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FACT SHEET

Department of Animal Science, University of Connecticut

Effective Horse Management - Second in the Horse Health Series

Colic: Its Risk Factors and Prevention

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Colic really means any type of abdominal pain. There are many types of colic. Some more common types of colic include:

- spasmodic or gas colic - the most common type of colic
- strangulating small intestinal obstruction
- non-strangulating small intestinal obstruction
- large colon impaction
- strangulating large intestinal obstruction
- and non-strangulating large intestinal obstruction other than large colon impaction.

Spasmodic or gas colic occurs when there is a buildup of fluid and gas leading to distention (swelling) of the intestine. Strangulating small intestinal or large intestinal obstruction occurs when there is an obstruction of feed material in the intestine due to a simple buildup of feed material blocking the intestine (usually where the intestine narrows), a twist or torsion of the intestine, an area where there is a distention due to gas or feed material in front and a strangulating loop behind where bacteria can build up, or when one part of the intestine slides into the next (called telescoping or intussusception).

The result is that blood flow is cut off from the affected part of the intestine and the tissue dies; this process is very painful for the horse. Non-strangulating small intestinal or large intestinal obstruction occurs when there is a migration of strongyle larvae, hernia, or as a result of dystocia (difficult birth) causing the tearing away of the blood vessels supplying the intestine. This may start out as an inflammation and can progress to stopping the flow of feed material; the resulting retention of gas and fluid may be very painful. Large colon impaction occurs when feed material blocks the large intestine. It may be caused by the natural narrowing of the large intestine, dehydration (usually seen in winter), diet of particularly coarse roughage, or retained meconium (first feces) in foals.

The National Animal Health Monitoring System's (NAHMS) Equine '98 study examining equine mortality in 1997 found that colic was second only to old age as the cause of death. The study also found that the incidence of colic was 4.2 events/100 horses per year. Of these cases, 16.3% required surgery. Eleven percent of all horses affected with colic died or were euthanized. The national economic impact is estimated to be \$115 million due to death of horses with colic, high average cost of care for horses that required surgery, and the number of horses that required surgery. This study did not include horses housed at racetracks or operations with less than three horses.

Risk Factors

Horse owners cannot protect their horses against all risk factors. In a 1995 study by Cohen et al., a history of previous colic was significantly associated with another occurrence of colic. In a 1999 study by Cohen et al., it was found that previous abdominal surgery for colic was significantly associated with another occurrence of colic.

Several studies have focused on what triggers colic events in horses. These risk factors are considered to be alterable; an owner should avoid making more than one of these changes at once and should be vigilant for a possible colic episode if any of these changes occur:

- change in stabling conditions (moving a horse to a new stable)
- change in level of activity
- change in hay (different source or different cutting)
- change in type of grain (change from pellets to sweet feed, for example)

Management Strategies to Reduce Incidence of Colic

Some ideas on how to prevent colic have emerged based on the sources listed at the end of this fact sheet:

- Avoid keeping horses stalled more than 50% of the time.
- Keep horses active other than just by turning them out in the pasture.
- Avoid overcrowding horses in a small area (Horses that reside on farms with greater than 25 acres were found to be significantly less likely to colic and farms with a density greater than 0.25 horses per acre had more cases of colic than farms with less dense horse populations according to Cohen et al. 1999.).
- Maintain a regular internal parasite control program.
- Allow free access to water.
- Avoid accidental overfeeding.
- Maintain a regular feeding schedule.
- Avoid feeding moldy feed.

- Avoid feeding hay from round bales (Round bales may be predisposed to mold since they are often exposed to moisture, ingestion of poor quality roughage may result in large colon impaction in some horses, and time and exposure to the elements may decrease hay quality according to Hudson et al.).
- Feeding horses extruded feeds may be beneficial since they are consumed at a slower rate than other concentrates.

There are many things that you can do to help prevent colic in your horse. By being aware of the risk factors and implementing these preventative measures, you should be able to help your horse avoid this painful and costly disorder. If you would like further information on this topic, please consult the sources listed below.

Sources:

Cohen ND, Matejka PL, Honnas CM, Hooper RN. 1995. Case-control study of the association between various management factors and development of colic in horses. *Journal of the American Veterinary Medical Association*, 206 (5): 667-673.

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United States Department of Agriculture, Animal and Plant Health Inspection Service. 2001. Incidence of Colic in U.S. Horses. Veterinary Services Information Sheet.

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