

THE COLICKY HORSE: What to Expect When the Veterinarian Arrives



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Your horse has been agitated and restless all evening, and you decide to call your vet. He arrives at 10:30 and confirms your worst fears: Your horse is colicking. Amidst a blur of syringes, tubes, and oil, your veterinarian begins treatment. It's going to be a long night...

So, what can you expect when your horse colics? What really happens during the veterinary examination, diagnosis, and treatment? And, most importantly, will your horse survive this episode?

Let's start at the beginning. In humans, "colic" simply describes pain originating in the colon. In horses, however, "colic" is a term used to describe symptoms of abdominal pain originating from any portion of the gastrointestinal tract. Colic in the horse may indicate dysfunction, impaction, or malposition of any structure within the horse's abdomen. The horse's GI tract is a long, one-way route, with average length of 100 feet in the adult horse! This anatomical design resembles a "plumbing system" with no access--which makes small disruptions in the system very serious. Today's management practices have also forced the horse to evolve from a continuous grazer, to an animal who must cope with large volumes of feed at sporadic intervals, predisposing the horse to colic. The majority of colic cases (83%) that occur are mild and "idiopathic"--we never know exactly why they occur, and they usually resolve spontaneously, or with the most basic treatment. A lesser percentage of colic cases (around 11%) in the horse are considered "moderate,"--they require more sustained medical treatment. Fortunately, only a small number of

colics (6%) tend to be classified as "severe"--horses with unrelenting pain that must be intensely managed either medically or surgically¹. To further put colic in perspective, the annual incidence of colic in the US horse population is estimated to be 4.2 colic events/100 horses per year. Of all colic events, 1.4% result in surgery. The overall fatality rate from colic is estimated at 11%, and the annual cost of colic in the United States is estimated to be \$115,300,000². Due to the high fatality rate associated with colic, colic is considered to be a major cause of death in horses.

On the phone, the veterinarian will likely instruct immediate removal of all feed from the horse's environment. Horses with colic should not be allowed access to grass, hay, sweet feed, or treats, which can exacerbate the colic by further "clogging" the "plumbing system." Upon arriving on your farm, a veterinarian may diagnose colic in your horse in several ways. Diagnosis usually starts with a basic history of what symptoms your horse is exhibiting and for how long, followed by a thorough physical exam. Symptoms of colic vary from horse to horse, but may include the following:

- Lying down for prolonged periods
- Depressed/Quiet
- Not eating
- Restlessness
- Looking at the flank
- Repeated stretching as if to urinate
- Kicking at abdomen
- Pawing
- Sweating
- Rolling

Your horse may exhibit some, all, or none of the above symptoms. The type

of symptoms your horse displays may indicate to your veterinarian the severity of the colic episode.

For example, a horse that is simply depressed may have a less severe case of colic than one that is lying down and actively rolling.

The physical exam of a horse with colic will usually start with the veterinarian listening to the heart and lungs via stethoscope, evaluating parameters such as heart rate and respiratory rate. The vet will also listen via stethoscope for any sounds of motility in the intestinal tract, evaluating whether the frequency of these sounds are increased or decreased compared to normal. The horse's temperature will be taken, to help rule out the presence of a fever which could indicate infection. Mucus membrane color (also called capillary refill time) will be evaluated to determine hydration status, and whether your horse requires oral or IV fluids. Horses that have been colicking for any length of time may refuse to eat and drink, often leading to a dehydrated state by the time the vet arrives.

One of the most common parts of the physical exam of the horse with colic is the rectal exam. For safety, the rectal exam may require that your horse be twitched or sedated, but this exam can be an invaluable aid to obtaining a diagnosis of what is causing your horse's pain. During the rectal exam, a veterinarian will be able to establish whether certain anatomical structures within the gastrointestinal tract feel normal, and if such structures are distended, displaced, or blocked. However, due to the length and size of the

horse's GI tract, it is impossible to palpate all of the structures within the horse's abdomen. Therefore, a "normal" rectal exam does not rule-out the possibility of a problem out of reach of rectal palpation. In any case, a rectal exam can lead to a quick field diagnosis that can be essential in determining the best course of treatment for your horse.

Another common part of the physical exam of the horse with colic is the passage of the nasogastric tube. Passage of a flexible, plastic tube from your horse's nose to his stomach is essential to determine whether stomach (gastric) distention is present, and to provide relief to horses with a distended stomach and small intestine. Many horses resent passage of the nasogastric tube, so do not be alarmed if your veterinarian twitches or sedates your horse for this procedure, or additional handlers are required for restraint. It is very important to have a cooperative patient in order to facilitate passage of the tube into the stomach and not the lungs, and to prevent unnecessary trauma and bleeding within the nose during the tube's passage. The type, color, and smell of the fluid from the stomach observed during passage of the nasogastric tube may help your veterinarian determine if infection or gastric distention is present. After passage of the nasogastric tube, the veterinarian may choose to administer water, electrolytes, or mineral oil, to assist in rehydration of the dehydrated horse, or to facilitate passage of feedstuffs present within the GI tract.

During the colic exam, you may observe your veterinarian administering an arsenal of medications, with or without explanation of their benefit. As previously mentioned, your horse may have been sedated to accomplish a thorough physical exam. Common drugs that are used include Xylazine or Rompun, Romifidine or Sedivet, and Detomidine or Dormosedan. These drugs not only relax your horse and promote a sense of calm during the exam; they also provide pain-relieving

(analgesic) effects that make your horse feel more comfortable. Most horse owners are familiar with the use of Flunixin, or Banamine, during treatment of the horse with colic. Flunixin is a potent nonsteroidal anti-inflammatory drug with strong pain-relieving effects. The pain relief from administration of flunixin is quick acting and may persist up to 6-8 hours, which can be very helpful in the horse suffering from colic. However, this pain relief may be so profound that it may mask symptoms that can indicate the horse is actually getting physically worse, not better. For this reason, many veterinarians are choosing to administer another drug first, a drug called Buscopan. Buscopan is the only FDA-approved anti-spasmodic for use in horses. Buscopan works within minutes to relieve spasm from any source the GI tract. Spasm of smooth muscle in the GI tract can be so severe that relief of spasm may lead to resolution of some colics. Unlike Flunixin, Buscopan is not an analgesic, or pain-reliever, and does not mask symptoms of a worsening colic situation. Buscopan is short-lived, and evaluation of the horse's response to Buscopan first can give your veterinarian valuable therapeutic, diagnostic, and prognostic information within thirty minutes. This information can help your veterinarian determine if your horse's colic should be managed medically or surgically. Thus, the unique benefits of this drug are making it an attractive choice for use during treatment of the horse with colic, either alone or alongside drugs like Flunixin.

In addition to several drugs that may be administered, a veterinarian may perform a series of diagnostic tests that may assist in getting closer to the origin of the colic. A veterinarian may pull a blood sample for a CBC, or complete blood count. This test enables the vet to evaluate white and red-blood cell parameters to look for evidence of inflammation or infection. Another blood test may be performed, a chemistry panel, which indicates the health of the

horse's kidneys and liver. These tests may unveil specific abnormalities which lead to a diagnosis, or they may be normal, but many veterinarians will urge that these tests be performed due to the potential to obtain helpful information. The major benefit of performing these tests is their ability to reveal the overall state of health of your horse, and whether your horse is stable enough to be treated at the farm, or necessitates immediate emergency referral for more intense intervention. Additional tests may include an abdominocentesis (to obtain a sample of fluid from the abdomen), ultrasound, or other modalities your vet may choose.

Determining what type of colic your horse is experiencing is important to deciding if your horse can be managed on the farm, or must be referred to a surgical facility. Many types of colic, i.e. spasmodic colic, impactions, or gas colic, can be effectively managed medically in the field with fluids, repeated administration of certain drugs (above), and mineral oil. Treatment may necessitate repeated visits to your farm to ensure your horse's recovery. Other types of colic (i.e. torsions, displacements, strangulating lipomas) may require surgery in an equine hospital in order for your horse to survive. Failure of your horse to initially respond to medical therapy in the field is a real justification for referral and evaluation for surgical intervention. Know that if your horse has to be referred for surgery, the battle isn't over yet. Surgical intervention in a colicky horse is not without risk and can be very expensive. Referral for surgery warrants a lengthy conversation between you and your veterinarian to determine your horse's ability to survive surgery and recover. Horses can and do recover from colic surgery, and this may be the only way to correct certain causes of colic. In any case, weigh the benefits versus the risks, and have a clear understanding that your horse may be facing weeks of recovery time.

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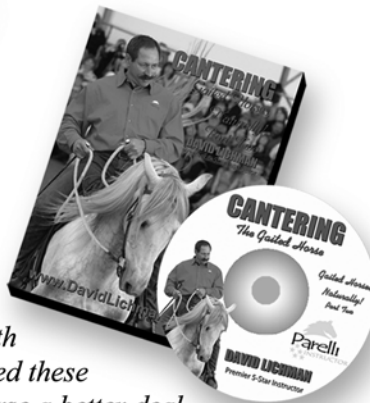
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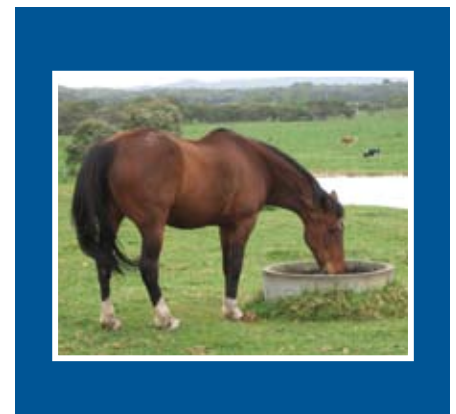
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When your horse is being treated for colic, you understandably want to know the exact cause. An important point to remember is that during the initial physical exam, diagnosis, and treatment, findings may not be specific and immediately reveal the origin of the abdominal pain. Veterinarians are commonly treating a horse with vague symptoms of colic, which can make obtaining a firm diagnosis difficult, if not impossible early on. Know that your veterinarian is just as anxious as you are to determine the exact reason for the colic, but this may or may not be possible during the course of initial exam and treatment. This is the most frustrating aspect of colic, and why it is so feared among veterinarians and horse-owners alike. But, by knowing what to expect when the worst happens, you and your veterinarian can actively work together as a team, and make clear, informed decisions that give your horse the best chance at survival.



1White & Edwards, Handbook of Equine Colic, 1999

2Estimate of the national incidence of and operation-level risk factors for colic among horses in the United States, spring 1998 to spring 1999

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