

PREVENTING COLIC: WHAT CAN YOU REALLY DO?

L. Chris Sanchez, DVM, PhD, DACVIM
Large Animal Internal Medicine Service

What is colic?

Colic is a general term describing abdominal pain, rather than a specific medical condition. Veterinarians typically describe types of colic in one of several different ways. The most common terminology divides causes first into those that cut off the lumen (inside) and blood supply to part or all of the intestines (strangulating lesions) and those that do not (non-strangulating lesions). From there, the location of the problem is described (small intestine, large intestine, stomach or small colon). For example, two of the most common causes of colic are spasmodic (gas) colic and large colon impactions. Both would be considered non-strangulating large intestinal problems.

Types of colic that can rarely be prevented:

In general, the strangulating lesions are typically considered “intestinal accidents”. As such, they typically cannot be prevented, even with the best possible nutrition and husbandry. The small intestinal strangulating lesions typically happen when a part of the intestine twists (small intestinal volvulus), when it gets trapped within the abdomen (mesenteric rent entrapment, epiploic foramen entrapment) or gets stuck inside an adjacent piece of intestine (intussusception). Some of the large colon problems are also considered accidents. Large colon displacements (right dorsal displacement and nephrosplenic entrapment – also called left dorsal displacement) are examples of such non-strangulating problems. Large colon volvulus is a strangulating problem that occurs when the large colon becomes twisted. Although this problem is encountered much more frequently in post-partum mares, specific means of prevention are currently unknown. Many other lesions can be considered intestinal accidents, but only the most common ones will be discussed.

Types of colic that may be prevented (or their likelihood decreased):

Although the risk of colic can never be completely eliminated, the incidence of these common problems can be greatly decreased with changes in management.

- **Spasmodic (gas) colic or non-specific types of colic.**
 - Provide adequate forage. Horses should consume 1% of their body weight (10 pounds for a 1000 pound horse) daily in grass, hay, or equivalent forage at an absolute minimum. A forage rate of 1.5% is preferred. Pasture grazing should be limited in horses at risk for or having a history of pasture-associated laminitis. Late night and early morning hours are best.

- Avoid feeding excessive carbohydrates. Concentrate amounts greater than 5 pounds per day have been associated with an increased risk of colic. Grain meals should ideally not exceed 5 pounds (for a 1000 pound horse) per feeding.
- Avoid sudden changes in diet. Horses have an increased risk of colic in the 2-week period following dietary changes, including changing sources of the same type of hay. Thus, changes should be made gradually, over a 7-10 day period.
- **Large colon feed impaction (impaction colic).** This problem occurs when the large colon becomes blocked with feed material. At the pelvic flexure, the large colon transitions from a very large internal diameter to a small diameter within a very short space. So, this is a very easy location for it to become clogged, so to speak. When the large colon contents become dry or the particle size of those contents is large, impaction of the feed material becomes easier. So, things to do to decrease the likelihood of large colon impaction include:
 - Regular dental care. This allows the horse to chew its food (especially hay) more effectively, thus decreasing particle size.
 - Appropriate water intake. This is particularly important during changes in weather, travel, changes in routine (including changing pasture groups), increasing exercise, excessively hot and/or humid conditions, after foaling, and other similar events. Options to increase water consumption at these times includes feeding of mashes, addition of salt to the grain ration, administration of electrolyte paste, ensuring appropriate water temperature during cold or freezing conditions, and having your veterinarian administer water with electrolytes (and possibly oil) prior to long distance travel.
 - Parasite control. Although this is truly a separate topic, large worm burdens can contribute to large colon problems such as impaction.
- **Large colon sand impaction (sand colic).** This problem is quite similar to feed impaction, but occurs when the large colon becomes obstructed with sand. In Florida, the only way to completely prevent this problem is to stable a horse in a stall with matted flooring. But, in addition to the measures outlined above for feed impaction, the following measures will decrease the likelihood of sand colic:
 - Install rubber mats in all pasture feeding locations (below grain buckets and all provided hay).
 - Decrease stocking density to ensure adequate grazing opportunities.
 - Provide adequate forage. See above recommendations.
 - No specific feed additive or other therapy has been shown to prevent sand colic if the source of sand intake is not altered.

- **Ileal impaction.** This problem occurs when the ileum (the last part of the small intestine) becomes blocked with feed material; it is identified almost exclusively in the Southeastern United States. The biggest risk factor, by far, for ileal impaction is ingestion of coastal Bermuda hay. Thus, methods to avoid this type of colic include:
 - Feeding other types of hay.
 - Introduce Coastal hay to the diet slowly for horses naïve to this particular forage type.
 - Parasite control. Tapeworm infestation can also contribute to this problem, as tapeworms attach in the ileum just near the junction with the cecum.