

## Recovery from Enteritis Dictates Changes in Feed Management

**Enteritis is an inflammation of the small intestine.** More specifically, anterior (or proximal) enteritis affects the duodenum and jejunum, sections of the small intestine anatomically closest to the stomach. Inflammation impedes the ability of the small intestine to absorb fluids, thereby causing distension or abnormal swelling of the organ. This distension provokes two physiological malfunctions. The first is a **slowing or stoppage of peristalsis**, the wavelike contractions that propel ingesta from one portion of the gastrointestinal tract to the next. The second is **dehydration**, which occurs when the small intestine fails to resorb fluid during digestion.

**The cause of anterior enteritis is unknown.** Most owners of affected horses have noted a seemingly healthy animal 24 hours prior to illness, so a **sudden onset of signs is not unusual**. Some researchers believe there is a **bacterial basis** for the disease. Most horses that suffer from anterior enteritis are being fed **grain-based diets** (i.e., textured feeds, pellets, straight cereal grains, etc.) at the time of the attack. While horses diagnosed with this disorder seem to have grain feeding in common, there is nothing to suggest this is a crucial element in the pathology. Other possible but vague causes of anterior enteritis may include **internal parasitism, cantharidin** (the toxin produced by blister beetles, insects that commonly swarm in alfalfa fields and are then baled with the plants during haymaking), **arsenic, and acorns**. Scientists are not completely swayed that these precipitants give rise to anterior enteritis because typically they affect much of the gastrointestinal tract and not solely the proximal small intestine. Interestingly, a preponderance of anterior enteritis cases has occurred in the southeastern United States.

**One of the most obvious signs of anterior enteritis is colic.** In addition to abdominal pain, horses may experience increased heart and respiration rate, fever, inappetance, discolored mucous membranes (bright pink, brick red, or blue), and depression. **Horses often display the same signs that would be present in cases of small intestinal torsion or blockage** requiring surgery: voluminous, stagnant fluid in the stomach and small intestine, small intestinal distension, and pain. Therefore, differentiation between the two disorders may be difficult. **Veterinary consultation should be sought immediately as in any case of colic.**

The first, and perhaps most important, step in **treatment of anterior enteritis is gastric and small intestinal reflux or removal of fluid by the use of a nasogastric tube**. Several liters of reddish-brown fluid may be removed during decompression. The degree of comfort gained from reflux and the amount of time that elapses before recommencement of pain may be an indication of whether the horse is suffering from anterior enteritis or other small intestinal pathology. Horses with a small intestinal twist or

obstruction may experience transitory easing of pain, but discomfort will return rather rapidly. The heart rate of these horses will remain elevated. Conversely, horses with anterior enteritis will have more immediate and long-lasting relief. Vigilant decompression of the stomach and small intestine will keep the horse relatively pain-free with a normal or only slightly raised heart rate.

**To counteract the dehydration** caused by the malabsorption of fluids from the intestinal tract, **intravenous fluid therapy must be commenced immediately and electrolyte imbalances corrected if necessary.**

Other diagnostic techniques that a veterinarian may perform include rectal examination, ultrasonographic evaluation, abdominocentesis, complete blood count, chemistry profile, and blood gas assessment. On rectal examination, distended loops of small intestine may be palpable. Although the small intestine is usually indefinable by ultrasonography, when the organ is filled with fluid, it contrasts sufficiently from neighboring tissue to be recognized. **Exploratory surgery may be necessary if the horse does not respond to medical treatment.** Horses that continue to be painful despite decompression and the use of anti-inflammatory, analgesic, and sedative drugs are candidates for surgery.

Horses with anterior enteritis often have good prognoses; however, **treatment is typically costly.**

## Feeding the Horse Following Anterior Enteritis

Depending upon the severity of the disease, **horses may have to receive nutrition parenterally (intravenously) during treatment.** This is particularly true if a bout of anterior enteritis lasts longer than three or four days. Although glucose-rich intravenous fluids are a viable energy source for ill horses, the expense of parenteral nutrition often precludes its use in horses, and negative physiological effects, including atrophy of the intestinal mucosa, may make it an unfavorable treatment option.

**Veterinary supervision** of the horse during recovery is imperative. One of the most crucial aspects of aftercare is the use of a **bland diet of small frequent meals.** Gastrointestinal overload should be avoided due to the fragility of the digestive tract. A reversion to a more natural feeding system seems to be the soundest way to begin refeeding. **Offering young, leafy grass first may be best because it is often the most palatable and digestible feedstuff for recovering horses. The inclusion of other forages, such as early-cut alfalfa hay and eventually grass hay, is then appropriate.** On the recommendation of the veterinarian, grains or grain-based products may be re-introduced into the diet.

Because high-grain diets seem to be related, though circumstantially, to anterior enteritis, **rations should be evaluated carefully.** If a ration includes a large volume of grain, consideration should be given to alternative sources of energy that will allow less feed to be fed. **Vegetable oils** (corn, soy, canola, etc.) are highly digestible and can deliver calories to hardworking horses. Though less digestible, **animal fats** are also abundant in energy. **High-fat stabilized rice bran** can also boost the calorie content of a ration. Rice bran supplements should have a balanced calcium to phosphorus ratio. Rice bran is naturally rich in phosphorus, and when a product is not enriched with calcium, it may skew the mineral content of the entire diet. Equi-Jewel (Kentucky Performance Products, 1-800-772-1988) is high-fat stabilized rice bran product that contains balanced calcium and phosphorus.

**Horses must be fed cautiously following gastrointestinal insult. By heeding the advice of a veterinarian, horses with anterior enteritis can eventually return to normal work. However, careful assessment of the feeding program may be prudent to ensure digestive health.**