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## Colic: First Things First

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[deck]Steps to take and information to gather when faced with a colicking horse. [/deck]

As you stroll into the barn one evening at feeding time, you notice an eager horse hanging its head over each and every stall door but one. Curious, you peer into your favorite gelding's stall and see that he's restless, pawing at the ground, and hasn't touched his hay. Panic starts to set in ... is he colicking? What do you do? How can you help him? Decision-making can be difficult when all of these questions are whirling about, so it's best to learn how to manage colics ranging from mild to severe before you find yourself in this type of situation.

First things first—let's define the word itself. Colic is a manifestation of abdominal pain. While horses colic primarily due to problems associated with the gastrointestinal tract, they occasionally colic due to pain from another abdominal organ or even a disease with signs that mimic colic.

Colic is not a disease, but an outward sign of an internal problem with many potential causes. In simple cases, feed material might block the intestine. But in more serious cases pieces of bowel can become displaced and twisted, compromising blood flow to the intestine.

How can you tell if a horse is colicking? Horses with abdominal pain often go off their feed or have a decreased appetite. Their manure production might decrease or change in consistency, becoming looser or firmer. Common signs include rolling to try to get comfortable, pawing, and kicking at the abdomen. Some horses spend time lying down or will make repeated attempts to lie down but don't, as if they cannot get comfortable. Some horses watch their flanks, and others stretch out their hind legs like they are about to urinate. Less common behavior that might be associated with colic is flehmen, or lifting the upper lip (the way stallions do around mares), or splashing around in the water bucket but not drinking. Colicky horses might sweat even if they aren't hot, which is a response to pain and not an indication of a fever.

When faced with a colic, stay calm, assess the situation thoroughly, and gather information to decide on the best course of action. Timing of diagnosis and treatment is key to a successful outcome; the longer you delay, the worse the prognosis, so act quickly.

### Making Observations and Collecting Information

The most important thing to do when faced with a colicking horse is to immediately call your veterinarian with an estimate of the colic's duration and severity. Any vet will tell you they'd much rather talk to you about an early colic they never have to come see, than rush out to see a horse they could have helped sooner. When gathering information to provide your veterinarian, evaluate the degree of pain your horse is in. Horses in mild pain paw occasionally, look at their flank, and/or refuse feed, while those in moderate pain paw continuously, try to lie down, sweat, and breathe rapidly. If your horse is in severe pain, rolling and thrashing on the ground, he's become a danger to himself and others, and you should contact your veterinarian immediately.

Also record your horse's vital signs, which include temperature, heart rate, respiratory rate, gastrointestinal sounds, and hydration status. A horse's average temperature is 99-101°F. Most horses stick within a narrower range from day to day—this is why it's important to know what's normal for your horse.

[pullquote source="Dr. Samantha Morello"]One of the most common misconceptions with colic is that if the horse can pass manure, it's probably going to be okay. [/pullquote]

To record a horse's respiratory rate, you need to have a good eye and a bit of patience. Watch the movement of the horse's rib cage, counting an inhale and exhale as one breath. Do this at a distance, so your interaction with the horse doesn't affect his breathing.

There are several ways to obtain a horse's heart rate. The simplest is to listen to the heart with a stethoscope. The heart sits beneath the second through fifth ribs, in the horse's "armpit" just behind the elbow. It is situated slightly toward the left of the horse's midline and is easier to hear from the horse's left side.

Another location for assessing a horse's heart rate is on the head. The facial artery runs along the mandible (lower jaw bone) under the masseter muscle (the cheek). It is about the size of a pencil, and you can feel it by curling your fingers around the mandible and trapping the vessel between your fingers and the bone. Don't press too hard or you will collapse the vessel and feel no pulse, but press too lightly and you might not feel a pulse either.

Once you hear the heart beat or feel the pulse, give the horse a few seconds to adjust to the procedure. Many horses' heart rates increase when you first poke their chest with a cold stethoscope. To get a rate in beats per minute (bpm), count the heart rate (each lub-dub counts as one beat) for 15 seconds and multiply that number by four. An adult horse's normal heart rate is 32-44 bpm. Very fit horses might have lower resting heart rates. A horse with a high heart rate (>60) should be evaluated by a veterinarian, and a very high heart rate (>80) is a true emergency.

Borborygmi is the term for gastrointestinal sounds, the gurgling and tinkling that you sometimes hear coming from your horse's abdomen. These are best evaluated using a stethoscope, listening on both sides of the horse in the upper and lower flank area. The presence of borborygmi does not give you the all-clear—it means that things are moving, but not necessarily how you want.

[image imageid="4306" includeTitle="false" includeSummary="false"]Listen for gastrointestinal sounds--preferably with a stethoscope--in the upper and lower flank areas. A complete absence of gurgling and tinkling can be associated with severe colic. [/image]

"One of the most common misconceptions with colic is that if the horse can pass manure, it's probably going to be okay," says Samantha Morello, DVM, large animal surgeon at the University of Wisconsin School of Veterinary Medicine. "While it is true that horses whose intestines are still moving are less likely to have severe lesions, passing manure does not mean that there isn't a serious obstruction somewhere much farther up in the bowel."

The complete absence of borborygmi is very concerning and is associated with severe lesions that often require surgery.

Also evaluate the mucous membranes on your horse's gumline for a general impression of the circulatory system. Mucous membranes should be light pink, moist, and shiny. Dry and tacky membranes indicate dehydration. The capillary refill time (CRT) is the time it takes for the color to come back after you have pressed your finger on the gumline for several seconds. Normal CRT is 1-2 seconds. The more prolonged the CRT, the worse the dehydration and circulatory status. Pale mucous membranes can indicate anemia (a red blood cell shortage) or early stages of circulatory shock (insufficient blood flow), while gums that are bright pink to dark red or even purple point to a severe inflammatory process. These cases warrant immediate and aggressive treatment.

## Immediate Treatments

Always remove all grain and hay from a colicky horse's environment. Without knowing the cause of the colic, it's best to not add more feed material to the system. Access to fresh water, however, is important, and you should allow your horse to drink small amounts if he desires.

Hand-walking painful horses is a controversial topic. Walking can promote GI tract motility and help distract the horse from the discomfort. Excessive walking, however, can be detrimental, leading to exhaustion or to worsening of some non-GI diseases that manifest colic signs, such as tying-up or botulism.

Many owners walk horses to keep them from lying down or rolling. If a horse wants to lie quietly in one position and appears more comfortable doing so, then don't interfere. Horses that roll, however, are at risk of injuring themselves as well as the people trying to help them. Try to keep these horses standing, or slowly walking, keeping in mind that human safety should be a priority.

It is a common misconception that the intestines twist while the horse is rolling, and that is why we should prevent them from doing so. "The twist happens first," clarifies Morello. "The best evidence for this is that over 90% of large colon torsions twist in the counterclockwise direction and it's doubtful that 90% of colicking horses all roll in the same direction."

Products such as phenylbutazone (Bute) or flunixin meglumine (Banamine)—while not designed for treating the cause of colic—can reduce inflammation and relieve some pain. Always discuss the medication and dose with your veterinarian over the phone, however, before administering. Then make sure you give the appropriate amount for your horse's body weight (unless your veterinarian directs you to give less) and record the exact amount and time you administered. This is both so you know when it is safe to give another dose and so you and your veterinarian can determine if the medication is effective. Pain medications can mask warning signs that the problem is worsening, so use them judiciously. Also keep in mind that overdosing or dosing either of these products consistently for longer than a week can lead to gastric or colonic ulcers and kidney disease, especially in dehydrated horses.

## Monitoring the Patient

After your initial assessment and treatments, continue monitoring the patient for any changes in condition. If your horse remains painful for a prolonged period of time (more than 1 to 2 hours) despite the previously listed interventions, he needs to be seen by a veterinarian. If he remains painful despite treatment, deteriorates, or becomes more painful or depressed, you might need to transport him to an equine hospital for intensive management and even surgery.

A veterinarian considers many factors before recommending colic surgery. "The single most important factor we use to determine whether or not a horse needs surgery is pain," says Morello. "Severe pain, or pain that doesn't respond well (if at all) to sedatives, is the most important tool we have to make that decision about taking a horse to surgery. This means that a client who recognizes quickly that their horse is in a great deal of discomfort and gets them to the hospital can sometimes make all the difference in the outcome."

Other factors that might lead a veterinarian to recommend surgery include duration of pain, findings on ultrasound, rectal palpation or abdominocentesis (sampling the fluid around the intestines). Colic surgery can be a scary proposition, but keep in mind that fewer than 5% of all horses experience an episode of colic each year, and of those horses that do colic only 1.4% require surgery. The vast majority of colic episodes can and will resolve with the care that you and your veterinarian give on the farm.

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**Seek the advice of a qualified veterinarian before proceeding with any diagnosis, treatment, or therapy.**

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