



Grain Overload

Nathan Voris, DVM

It happens several times every year. The phone rings and on the other side of the line is an unhappy client reporting their horse got out of its pen and into the grain bin. Many times, the horse is looking pretty normal, and the client wants to know if there is anything we should do. My answer is always; let's take a look at the horse right away.

Horses can suffer from grain overload after eating as little as 10 to 15 pounds of grain, depending on the size of the horse and its normal grain intake. Evaluating how much grain an escaped horse has consumed is often very difficult. As anyone who has experienced such an event can report, the feed room usually looks like a tornado has come through. Add the fact there is usually more than one horse involved, and the chore becomes impossible.

Grain overload can lead to colic, diarrhea and founder-three of the worst clinical conditions imaginable for a horse. Severe cases can even lead to acute toxic shock and death. The pathologic process starts with ingestion of large amounts of carbohydrates. Passage of undigested starch to the large intestine causes an overproduction of lactic acid and volatile fatty acids. The acids lower the pH of the hindgut, which both weakens the normal lining of the large intestine and kills the normal bacterial flora, causing a rapid release of endotoxins.

So what can be done to prevent such a terrible chain of events should your horse Houdini get into the grain? The key to successful treatment is to start before clinical signs develop. Administration of mineral oil will help to reduce the rapid pH drop in the large intestine by acting as a laxative and a binding agent for the undigested starches. Additionally, a 3-5 day course of Flunixin meglumine (Banamine) will help to reduce or eliminate the endotoxin effects on the horse. If treatment of grain overload is instituted prior to the development of clinical signs, the prognosis for successful treatment is excellent. If clinical signs of colic or laminitis are apparent, more aggressive medical treatment will become necessary, and the prognosis becomes more guarded.