

As a horse owner, it is more than likely that you have experienced colic in one of your horses at one time or another. Perhaps this scenario sounds familiar: As you call your horse in for dinner, he lifts his head in acknowledgement and slowly ambles toward you. But then he abruptly stops, looks at his side, and proceeds to lie down. Not only is he not interested in eating, but he is also looking fairly uncomfortable, every now and then rolling a little on the ground. There is no doubt that he is displaying pain, and it is most likely related to colic.

You've heard others' stories about colicky horses and have been told various "recipes" of what others have done. Putting aside the various anecdotal communications, let's look at dispelling some misinformed, prevailing myths about handling a case of colic.

A Starting Point

The first order of business, besides remaining calm, is to determine how serious your horse's bellyache may be. Encourage him (vigorously if necessary) to get to his feet and see if he'll stand quietly. Take him to a patch of green grass if available, and see if this stimulates him to eat. If he remains uncomfortable, put him on a longe line or in a round pen and work him at a vigorous trot for about 10 minutes (provided he doesn't have some musculoskeletal ailment that precludes exercise). This trotting motion may move gas bubbles around to relieve a simple colic. If, following this bit of exercise he still hasn't improved and shows no interest in food, it is time to call your vet.

A general rule is that if the colic doesn't resolve completely within half an hour, you should call your vet to provide your horse with immediate medical attention. While awaiting professional help, start gathering some information about your horse's vital signs (see Sidebar below).

Your Response to Your Horse's Pain

Through the years, horse owners have suggested that a horse with colic should be walked until the pain has abated, even if this means walking your horse all night, for hours on end. This

approach is not in your horse's best interest and does little to help his plight. Although your horse may be exhibiting discomfort or a lack of appetite related to his colic, if he'll lie quietly then leave him be while awaiting your vet. He is best off conserving his energy resources by resting calmly – either standing on his feet or lying on the ground.

However, if your horse's pain level is such that he is trying to thrash or roll violently, it may be better to move him around at walk or trot to keep him from injuring himself. Make sure not to put yourself in a position where you could be trapped or injured.

Rolling

One pervasive myth is that if a colicky horse isn't allowed to roll, then he won't develop an intestinal twist. Actually, this is not the case – a horse can be standing upright and his intestines may move into an abnormal position that requires surgical intervention to resolve. This can occur when the intestines lack normal motility and/or are distended with gas or accumulated intestinal contents like an impaction – then abnormal motility may pull the bowel out of its normal position, resulting in a displacement. A displacement may be just that – a section of bowel that has migrated to an inappropriate place in the abdomen, or it may be a full-blown torsion, which has rotated on its axis. Rolling may increase the chance of displacement of a loop of bowel, particularly when intestinal motility is compromised, but keep in mind that many colicky horses roll without suffering such a serious problem.

To Feed or Not to Feed?

A horse with mild colic may act as if he is improving, only to relapse after eating a bit of hay as his stomach fills and distends. In general, it is okay to offer a sloppy mash to try to stimulate his appetite – the presence of feed and the act of eating are tremendous stimulants to intestinal motility. But avoid offering grain or other fermentable feed when possible. Initially, offer only small quantities of wet mash (made from wheat bran and/or pelleted complete feed) or grass hay until you are certain your horse is on the mend. If he gobbles the mash and eagerly seeks more food, this is encouraging. Wait a short while to see how he handles the ingested food, and then offer small amounts at frequent intervals rather than just dumping a large pile of hay into his feeder.

Short periods (10 minutes) of grazing or eating grass hay also give you an idea of how much your horse has returned to his normal self. At all times, your horse should have access to clean, fresh water. All the while, be checking on his vital signs, and especially his intestinal motility.

Resist the Temptation to Medicate

It is often tempting to give a colicky horse a dose of flunixin meglumine (Banamine[®]) or phenylbutazone paste. This is not necessarily a good idea without first conferring with your vet, for many reasons:

- Oral medication is poorly absorbed from the intestines of a horse with poor gut motility as is often the case with colic. Even under normal circumstances, oral medications require several

hours to be absorbed to full effect – an oral dose is less likely to help with immediate colic pain, and once given interferes with both a veterinarian's assessment and the ability to administer this medication intravenously to provide immediate pain relief.

- Non-steroidal anti-inflammatory medications may significantly mask symptoms of a surgical problem thereby delaying appropriate treatment.
- These medications can create kidney function problems and/or gastric and/or colonic ulcers in a dehydrated horse.
- Injectable flunixin meglumine given intramuscularly is known for its potential to create *Clostridial sp.* muscle infection, with life-threatening consequences.

In addition, many horse owners are unaware that the label dose of flunixin meglumine is twice the amount that should be given to a colicky horse – such a large dose is able to mask a surgical condition for as much as half a day. This could delay appropriate medical and/or surgical intervention and reduce the horse's chances for survival.

Colic Related to Non-Intestinal Problems

Other issues may cause a horse to look like he is colicky when in fact his intestines are just fine. Some examples include a horse that is tying-up with muscle cramps, a foaling mare in beginning stages of labor, a horse with thoracic pain from pleuropneumonia, a horse that is choking on feed, or a horse with painful laminitis. The first thing to do is to see if a recumbent horse will rise from the ground. Once he is on his feet, gather all the vital signs and behavioral clues you can to intelligently relay this information to your vet when you call.

Your Veterinarian's Analysis

With a thorough physical exam, including a rectal exam, your veterinarian will have a better idea if your horse has an intestinal displacement that necessitates surgery, such as a twist (torsion) that will not respond to medical therapy alone.

However, sometimes the decision to go to surgery is not apparent until the colic has progressed for some time. Your vet may suggest running intravenous (IV) fluids along with administration of pain medications. IV fluids help jump start your horse's intestinal motility, keep him hydrated, and stabilize his cardiovascular system. There is no down side to being proactive and administering IV fluids to a colicky horse, especially when he is not as responsive to conservative medical therapy as expected. IV fluid therapy has the ability to turn around a brewing impaction, for example, and to improve intestinal circulation. The objective in all cases is to restore intestinal motility – this relieves distention and pressure created by accumulating gas and dehydrating intestinal contents in a stagnant bowel. This then lessens the likelihood of a surgical displacement.

Your horse's vital signs should be evaluated periodically throughout the recovery period as his condition can change suddenly and unexpectedly, transforming from what seemed to be a simple medical condition to one that requires immediate surgery. Your horse's vital signs and demonstration of pain provide significant clues as to how he is responding, or not, to medical therapy.

The Best Therapy Is Prevention □

The most appropriate means of saving your horse from colic is for you to apply excellent preventive management.

- Provide clean water *always*. Make sure it remains unfrozen in winter.
- Keep your horse's diet consistent and feed at least 60% of his diet (by weight) as roughage (hay or pasture).
- Feed good quality hay, not too coarse and not too fine. Avoid dust and mold.
- Use feeding systems that minimize eating directly off the ground, such as tire feeders that prevent spreading of hay through the dirt.
- Feed psyllium products for 5-7 consecutive days each month to move dirt and sand through the bowel.
- Implement an appropriate, selective deworming program based on regular fecal egg reduction counts as recommended by your veterinarian. Dose appropriately to your horse's body weight and ensure that all the dewormer medication is consumed.
- Remove manure from paddocks and stalls at least twice weekly to reduce presence of infective intestinal worm larvae.
- Have yearly dental exams and teeth filing performed by your vet to enable your horse to adequately grind his feed.
- Allow your horse ample daily exercise, either in turn-out and/or under saddle.
- Minimize stress in herd situations, confinement, and during transport whenever possible.
- At any sign of reduced appetite, lessened manure production, or your horse not acting like himself, call your vet.

Proactive Therapy

Every case of colic is unique and each horse's ordeal must be addressed individually. Your friends' past experiences have little relevance to what your horse may currently be experiencing. Waiting for many hours to see if colic will spontaneously resolve can be a costly decision, not just in expense but also in regards to your horse's ability to survive. The best assessment is done by a capable equine veterinarian who can guide you through decisions for providing the most relevant medical approach. And, an ounce of prevention is always worth a pound of cure.

COLLECTING VITAL SIGNS

Heart Rate

Use a stethoscope to count the number of beats per minute (bpm) by placing the end of the stethoscope on the body wall just behind and at the level of the left elbow. Count each lub-dub as one beat. Normal resting equine heart rate is 28 - 40 bpm whereas mild to moderate pain often drives a horse's heart rate up to 64 bpm. Something of a critical nature like shock or an intestinal twist will run your horse's heart rate over 80 bpm and it will remain elevated. A rapid heart rate is usually accompanied with rapid breathing and obvious signs of pain and distress. It is important to note that early stages of a surgical colic may not yet elicit high heart rates or dramatic pain.

Mucous Membranes

The gum color above your horse's teeth beneath the upper lip should be pink and moist, like the pink color you see beneath your fingernails. Pale mucous membranes or those that are brown-tinged or a muddy hue are of significant concern. Bright red or purple indicate shock.

Capillary Refill Time

Blanch the membranes of your horse's gums with the tip of your finger and see how quickly the pink color returns. Normal capillary refill time (CRT) should take less than 2 seconds. Delayed CRT indicates cardiovascular compromise associated with dehydration and/or shock.

Skin Tenting

Pinch the skin over the point of the shoulder or on the upper eyelid to estimate how quickly it snaps back into position – it should take less than 2 seconds to go from a tented position to flat. Another common myth is that if you see a normal skin turgor (elasticity) response, then you can assume the horse isn't dehydrated. However, skin won't remain tented until a horse develops at least 3 – 5 % dehydration. Pinching the skin on the neck is fraught with misinformation, as well, since thin, wet, or old horses have less skin elasticity than normal; even a normally hydrated horse's skin may show delayed return to normal.

Intestinal Sounds

With your stethoscope, listen to each of the four quadrants on both sides of the flank for sounds similar to what you'd hear when your stomach rumbles when you're hungry. You should hear at least two or three active intestinal rumbles over a two-minute period in each quadrant of the

flanks. Contrary to popular myth, just because you hear active gut sounds does not mean that all is well. A hyperactive gut may be noisy due to gaseous activity from over-fermenting feedstuffs or it may be an early effort to move an impaction; loud sounds may precede complete intestinal shut-down. Occasional noises similar to the sound of a penny falling down a well (tink-tink-tink-tink-tink) on the right side of the flanks indicate gas in the cecum and intestinal stagnation. Absolute quiet is worrisome, as that indicates an absence of intestinal motility (ileus) with greater risk of intestinal displacement or torsion.

Rectal Temperature

Normal rectal temperature for an adult horse is less than 101 degrees Fahrenheit; for a foal, it is less than 102 degrees Fahrenheit. Any temperature above these numbers is considered a fever. Contrary to popular myth, standing in the hot sun should not affect a normal horse's rectal temperature, although he may breathe faster than usual or sweat to dissipate solar heat.