

A simple blood test can detect the earliest signs of gastrointestinal damage caused by phenylbutazone, says a Louisiana State University researcher.

"Bute," a commonly used anti-inflammatory medication, has long been known to have potentially serious side effects, including inflammation of the large colon, particularly the right dorsal

colon. To learn more about how these problems develop, LSU researcher Rebecca McConnico, DVM, PhD, monitored 12 healthy horses as they

**Reference:**

"Pathophysiologic effects of phenylbutazone on the right dorsal colon in horses," *American Journal of Veterinary Research*, November 2008

received a typical 21-day course of bute.

The horses served as their own controls: They were given either medication or a placebo for the first trial period, and the protocols were switched during a second period for comparison. "The horses were getting about two grams of bute, twice a day, which is the high end of the recommended dose, but what you'll find a lot of horses

## Blood tests may detect early NSAID damage

getting," says McConnico.

Twice a week during the study, the researchers collected blood samples from each horse and monitored blood flow to the right<sup>0</sup> dorsal colon using a probe implanted directly into the digestive tract through a cannula.

The data revealed a number of significant physiologic changes associated with the bute treatment. The level of albumin<sup>0</sup> in the horse's blood significantly decreased by the seventh day of treatment, an indication that the protein was leaking through damaged gut wall, says McConnico. Within the first five days of treatment, the horses also had fewer circulating white<sup>0</sup> blood cells



(neutropenia), a condition associated with inflammation.

One interesting finding, says McConnico, was that the horses had increased blood flow to the right dorsal colon while on bute. "We often see increased flow to areas of damage, so it could be related to that," she says. "It's difficult to tell at this point."

Based on these results, McConnico urges owners to request a baseline blood test for their horses prior to starting bute treatment and then follow-up blood tests every few weeks while they are on the medication. "If you think about how serious these complications can be, why wouldn't you spend \$20 to catch them developing at the earliest possible stage? If the tests show white blood cells or albumin going down, you can switch the horse to another medication or suspend treatment before things get so bad they can't be easily reversed."

In addition, she says, a safer alternative to bute is now available—firocoxib (brand name Equioxx). Firocoxib is not associated with adverse responses and studies have shown it to be as effective as bute in combating inflammation.

## New glaucoma treatment

**Reference:** "Effects of topical administration of 1 percent brinzolamide on intraocular pressure in clinically normal horses," *Equine Veterinary Journal*, November 2008

A new drug has been added to the short list of effective treatments for equine glaucoma, an often-painful condition characterized by increased pressure within the globe of the eye. Glaucoma in horses can be congenital or develop as a consequence of equine<sup>0</sup> recurrent uveitis (ERU).

Noting that "only a few drugs with limited efficacy" are available for topical

treatment of equine glaucoma, researchers at the University of Zurich investigated the potential of eye drops containing 1 percent brinzolamide, a drug used to treat the condition in people. Brinzolamide works by reducing production of aqueous humor, the fluid within the eyeball.

In a study of 20 horses with normal, healthy eyes, researchers found that

twice-daily brinzolamide drops decreased intraocular pressure by an average of 21 percent. Once-daily drops reduced pressure by 14 percent.

These findings, the researchers say, suggest the drug may also be effective in horses with elevated eye pressure and therefore may be a useful treatment for equine glaucoma.