**Causes of Equine Colic**

***Distention and Rupture of the Stomach***

Excessive gas or intestinal obstruction can lead to distention of the stomach. This may be caused by overeating fermentable feeds such as grains, lush grass, or beet pulp. If untreated, this can rapidly progress to a rupture of the stomach. Signs include severe abdominal pain, increased heart rate, and retching. Once the stomach ruptures, the horse may act relieved or depressed. The outlook for survival is excellent if the condition is recognized and treated soon enough, but stomach rupture is fatal.

***Obstruction of the Small or Large Intestine***

Signs of colic may occur if the small or large intestine is obstructed or inflamed. The outlook for these conditions is guarded, so rapid diagnosis and treatment are critical.

The most common condition that causes obstruction of the small intestine is impaction (blockage of the intestine by food or other materials that have been eaten). It has been linked to eating high-fiber hay and infection by the tapeworm, *Anoplocephala perfoliata*. Young horses may be affected by impaction of the small intestine with ascarid parasites following deworming. In the large intestine, obstruction has also been linked to coarse feed, insufficient water intake, and diseased teeth. In some areas sand may be the cause of intestinal obstruction and colic. This is especially true if there is not enough pasture and the horse is fed on the ground. The sand may accumulate in the large intestine and eventually cause a blockage.

#### *Adhesions*

Adhesions are fibrous connections between organs within the abdomen. They generally affect the small intestine and usually constrict the inner opening of the intestine. Adhesions develop in response to abdominal injury such as surgery, longterm distention of the intestine, inflammation, or migration of larval parasites. Signs range from mild, recurrent colic to severe, continual pain. Treatment involves surgery to remove the fibrous tissue and the affected portion of the intestine. Medications are also given to try to reduce the formation of new adhesions. However, adhesions often recur and the longterm outlook for horses with extensive adhesions is poor.

#### *Inflammation of the Small Intestine*

Inflammation of the first part of the small intestine is a poorly understood condition of horses. It has been reported in the southeastern and northeastern US, as well as in England and continental Europe. There may be fluid or bleeding within the intestinal wall, or tissue death in more severe cases.

#### *Lipomas*

Colic caused by lipomas (benign fatty tumors) is sometimes seen in horses more than 10 years old. If the tumor is attached by a stalk to connective tissue in the abdomen, then it may wrap around a part of the intestine, shutting off its blood supply. Signs may include depression and severe abdominal pain, with rapid worsening of condition. Treatment requires removal of the tumor by surgery, along with any damaged sections of the intestine. If the problem is detected early, the outlook is good, but if surgery is not done before signs are advanced, the chances for recovery are fair to poor.

#### *Twisting or Displacement of the Small or Large Intestine*

Twisting of the intestines (volvulus) occurs when the intestine rotates around its attachment to the abdominal wall. This reduces the blood supply to the intestine, leading to colic. Horses with this condition are painful and have an increased heart rate. Dehydration is caused by movement of fluid into the stomach and intestine. The horse's condition may worsen rapidly. Displacement, without twisting, of the large intestine may occur and also leads to obstruction.

#### *Inguinal Hernia*

Inguinal hernias (commonly referred to as scrotal hernias) occur when the intestine passes from the abdomen into the inguinal canal that connects the testes to the abdomen. They occur in male horses, generally after breeding, trauma, or a hard workout. If the inguinal opening is large enough, part of the intestine may become trapped, causing colic. Hernias appear to be most common in Tennessee Walking Horses, American Saddlebreds, and Standardbreds. If the condition has been present for more than a few hours, the horse's condition worsens rapidly. Surgery is the usual treatment and may require removal of the testicle on the affected side, along with a portion of the intestine if it has become too damaged. The chances for survival appear to be breed-dependent, with Standardbred horses having a good outlook and Tennessee Walking Horses a fair to poor outlook. Presumably, this is because Tennessee Walking Horse stallions with inguinal hernias show few signs of pain, which may delay recognition of the problem and treatment.

#### *Enteroliths (Intestinal Stones)*

Enteroliths are hard masses composed of magnesium ammonium phosphate crystals that form around a foreign object (such as a piece of wire, stone, or nail) in the large intestine of horses. Enteroliths may be seen singly or in groups and are commonly found in horses in certain parts of the United States, including California, the southwest, Indiana, and Florida. Most horses with enteroliths are about 10 years old; horses younger than 4 years old are rarely affected. A common factor associated with formation of enteroliths may be the consumption of alfalfa hay, which results in a higher pH and increased concentrations of calcium, magnesium, and sulfur in the large colon.