

# Equine Gastric Ulcers: Special Care and Nutrition

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## Why do horses get ulcers?

Equine gastric ulcers affect up to 90 percent of racehorses and 60 percent of show horses. Ulcers are the result of the erosion of the lining of the stomach due to a prolonged exposure to the normal acid in the stomach. Unlike ulcers in humans, bacteria do not cause equine gastric ulcers. A horse's stomach continually secretes acid, which can result in excess acid when the horse is not eating regularly due to there being no feed to neutralize the acid. Horses are designed to be grazers with regular intake of roughage.

The horse's stomach is divided into two parts. The bottom part is glandular and secretes acid and has a protective coating to keep it from being damaged by acid. The top portion of the stomach is designed for mixing of the contents of the stomach and does not have as much protection from the acid. This is the most common place to find ulcers.

## Horses at Risk

Ulcers are a man-made disease. Stall confinement alone can lead to the development of ulcers. When horses are fed two times per day, the stomach is subjected to a prolonged period without feed to neutralize the acid. Furthermore, high-grain diets produce volatile fatty acids that can contribute to the development of ulcers.

Stress (both environmental and physical) can also increase the likelihood of ulcers. Hauling, mixing groups of horses and training can lead to ulcers. Strenuous exercise can decrease both the emptying function of the stomach and blood flow to the stomach, thus contributing to the problem.

Finally, chronic administration of non-steroidal anti-inflammatory drugs such as phenylbutazone can decrease the production of the protective mucus layer, making the stomach more susceptible to ulcers.

## Symptoms

The majority of horses with gastric ulcers do not show outward symptoms. They have more subtle symptoms, such as a poor appetite, decreased performance and a poor hair coat. More serious cases will show abdominal pain (colic).

## Diagnosis

The only way to definitively diagnose ulcers is through gastroscopy, which involves placing an endoscope into the stomach and looking at its surface. To allow this, the stomach must be empty, so most horses are held off feed for six to 12 hours and not allowed to drink water for two to three hours. With light sedation and possibly a twitch, the endoscope is passed through the nostril and down the esophagus into the stomach. The light and camera on the end of the endoscope allows the veterinarian to observe the lining of the stomach.

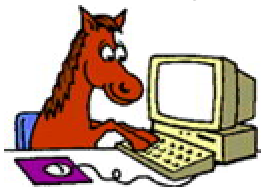
## Treatment and Prevention

Treatment is aimed at removing predisposing factors and decreasing acid production. When possible, horses should be allowed free-choice access to grass or hay. Environmental factors should be addressed. Horses that must be stalled should be arranged so they can see and socialize with other horses. Some horses appear to enjoy having a ball or other object in the stall to occupy their time.

More frequent feedings will help buffer the acid in the stomach. Decreasing types of grain that form the volatile fatty acids may help some horses. The energy from the grain can be replaced by using a feed higher in fat. In horses with lower caloric needs, free-choice grass hay with the appropriate vitamin and mineral supplements will help.

Medication to decrease acid production is only necessary in horses showing clinical disease or when the predisposing factors cannot be removed, such as with some horses in race training. While antacids sound like a good idea, to be effective they would need to be administered six to 12 times a day. Antacids in feeds are relatively ineffective because they are ingested at the same time as the feed, which will buffer the acid. Multiple medications are available to decrease acid production. The most effective treatment is Omeprazole, which decreases acid production for up to 24 hours.

Prevention of ulcers is key. Limiting stressful situations, frequent feedings and free-choice access to grass or hay is imperative. This provides a constant supply of feed to neutralize the acid and stimulate saliva production, which is nature's best antacid. When this is not adequate or possible, horses at greatest risk will benefit from medication to decrease acid production.



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