

2022 Jim Steere Memorial Veterinary Student Scholarship Winner

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North Carolina State University class of 2025



Caroline is a 2019 graduate of NCSU in Animal Science with a Veterinary Bioscience Concentration. She grew up in Raleigh, NC and is an avid equestrian. In her free time she spends time with family, friends, and competing/training her young investment horse Cora.

Horse Owner's Nightmare

You walk into the barn on the first cold day of winter to feed your horse dinner. While walking down the aisle you see a flash of your horse's face in the distance and his lip is curled up. As he disappears into his stall the barn echos with the sound of his pawing. Your heart drops. Before you reach the stall your mind has already gone through a million scenarios of what could happen in the next several hours.



Colic, a term most horse people have heard, is often associated with a nightmare amongst horse owners. Statistically however, 90% of colic cases are treatable by your local veterinarian and do not require referral to an emergency hospital or surgery. Understanding and recognizing the signs of colic and when to call your veterinarian is a crucial skill to learn as a horse owner.

What is colic?

Colic is a generic term that is equivalent to abdominal pain. The horse's digestive tract is mostly free moving, very expansive, and is enveloped in a large open area in the abdomen. The mobility of the intestines and the inability of horses to vomit can cause an array of problems. There are a multitude of different types of colic, but the most common include: gas, impaction, sand, and displacement colic. Gas colic is the most prevalent and occurs when there is a build up of gas that is unable to be expelled. Typically, this is seen when there is a sudden change in diet or the horse's routine has been altered. Impaction colic refers to a blockage in the intestines that does not allow the emptying of the contents. This can occur due to a decrease in water availability in the gastrointestinal tract impeding the contents ability to pass. Sand colic occurs when a horse ingests sand as it is eating and over time creates a buildup of sand that is unable to pass through the gastrointestinal tract due to its nature to sink to

the floor of the intestines. Lastly, displacement colic occurs when the contents of the gastrointestinal tract move into positions that are not typical, causing a disruption in multiple processes. This is mainly due to the anatomy of the horse's gastrointestinal tract and how it is positioned in the abdomen.

How do I know if my horse is colicking?

It is very important to understand the signs of colic because quick medical treatment can improve the outcome of any colic. There are numerous signs of colic and they can vary greatly depending on type of colic, pain level, and the individual horse. As a horse owner it is best to be familiar with most signs so that you easily recognize when a horse starts feeling uncomfortable. The most common signs are biting at sides, stretching out, kicking at stomach, excessive rolling or lying down, pawing, lip curling, and disinterest in food.



Looking or biting at sides
www.extension.umn.edu



Stretching out
www.acvs.org



Kicking at belly
www.centenarycollege.edu



Excessive rolling
www.thehorse.com



Pawing
www.fineartamerica.com



Lip curl
www.extension.org



Not eating
www.naturhorse.com










Excessive lying down
www.myhorse.co.uk

My horse is colicking, what now?



Collecting vital signs is always helpful prior to calling your vet. This is something that anyone can learn how to do. First, look at your horse's gum color and feel them: are they pink, light pink or white; are they moist, tacky, or dry? Next, place a thermometer in the rectum and obtain a temperature. If you have a stethoscope place the end in the crease of the elbow at the abdomen and take a heart rate. Lastly, place the stethoscope on the horse's abdomen near the flank and listen for gurgling noises. If you do not have a stethoscope, one can easily be found at a local pharmacy and is a good tool to have in your first aid kit. Now it is time to call your veterinarian. Share all of the information you just obtained and this will help him decipher the degree of colic and what the next steps need to be. At this time, you can also consult with your veterinarian on administering

medications such as Banamine. When your vet arrives, he will do a physical exam. Next, two procedures will be performed: nasogastric intubation and a rectal exam. Typically, both of these procedures require sedation. For nasogastric intubation, he will insert a tube that will be placed into your horse's nose and passed to his stomach. If no liquid is produced from the horse the vet may pump fluids and other substances into his stomach. The rectal exam includes the vet inserting his arm into the rectum to feel for structures in the gastrointestinal tract. After completing the physical, nasogastric intubation, and rectal exam your vet will share the findings, recommendations, and treatment options for your beloved companion.

VITAL SIGNS IN HORSES

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1 HEART RATE
28-44 Beats Per Minute (Depending on the Horse's Size)
To Check: Take your horse's pulse from an area under the jaw, beneath the tail at its base or from an area on the side of the foot.
 - Foal 70-120 bpm; Yearling 45-60 bpm
 - Count 15 seconds and multiply by 4
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2 RESPIRATION
10 - 24 Breaths Per Minute
To Check: Watch or feel your horse's rib cage/nostrils for one minute. Be sure to count 1 inhale and 1 exhale as one breath (not two).
 - Respiratory rate should not exceed pulse rate
 - Wait at least 30 minutes after work to check rate
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3 TEMPERATURE
99.5°F - 101.3°F Normal
To Check: The best way to take the horse's temperature is rectally with a digital thermometer
 - Clean the thermometer before use
 - Environment factors can affect reading
 - Exercise, stress or infection can raise temperature
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4 MUCOUS MEMBRANES
The Horse's Gums Should Be Moist And Healthy Pink
To Check: Lift your horse's upper lip and confirm that the gums are moist and a healthy pink color.
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5 CAPILLARY REFILL TIME
Firmly Press Your Finger Against The Horse's Gums. The Point of Pressure Should Return To A Pink Color Within 1-2 Seconds.
To Check: Lift your horse's upper lip up and firmly press your thumb against the gums for 2 seconds to create a white mark.
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6 INTESTINAL SOUNDS
Normal Gurgling, Gas-Like Growls, Tinkling Sounds and Occasional Roars are Normal. No Intestinal Sounds or Decreased Intestinal Sounds Can Be A Sign Of Colic.
To Check: Press your ear up against your horse's barrel just behind his last rib. Be sure to check from both sides. Call Vet when there is an absence of noise
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7 DEHYDRATION
Horse's Drink a Minimum of 5.25 Gallons of Water / Day.
Horse's in Heavy Exercise or Hot Conditions Can Drink Up to 18.5 Gallons of Water / Day.
To Check: Pinch the skin on your horse's neck it should flatten back in 1 second.

Horse's Vital Signs Can Be Early Indications of Problems. Horse That Are Excited Or It's A Hot/Humid Day, The Heart and Respiratory Rates Can Be Slightly Elevated.

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How can I prevent colic?

Since there are many causes of colic (many unknown) even the best preventive methods sometimes fail. As a horse owner, we all want to avoid having the scary moment when we realize our horse is colicking. There are several preventatives that you can do to ensure the best outcome for your horse. The main preventative method is to keep your horse hydrated, especially when the temperature falls. Tricks for hydrating your horse include adding molasses, electrolytes, or gatorade to the water. Also making a salt lick available will make him feel the need to drink more often. Secondly, make slow transitions in his diet, especially with hay changes. Additionally, if your horse goes out in a sandy area, consider feeding him off the ground so that he does not ingest as much sand. Lastly, it is always a good idea to proactively use a gastro-protectant for competition horses or when your horse is traveling. This will help protect the stomach against gastric ulcers that can lead to a colic episode.

References:

Overview of Colic in Horses- Digestive System. (n.d.). Merck Veterinary Manual . Retrieved from <https://www.merckvetmanual.com/digestive-system/colic-in-horses/overview-of-colic-in-horses?query=colic>

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