



# Colic

## Minimizing its incidence and impact in your horse

Colic is the number one killer of horses. The good news is that most cases of colic are mild and resolve with simple medical treatment, and sometimes with no specific treatment at all. Less than 10% of all colic cases are severe enough to require surgery or cause the death of the horse. Nevertheless, **every case of colic should be taken seriously** because it can be difficult to tell the mild ones from the potentially serious ones in the early stages.

Colic is not a disease; it is merely a symptom of disease. Specifically, colic indicates a painful problem in the horse's abdomen (belly). There are dozens of different conditions that can cause a horse to show signs of abdominal pain. Most (but not all) involve the digestive system, most often the stomach or intestines.

## RECOGNIZING COLIC

Horses show signs of abdominal pain in a wide variety of ways. Some signs, such as curling the upper lip are subtle and easily overlooked, whereas other signs, such as repeated rolling or violent thrashing, are hard to mistake. Among the more common signs of colic are these:

- Turning the head toward the flank
- Pawing
- Kicking or biting at the belly
- Stretching out as if to urinate, without doing so
- Repeatedly lying down and getting up, or attempting to do so
- Repeated rolling, often with grunting sounds
- Sitting in a dog-like position, or lying on the back
- Holding the head in an unusual position, e.g. with the neck stretched out and the head rotated to one side
- Leaving food or being completely disinterested in food

- Putting the head down to water without drinking
- Lack of bowel movements or fewer bowel movements than normal
- Reduced or absent digestive sounds
- Inappropriate sweating (e.g. unrelated to hot weather or exercise)
- Rapid breathing and/or flared nostrils
- Elevated pulse rate (greater than 50 beats per minute)
- Depression
- Lip curling unrelated to sexual interest

Usually, a horse shows only a few of these signs during an episode of colic. Seeing *any* of these signs should prompt you to take a closer look and keep a watchful eye on the horse.

In general, the more obvious the signs of pain, the more serious the problem. Also, in horses with serious conditions, the signs of pain usually persist and may even worsen with time, whereas in horses with mild colic the signs of pain may be intermittent or may disappear after a short time.

### **TAKE IMMEDIATE ACTION**

While some cases of colic resolve without medical care, a significant percentage of horses with colic require medical treatment. Time is perhaps the most critical factor if colic is to be successfully treated, particularly if the horse has a condition that requires emergency surgery.

If you suspect your horse is suffering from colic, the following action plan is suggested:

1. Call your veterinarian immediately.\*
2. Remove all food from the horse's surroundings, but leave the horse some water.
3. If necessary, move the horse to a small enclosure (e.g. a stall or yard) so you can watch it more closely.
4. If it is already dark or approaching nightfall, arrange for some lighting so that you (and, if necessary, your veterinarian) can examine the horse properly.
5. Allow the horse to rest if it simply wants to stand or lie quietly; walk the horse around if it is continually rolling or in danger of hurting itself—but do not tire the horse with relentless walking.
6. Keep the horse under close observation until the signs of colic resolve

or the veterinarian arrives.

\* Alert your veterinarian from the outset that your horse is suffering from colic. The veterinarian may not need to come out and examine the horse immediately if the colic signs are mild, but leave that decision to the veterinarian. When you call, be prepared to provide as much of the following information as possible:

- Specific signs of colic, and their severity
- Pulse or heart rate (beats per minute), measured over the heart (just behind or above the left elbow) or over an artery (e.g. at the sides of the fetlock or on the underside of the lower jaw)
- Respiratory rate (breaths per minute), measured by watching the rise and fall of the flank with each breath
- Rectal temperature
- Color of the gums (white, pale pink, dark pink, red, or bluish-purple)
- Moistness of the gums (moist, tacky, or dry)
- Refill time for gum color (the time it takes for the color to return to the horse's gum after you briefly press on the gum with your thumb; normal is 1–2 seconds)
- Digestive sounds (if any)
- Bowel movements, including color, consistency, and frequency
- Any recent changes in management, feeding, or exercise
- Medical history, including deworming and any past episodes of colic
- Breeding history and pregnancy status if the patient is a mare, and recent breeding history if the patient is a stallion
- Insurance status of the horse

After evaluating this information, your veterinarian will advise you on the appropriate course of action. Follow your veterinarian's advice exactly. Do not administer any drugs to the horse unless specifically directed to do so by your veterinarian. Sedative or pain-relieving drugs can camouflage serious problems and interfere with accurate diagnosis.

### **Things to avoid**

Unless you have the necessary training, equipment, and experience, **do not attempt to do any of the following:**

- 1. Pass any kind of tube into the horse's stomach.** It is very easy to

damage the horse's nasal passages, throat, or esophagus with improper equipment or technique. Also, the tube passes more readily into the trachea (windpipe) than into the esophagus, potentially damaging the trachea. Any liquid poured down the tube will be delivered directly into the horse's lungs.

2. **Give the horse any substance by mouth, particularly liquids.** Most horses resist swallowing liquids given by mouth and some of the liquid may be inhaled into the horse's lungs. Mineral oil is particularly harmful when inhaled.
3. **Insert anything** (your hand, a hose, or any other kind of tube or device) **into the horse's rectum.** The rectum is easily damaged, and rectal tears can be fatal. Also, intestinal blockages generally cannot be relieved simply by removing manure from the horse's rectum or giving the horse an enema.
4. **Give any intravenous injections.** Even with practice, every intravenous injection carries some risk.

**Note:** Home remedies such as castor oil, kerosene, and turpentine are useless for colic and are dangerous; *they should never be given orally to horses.* Over-the-counter remedies that contain bella donna extract (e.g. Dr. Bell's) should also be avoided. They may relieve mild, spasmodic (crampy) colic, but overuse or use in horses with more serious types of colic can be disastrous.

## EVALUATING THE PROBLEM

Your veterinarian may use a variety of procedures to determine the type and severity of the colic and devise an appropriate treatment plan. Procedures include the following:

- Accurate history (including feeding and deworming programs, medical problems, vaccination schedule, etc.)
- Review of your observations and evaluation of the horse's behavior
- Complete physical examination (including vital signs and presence and quality of intestinal sounds)
- Rectal palpation, looking for evidence of intestinal blockage, distention, displacement, or other abnormalities\*
- Passage of a nasogastric (stomach) tube to identify the presence of excess gas or fluid in the stomach (and to relieve the pressure if the stomach is distended)\*
- Collection of fluid from the abdominal cavity (peritoneal or "belly" tap) and analysis for abnormalities which might indicate compromise of the bowel wall or infection\*
- Blood tests, looking for evidence of dehydration, electrolyte or

metabolic abnormalities, or infection\*

- Evaluation of the response to treatment
- These techniques may not be performed in every case. For example, the veterinarian may decide that they are unnecessary in a case of mild colic, or that they are unsafe in a particular situation.

## Classifying colic

Determining the type of colic is important in deciding how best to treat the horse. Even though there are myriad causes of colic, most cases fall into one of three groups:

- 1. Intestinal Dysfunction.** This is the most common category and simply means that the horse's bowels are not working properly. It includes such things as spasms (disordered motility), gas distention, impaction, and decreased motility (ileus). These types of problems usually respond well to medical treatment.
- 2. Intestinal Accidents.** These occur less frequently, and include displacements, twists (torsion, volvulus), and entrapment of a section of intestine in a tight space. Some horses seem anatomically predisposed to such problems. Intestinal accidents almost always require emergency surgery.
- 3. Inflammation or Ulceration.** These problems are named according to the bowel segment involved; e.g. gastritis (stomach), enteritis (small intestine), and colitis (large intestine). They can be caused by numerous factors, including stress, medications, infection, and parasites. Medical treatment is generally required.

## TREATMENT

Treatment of colic depends on its severity and on the likely cause. Treatment options include the following:

- Pain-relievers (analgesics) or sedatives to relieve pain while intestinal function returns to normal or further treatment is instituted
- Fluid therapy, either by nasogastric tube or intravenous infusion, to correct dehydration and soften dry, firm intestinal contents
- Laxatives, such as mineral oil, to help reestablish normal intestinal function
- Enema for young foals with a blockage (impaction) caused by retained meconium (the first manure produced by a newborn foal)
- Surgery (usually with the horse under general anesthesia)

When your horse has colic, it can be reassuring to remember that most cases of colic resolve with simple medical treatment (analgesics and either fluids or laxatives).

**Note:** If your horse is insured, contact the insurance company immediately if surgery seems likely or if euthanasia is a possibility.

## PREVENTING COLIC

Colic is a problem with many potential causes and contributing factors, some of which are beyond our control. However, management plays a key role in most cases of colic, so colic prevention centers on management. Although not every case of colic is avoidable, the following guidelines can maximize your horse's health and reduce the risk of colic:

- Establish a set daily routine—including feeding, exercise, and turnout schedules—and stick to it (even on weekends).
- Feed a high quality diet comprised primarily of roughage (pasture, hay, hay cubes, haylage). Except for young foals, all horses should be fed at least 1% of their body weight (or 1 lb per 100 lb body weight) of good quality roughage per day.
- Limit the amount of grain-based feeds (grain in any form, sweet feed, pellets in which the main ingredients are grains). Feed these only as a supplement, and not more than 50% of the diet.
- Divide the daily concentrate ration into two or more smaller feedings, rather than one large one, to avoid overloading the horse's digestive tract. Hay is best fed free-choice.
- Set up a regular parasite control program with the help of your veterinarian. Use fecal examination to determine its effectiveness.
- Provide exercise and/or turnout every day.
- Make any changes to diet, housing, and activity level gradually.
- Provide fresh, clean water at all times.
- Avoid giving your horse medications unless they are prescribed by your veterinarian.
- Check hay, bedding, pasture, and environment for potentially toxic substances, such as blister beetles, noxious weeds, and other ingestible foreign matter.
- Avoid putting feed on the ground, especially in sandy soils.
- Reduce stress; horses experiencing changes in environment or workloads are at high risk for intestinal dysfunction.
- Pay special attention to animals when transporting them or

changing their surroundings, such as at shows.

- Observe foaling mares pre- and post-foaling for any signs of colic.
- Pay particular attention to horses that have had previous bouts of colic, as they may be at greater risk for repeated episodes.
- Maintain accurate records of management, feeding practices, and health.

## **SUMMARY**

The key to minimizing the incidence of colic is good management. The key to minimizing the impact of colic (i.e. increasing the chances of a good outcome) is to identify the problem early and call your veterinarian immediately. Treat every incident of colic as potentially serious, and involve your veterinarian from the outset; try never to jeopardize your horse's health for the sake of a few dollars.

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