



Preventing and Treating Colic in Your Horse

K. Keen and L. Coates-Markle

Colic is a general term given for any abdominal pain. There are many types and causes of colic, as well as predisposing factors. Digestive colic, the true form of colic, can be caused by feeding and management practices. The intestine may become blocked and twisted, or gas may develop. A horse's digestive system is highly sensitive; therefore, colic is a major cause of death in horses.

There are five types of digestive colic: spasmodic, impaction, incarceration, displacement, and excessive fermentation.

Spasmodic colic is the mildest and most common. It is associated with over-excitement or sudden feed changes. It generally responds well to modest medical treatment.

Impaction colic is caused by normal ingesta or foreign material blocking the intestine. It may be caused by increased coarseness of forage, decreased intestinal fluid, or interference with

normal intestinal movement. If the blockage prevents passage of gas as well as ingesta, surgical intervention may be necessary.

In *incarceration colic*, a loop of the intestine may become trapped within a normal or abnormal structure in the abdominal cavity. A common example is a strangulating hernia. This situation may require surgery if the blood supply is cut off.

In *displacement colic*, a portion of the intestine becomes twisted or caught in an abnormal position. The displacement may or may not be strangulating, but surgery usually is required to save the horse's life.

Excessive fermentation occurs when the stomach's contents ferment more rapidly than they can be eliminated. This usually is caused by eating too much grain. Surgery rarely helps, and medical treatment is difficult. This situation also can cause rapid chemical changes in the blood that lead to abnormal blood flow to the hooves. This usually cripples the horse.

Causes

Improper food, water, and management practices are big factors in colic. They include:

- Irregular feeding times
- Lack of water
- Giving excess water to hot horses or horses deprived of water
- Excess grain
- Moldy feed
- Improperly chewed food due to bolting or poor teeth
- Overeating grain when hungry from being off feed
- A diet of extremely coarse roughage or very fine roughage such as coastal Bermuda hay
- Consuming foreign objects
- Fecaliths or enteroliths (large accumulations formed in the intestine around foreign material)
- Feeding on the ground where sand can be ingested
- Feeding excessive salt to salt-deprived horses when water is not readily available (rare)
- Parasites

Karen Keen, former student in equine sciences; and Linda Coates-Markle, former director, Horse Center; Oregon State University.

Symptoms

In colic, the horse exhibits early signs including:

- Playing in water with its mouth
- Curling the upper lip
- Refusing to eat
- Biting its flanks
- Looking at its abdomen
- An expression of anxiety on its face

Moderate signs include:

- Kicking at its belly, rolling, pawing, getting up and down frequently and overall restlessness
- Assuming a saw horse posture (legs stretched out as if to urinate)
- Increased pulse rate
- Normal or raised temperature
- Sweating
- Abdominal distention
- Depression
- Lack of defecation
- Small volumes of firm, mucus-covered feces
- Anorexia

Diagnosis

There are no shortcuts, tricks, or surefire tests to determine whether surgery is needed. A thorough exam and clinical judgment are required. Conservative treatment is best if possible.

The decision on treatment is based on the horse's history, clinical signs, a physical examination, and evaluation of laboratory data.

History—Recent husbandry and management—as well as the horse's normal temperature, pulse, and respiration—should be evaluated.

Physical examination—A veterinarian should conduct a physical examination. The initial exam should be done from a distance to better observe the horse's behavior. If the horse is in extreme pain, the vet can insert a nasogastric tube to relieve gas before the exam. The veterinarian will check the heart rate and capillary refill time (checked on the gums) to aid in determining cardiovascular status. He or she also will listen to abdominal noises and perform rectal palpitation to check for irregularities.

Laboratory procedures—Further diagnostic procedures performed in the laboratory may be required, including blood evaluation, abdominocentesis, abdominal radiography, endoscopy, ultrasonography, and diagnosis of fecal material.

General treatment strategies

Prior to the arrival of the veterinarian:

- Do not allow the horse to drink or eat.
- Prevent injury. Walk the horse if it is trying to roll.
- If the horse is quiet, leave it alone and observe.
- Do not give pain medication prior to the veterinarian's analysis.

Medical treatment could include the following procedures:

- Nasogastric tube to relieve gas
- Sedation to allow examination
- Analgesic for pain (e.g., Banamine)
- Intravenous fluid to correct electrolyte and acid-base imbalances
- Water lavage (enema) at the site of an impaction

- If mild—fecal-softening agents such as psyllium hydrophilic mucilloid (Metamucil TM) (1–2 cups for 30 days), mineral oil, or warm-water enemas with lubricants
- 10–12 liters of warm water via a nasogastric tube every 2 hours

Surgery may involve resection of the damaged intestine. When deciding about surgery, consider economic factors. The post-surgery survival rate is 50 percent, with 20 percent of those survivors dying within 1 year.

Prevention of colic

The following management practices can help you avoid colic in your horses:

- Feed small amounts frequently.
- Be sure clean, fresh water always is readily available, except when horses are hot.
- Provide high-quality feed—high forage, low concentrate.
- Make feed changes gradually.
- Maintain a regular schedule of exercise.
- Provide regular dental care to allow for proper chewing.
- Maintain a regular worming schedule (once every 2 months or as advised by veterinarian).
- Keep foreign materials that could be ingested, such as rubber feeders or fencing material, away from horses.
- Do not feed on the ground where sand may be ingested.
- Make changes in routine gradually (e.g., trailering, showing, and other stressful situations).

- Keep your horses in a pasture, because pasture-kept horses rarely have colic.

Conclusion

Preventing colic requires careful feeding and management practices. Be familiar with what is normal for your horses. Observe changes in behavior carefully and report them to the veterinarian. Make changes in feeding and management gradually to allow the horse to adapt.

For further reading

- Baxter, Gary M., "The Steps in Assessing a Colicky Horse," *Veterinary Medicine*, V.87, October 1992, pp. 1012–18.
- Baxter, Gary M. and Schlipf, John W., Jr., "Nonsurgical Conditions of the Equine Gastrointestinal Tract," *Veterinary Medicine*, V.87, October 1992, pp. 1019–29.
- Baxter, Gary M., Eric Mueller, and Andrew H. Parks, "Small Intestinal Diseases of Horses: Diagnosis and Surgical Intervention," *Veterinary Medicine*, V.87, October 1992, pp. 1030–36.
- Bennett, Dwight G., DVM, "Colic in the Horse," *Horse Industry Handbook*, American Youth Horse Council, Inc., Winter 1995, pp. 435-1–435-4.
- Evans, J. Warren et al., *The Horse*, 2nd edition, New York, 1990.
- Johnson, Philip J., BVSc, MS, "Equine Colic," *Horse Industry Handbook*, American Youth Horse Council, Inc., 1994, pp. 635-1–635-5.

OSU Extension publications

Many OSU Extension Service publications may be viewed or downloaded from the Web. Visit the online Publications and Videos catalog at <http://extension.oregonstate.edu> Copies of many of our publications and videos also are available from OSU Extension and Experiment Station Communications. For prices and ordering information, visit our online catalog or contact us by fax (541-737-0817), e-mail (puborders@oregonstate.edu), or phone (541-737-2513).

Keeping Your Horse Healthy, EC 1472, by Eva Sestric, Karen Keen, and Linda Coates-Markle (published 1996, reprinted 2005).

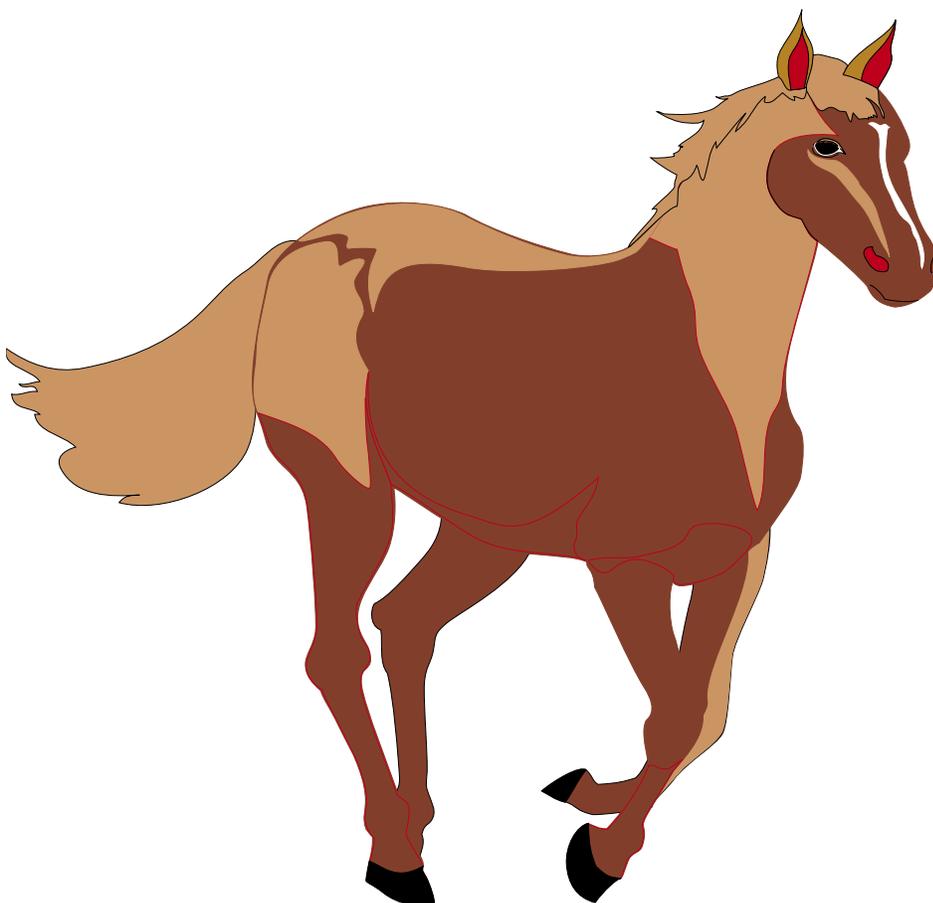
Managing Small-acreage Horse Farms for Green Pastures, Clean Water, and Healthy Horses, EC 1558, by Garry Stephenson et al. (2003).

Managing Your Pregnant Mare and Her Foal, EC 1476, by Juli Ellingson and Linda Coates-Markle (1996).

Oregon's 1994 Preliminary Equine Impact Survey, EC 1477, by Angela White and Linda Coates-Markle (1996).

Preventing and Treating Parasites in Your Horse, EC 1473, by Eva Sestric and Linda Coates-Markle (published 1996, reprinted 2005).

Your Horse's Nutrition, EC 1475, by Katia Engelhardt and Linda Coates-Markle (1996).



Produced and distributed in furtherance of the Acts of Congress of May 8 and June 30, 1914. Extension work is a cooperative program of Oregon State University, the U.S. Department of Agriculture, and Oregon counties. Oregon State University Extension Service offers educational programs, activities, and materials—*without regard to race, color, religion, sex, sexual orientation, national origin, age, marital status, disability, and disabled veteran or Vietnam-era veteran status*. Oregon State University Extension Service is an Equal Opportunity Employer.

Published April 1996. Reprinted April 2005.