

● HORSE HEALTH

Case File: Ulcers

Despite a stress-free life, an easygoing donkey's recurrent colic is linked to stomach ulcers.

Story and Photograph by CYNTHIA McFARLAND

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BEFORE BUTLER THE DONKEY arrived at my little farm in 2007, I'd never had the privilege of knowing a "long ears." I'd had horses for more than three decades, but donkeys, I soon learned, are quite different. His intelligence, laid-back and lovable temperament, and clever sense of humor won my heart.

I'd always heard donkeys are tough critters who rarely have any health problems, so I was surprised when Butler had incidences of mild colic during the past three years. They were infrequent and always resolved quickly after I administered an anti-inflammatory drug, Banamine, but I jotted down on the calendar whenever this happened.

In September of 2010, at 18 years old, Butler had a colic incident that was treated and resolved within an hour; however, when he had three more colic episodes within a nine-day period the following month, I grew concerned. The last time, he was grinding his teeth, a symptom he hadn't exhibited previously. Again, these incidents resolved about an hour after treating him with Banamine.

At this point, I knew something was up and my veterinarian, Bill Russell, DVM, referred Butler to Peterson & Smith Equine Hospital in Ocala, Florida. I trailered him to the clinic on November 2, when internal medicine specialist Carol Clark, DVM, and a Diplomat of the American College of Veterinary Internal Medicine, took over his case.

Settled into his stall in the medical barn, Butler was muzzled overnight so he couldn't eat anything for 12 hours prior to the x-rays and gastroscopy scheduled the next morning.

Radiographs taken of Butler's abdomen on November 3 showed nothing out of the ordinary. In Florida, sand accumulation is frequently the cause of recurrent colic, but as Clark pointed out on Butler's x-rays, there was only a tiny amount of sand present, and definitely not enough to cause blockage or colic.

Still searching for the cause of his colic episodes, she proceeded with gastroscopic examination, passing an endoscope through his nose and into his stomach. This exam revealed the presence of grade 2 non-glandular ulcers, as well as a ball of accumulated feed in the stomach. This "bolus" of feed was a surprise, since Butler had been muzzled as is routine before a gastroscopic procedure. The ulcers were clearly visible and some were bleeding. As Clark explained, the teeth grinding I'd witnessed two days earlier was a clear indication of stomach pain.

But ulcers? Aren't they caused by stress such as travel, training or changes in routine? As an equine freelance writer, I've written a number of articles on ulcers and am well aware of how prevalent they are in today's equine population. Still, I was unprepared for Butler's diagnosis since he lives the most stress-free life of any animal I know.



Butler the donkey at McFarland's home in Florida.

A repeat *gastroscopy* the following morning showed us that the ball of accumulated feed had passed. Clark started Butler on medication to treat the ulcers and make him more comfortable.

Because I'd kept careful records, I could look back over the three-plus years I'd had Butler and see that his colic episodes were almost exclusive to the early fall months. Here in north Florida, this is typically when our grass quality plummets and we begin feeding hay. If Butler wasn't grazing as regularly because the grass wasn't appealing, he may not have had much in his stomach when I'd feed his morning and evening hay.

"Things that make horses most at risk for ulcer disease are sporadic feeding with periods of an empty stomach or irregular feeding with long periods of no intake, high-starch diets, exercise at speed, concurrent illness, especially of a gastrointestinal nature, and use of NSAIDs [non-steroidal anti-inflammatory drugs]," notes Clark. "There have been studies that have induced ulcers simply by withholding feed."

Just to make sure the hay wasn't an issue, I took Butler off long-stemmed

hay completely and switched him to chopped bagged forage—a timothy/orchard mix with no alfalfa—and grazing only. Long-stemmed hay is not usually a cause of ulcer disease, so to eliminate any possible dental issues, I also had his teeth floated while he was at the clinic. Clark pointed out that if he wasn't chewing his hay adequately, that could have led to the formation of "feed balls," which may have irritated the stomach.

Released from the clinic on November 4, Butler returned home, where I continued the prescribed 30-day regimen of medication.

The fact that Butler had experienced incidences of low-grade colic in the past made me wonder if he'd had ulcers then and I just didn't realize it.

"Ulcers can sometimes heal without treatment if the causative problem is resolved," says Clark.

But, she also adds that there's no definitive way to know if this was the case because an endoscopic exam won't show previous evidence of ulcers. Healing can take up to 30 days and ulcers won't always heal themselves, even if you remove the cause.

Even when ulcers have healed, veterinarians emphasize that the horse is vulnerable to new ulcer development if under stress, or if the previous cause is reintroduced.

Merial, a leading equine pharmaceutical company, held gastroscopy events around the United States from 2008 through 2010, scoping 3,354 horses in 30 different states. Veterinarians doing the scoping found that more than 58 percent of horses had ulcers, ranging from grade 1—mild with small lesions or damaged tissue, to grade 3—extensive lesions with deep ulceration and bleeding. These were horses of a variety of breeds, ages and disciplines.

Approximately 75 percent of veterinarians questioned in a recent study believe that ulcers are under-diagnosed. Because the only definitive way to determine if a horse has stomach ulcers is by veterinary exam via endoscope, horses often go undiagnosed because many veterinarians don't have access to the equipment.

"Any stressful event [such as a recent change in the horse's environment or

workload] can trigger ulcers," says April Knudson, DVM, equine specialist for Merial's Large Animal Veterinary Services. "Transporting a horse, increased stall time, limited turnout, training and competition can all contribute to Equine Gastric Ulcer Syndrome [EGUS]. More surprising, a horse can develop stomach ulcers in as few as five days."

Clark explains that training at gaits at or faster than the canter has been implicated in causing ulcers because when a horse is exercised at speed, the abdominal contents compress the stomach and push gastric fluids upward onto the non-glandular mucosa. The non-glandular mucosa has little protection and is more subject to acidic damage.

EGUS can impact both the upper, squamous, and the lower, glandu-

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—APRIL KNUDSON, DVM

lar, parts of the stomach. The upper/squamous region is not well protected from the acid that is produced in the lower/glandular part of the stomach.

"The glandular region has a mucus covering to protect itself from the acid. Acid is the main culprit, since 90 percent of ulcers affect the upper portion of the stomach, where there is no protection from acid," Knudson notes. "This happens when horses don't keep their stomachs full of hay or grass.

"When horses are transported, exercised, fed a significant amount of their

calories as grain/concentrates or are doing anything that may take them out of their routine, including illness, they are at risk for the acid in their stomach burning the unprotected tissues in the upper part of the stomach.

"Ulcers in the lower part of the stomach can have several root causes, but one that has been well demonstrated is reduction of mucus production, or acid protection, resulting from side-effects of old-style non-selective anti-inflammatory drugs," she adds.

Signs of ulcers can be subtle, and some horses exhibit no clinical symptoms. There may be "grumpiness," attitude change or unexplained decreased performance. The horse may have a change in eating patterns or decreased appetite, which is usually more toward the grain ration than hay. The horse owner may start to notice weight loss, poor hair coat and repeated low-grade colic if ulcers become chronic. With severe ulcers, there may be teeth grinding and excessive salivation.

In Butler's case, the only sign something was wrong was the recurrent low-grade colic and, in the last episode, teeth grinding.

Since his diagnosis and treatment for ulcers, I've implemented two important changes: the switch to chopped forage, and making sure never to go more than a few hours between feedings. When the grass quality declines or if the amount of available grazing in his pasture is decreased because of the season, I'll give him mid-day and late-night feedings of forage—in addition to the regular morning and evening feedings—just to be sure he never has a totally empty stomach.

Butler's experience also increased my awareness of how I feed my Paint Horse and trail riding buddy, Ben. Here in north Florida, we have good grazing for a number of months. Now, though, I'm especially cautious during the fall and winter to adjust my feeding schedule and turnout time so that there aren't long periods where they don't have some form of forage available.

I've learned you can't be too careful when it comes to feeding and dental care. Our equine partners are completely dependent on us, and it's our responsibility to manage *them in ways that promote their best health and well-being.* 🐾