lameness, especially if the same soreness exists in both front and/or hind feet; the horse might just appear to shorten his stride, stumble often, or be off form. That altered gait will usually stress other structures in the horse's body, from other regions of his feet on up through his legs and even his back.



Big Brown, one of many major winners with hoof problems

CAUSES OF SORE FEET

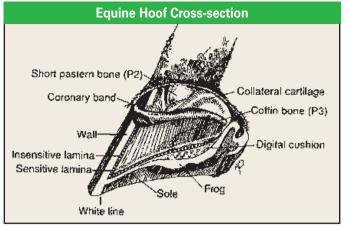
Concussion/track surface: "Some attribute (chronic sore heels) to shoe selection, size of the shoe, or a tight shoe fit at the heels, while others say it's the track surface," said Curl. "I think concussion is the number one cause. Tracks are getting harder, pulled down tighter so the

horses can go faster, but it really beats up the feet. Some surfaces, when they get a little rain, the horses go right to the bottom (hooves drive through the soft surface down to the hard track base)."

Do synthetic surfaces negate this problem? Curl says most trainers haven't really made up their minds about synthetics, noting that they're "just different" and in some cases soft tissue injuries are more of a concern. "One day they like them and one day they don't," he summarized.

Too much speed? "It's going to be rare to have sore feet or cracks in a slow racehorse," said Curl. "Think of horses like Big Brown or Quality Road—just watch them. They aren't playing around; they're hitting the ground with great force. Some people say it looks like they're floating, but not these guys. They're grabbing hold of the ground hard. It's an athletic sport, and you're going to have injuries and soreness from training.

"It's just like after a football game—players who don't work too hard go play golf on Monday, while those who did (work hard) are in rehab," he added. "Something's gotta give, and it's usually the foot."



Horse selection: Buying horses without regard for their feet can certainly leave you with foot problems, says farrier Ian McKinlay, another problem foot specialist who also worked on Big Brown last year and Quality Road this year (and many others besides). "I know if I spent \$300,000 on a horse, I'd want to see his feet with no shoes on," he commented. "Buyer beware... Sometimes they come out of the sale with what looks like a nice foot until you pull the shoe and cosmetics off. Keep in mind that glue-on shoes are almost always on thinwalled feet with heels that will easily collapse and roll under. They can do very well in glue-ons, but it can be costly. It's much easier and cheaper to buy a goodfooted horse to start with."

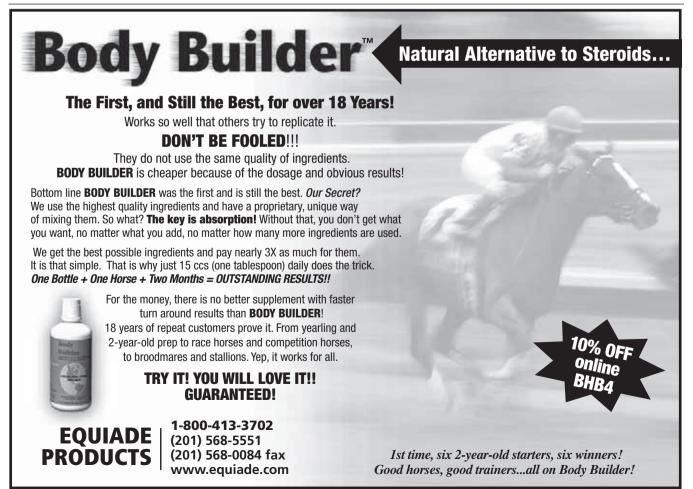
Foot soaks/mud packs: McKinlay cautioned that soaking or packing the feet might help pull out inflammation and soreness, but it can also wreck the hoof walls. With the added moisture, "the wall isn't so rigid anymore," he explained. "The feet will flare at the quarter and roll under at the heel, or the heels just roll under and the foot runs forward."

Curl added, "There's one trainer I always check on when I'm at Belmont, and he always

says, 'I don't need anything, I haven't had a quarter crack since Ian told me to throw that mud away.' "

Farrier selection: Your regular farrier has a huge impact on your horses' careers, said McKinlay; select one based on skill and success, not just price. "There are two kinds of guys out there: Those who work to keep your horse sound, and those who just work to keep the shoes on for 30 days," he said. "To pick the former, the trainer has to understand the importance of horses' hooves.

"Some trainers pick blacksmiths solely by what they charge and will switch to someone who's \$5 cheaper," he added. "You have to be a stone-cold idiot to





change blacksmiths to save \$5 if your horses are doing well. A bad farrier can ruin vour entire stable guickly. The trainer, owner, and horse will all pay a lot more than that \$5 if it goes bad."

Genetics Many in the industry feel strongly that bad feet are fairly consistently passed down through the generations, and McKinlay agrees this can be a factor.

CORRECTING AND PADDING CRUSHED HEELS

According to McKinlay, most horses land heel first. "But most horses I glue shoes on for the first time will have a red ring on the toe because they know it hurts to land on their heels, so they land on their toes (and bruise them)," he said. "The trainers may say they stumble a lot. Glue some shoes on and rebuild the heels; put some Yashas (special pads) on them; then you'll hear they're reaching out real nice and not stumbling any more. And that red ring goes away because they start landing right.'

The Yashas are pads of McKinlay's own design, which come in two forms, depending on whether the shoe will be glued or nailed. The nail-on versions are two-part shoe-shaped pads that include hard red plastic around the outer front edge for stability under the nails and softer black polyurethane along the inner rim and in the rear to cushion the heels and sole. He reports good luck with them in racehorses and for other breeds/disciplines. The glue-on versions have only the softer black polyurethane padding at the heels to cushion them; McKinlay finds them particularly useful when a sore-heeled foot is rebuilt with wider heels (using glue) for a broader base of support.

"After making their feet more comfortable, they'll go from hiding in the back of the stall to hanging out the front, being happy and interacting with other people and horses," McKinlay said. "And just think of the secondary lamenesses getting fixed; usually the first thing that happens when we glue them is that swelling in the ankles reduces because the horses change the way they land (back to the



Farrier lan McKinlay, who makes his living by solving tough racehorse foot problems, said sometimes a horse with bad feet is a great buy. The key is to find one with good bloodlines and good past performance who has gone off form due to repairable foot problems, because such a horse can often be bought or claimed inexpensively and brought back to winning form with proper foot care.

'Just look for horses with heels rolled under," he reported. "I work for one owner in particular who looks for these horses as claimers and has a 50% win rate with them so far just by fixing their feet. He looks for sore-footed horses switching leads back and forth, a shortened stride, and running with their heads up in the air—those that clearly can't get comfortable."

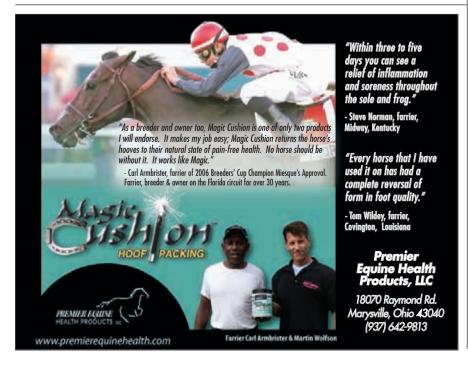
How exactly does he fix their feet? McKinlay often uses glue-on shoes with the Yasha pads he designed and widens the heels, noting that glue-ons are far less traumatic to the hoof wall than nails and often a good choice for thin-walled horses. The Yasha glue-on has soft black polyurethane in the rear of the shoe to cushion the heels.

McKinlay recalls one horse in particular that was claimed for \$5,000, then won more than \$180,000 after having his feet fixed. He estimates the horse is now worth about \$75,000. "That's a big boo-boo (for the previous owner) over a pair of glue-on shoes," he added. "It's an absolute no-brainer to glue these horses. It costs more, but the horses are happier, running better, winning more, and worth more."

If your horse fits this profile, McKinlay suggested trying glue-on shoes and heel rebuilding/cushioning for a month. "You'll know in probably three days, maybe two to three weeks max, if it's working," he said.

-Christy West







before



after

FORMULA4 FEET Building better hooves, one horse at a time.

This 23 year old Thoroughbred has had "bad feet" since he began training as a 2 year old. His horn quality was so poor that he only went to the races once and finished dead last. He was then expelled as unfit for training and for the next eight years was used as a hack.

He couldn't even cope with that as his time in training had left the pedal bones of both his front feet with peripheral demineralization. He then suffered an extensive horn infection which required a large area of both front hoof capsules to be resected. After that, he remained fairly sound only with careful, regular visits to the farrier.

However, his hooves were never strong and his feet always had a tendency to splay or flare over his shoes and his heels remained collapsed despite being fed, every day for 13 years, another leading hoof supplement.

This product was replaced by Formula⁴ Feet in 2004; no other management nor feeding changes were made. After only two months of receiving Formula Feet, the farrier commented "What have you done to this horse's feet, they are much stronger to nail to and more 'uptogether." Farriers are not always easy to convince of the benefits of hoof supplements. Sam's farrier made his complimentary remarks when unaware of the recent change to Formula 4 Feet.

Now Sam didn't know that Formula⁴ Feet was developed by the Director of the Laminitis Clinic, Dr. Robert Eustace and Dr. David Frape, the father of equine nutrition. He didn't know that it is made from entirely non-GM ingredients, nor that it was extensively researched at the University of Berlin, a world reknowned keratin research institute, or even that every batch is tested by the world's leading equine forensic laboratory before being sold. Why Sam did not know that it contains unique ingredients which protect him from insulin resistance. And he sure was not aware that it is the only product with four specific powerful antioxidants, nutrients which promote vasodilation and others having anti-inflammatory properties.

All Sam knew is that it tasted a lot better than what was put in his feed before.

Sam is now a happier horse as his feet no longer hurt and his coat is always shiny. He is fed no cereals, only feeds recommended by the Laminitis Trust which he loves.

For technical information, visit www.laminisclinic.com



Distributed in the USA by Emerald Valley, Exeter, NH

If you have a horse who is like old Sam, please call for your FREE SAMPLE and info pack, so you can share in Sam's good fortune.



way the horses should be landing)."

Once the feet are comfortable, secondary lamenesses can become more apparent because the worst pain is no longer masking them. You can

then treat these issues as well for a fully sound horse.

INTERFERING/HITTING

It's not uncommon for a horse to strike one foot with another, especially at racing speeds, whether it's a left foot hitting a right (or vice versa) or a hind toe striking a front foot or leg. The result of interfering ranges from a little hair loss to a severe wound or even tearing off part of the hoof or shoe. Trainers often apply protective boots to avoid interference injury, although these don't address the cause.

Interfering might be due to poor conformation, shoeing or trimming that doesn't suit the horse, or even a bad step, but McKinlay said pain and resulting gait alterations can cause it as well.

"Most horses I glue stop hitting immediately," he reported. "They've been altering their gait to get weight off their fronts because they hurt, and when you get their feet comfortable, they don't need to do that anymore."

If a horse is clipping his front feet or legs with his hind toes, he might have his front feet shod short (with shortened heels) or his hind shoes set back to make it harder for him to catch a front heel with a hind toe. This might not be too bad for the hind feet, but short shoeing the fronts will often cause problems, said Curl.

With short shoeing, the foot's base of support is shorter and farther out in front,



The expertise of a skillful farrier may well be worth the cost

so the heels get more stress; the ends of the shoe heels might begin digging into the bars and sole at the heels, particularly as the foot grows forward.

"This pressure and concussion often start the problem (bruising) that will lead to quarter cracks and wall separations," Curl added.

QUARTER CRACKS AND WORSE

Quarter cracks are vertical breaks down the hoof wall on one side of the foot near the heel. They start near the coronary band and can progress down to the ground if the heel isn't stabilized. Curl noted that like sore heels, quarter cracks often affect good horses with big, hard-hitting strides. "The problem is that a lot of people don't know how to stabilize them so they can heal," said Curl. Often, a trainer will work with a local farrier to fix the problem, which is great if he's experienced and successful with quarter cracks. But without good experience, he might try various strategies unsuccessfully. Meanwhile, the horse is losing condition, the owner's losing money, and everyone's getting frustrated.

"The last thing you want to hear out of the farrier working on a problem foot is, 'Let's try this,' "Curl commented.

He recommends finding people experienced and successful in quarter crack repair to handle the problem, even if they're not local and have to travel to do it. "If the athlete is worth his weight in all this, get the right people in to fix it," he advised. "It may not be a simple little crack; most all wall separations look like quarter cracks in the beginning, but they can get huge (if not properly treated early). It's best if someone knows they're in over their head to call for help. Gather all the information you can on the problem from all sources, and make the most informed decision possible on who will do the best job of treating the horse. It may or may not be a popular decision (i.e., bringing in an out-of-town specialist might not be as well-received as using a local farrier), but make the most informed decision you can."

A wall separation is different than a quarter crack in that it usually starts at the bottom of the wall (often from a bruise that becomes infected) and progresses upward, undermining the attachment of the wall to the inner tissues of the foot. It also tends to be more serious than a quarter crack, requiring more layoff time and farrier skill to repair.

The first concern with both quarter cracks and wall separations is stabilizing



the compromised hoof. According to Curl, bar shoes are a popular option for this, but he advised, "A bar will put *more* pressure on the heels, not less. I've never seen a bar shoe fix a guarter crack."

Another common strategy is to threequarter the shoe, or cut off the shoe heel under the compromised quarter to "float" or "de-weight" it. McKinlay warns that this tears up the cracked area worse, because the unsupported heel will flex down when the horse loads the foot while the rest of the wall will be held up by the shoe. Instead, he prefers to support the compromised heel with a full shoe, often using a glue-on to rebuild it with a cushioned Yasha pad underneath to reduce heel concussion.

The second key to successful quarter crack or wall separation repair, according to both foot experts, is to ensure that any exposed soft tissue is thoroughly dried out and no infection is present before a patch is placed over it. If infection is sealed underneath the patch, it will quickly grow into a major abscess and further undermine the foot. If the foot is stabilized and patched properly, it can easily stand up to the rigors of training and racing. (More information on their crack stabilization methods: www.TheHorse.com/ViewArticle. aspx?ID = 11972)

WHAT YOU CAN DO

McKinlay and Curl offered the following tips for identifying and fixing foot problems.

- Look for lame or "off "performance (short striding, frequent lead changing, etc.) that might be caused by foot problems. If it's hard to pinpoint, watch the horse walk and jog on pavement.
- Try glue-on shoes for horses with thin walls that don't hold a shoe, or to allow rebuilding of weak heels.
- Reduce heel concussion in sore horses, possibly with cushioning pads.
- If your horse has a quarter crack or wall separation, get someone experienced with the problem to fix it. If your local farrier doesn't have this experience, ask for a referral
- Don't trim soles and frogs excessively; leave them alone so they can contact the ground as much as possible to assist in weight bearing and shock absorption. They're already farther from the ground in the shod foot compared to the bare one.
- Strive for a foot that fits the horse and a shoe that fits the foot. Most Thoroughbreds could use more wall and sole; don't take it all away, and don't use shoes that are too short.

"With the knowledge we've gained from working on all of these horses—and we're still learning—we've come up with ways to help them heal and return (to racing and training) quicker," said Curl. "We can give every athlete the chance to perform at their peak."



