Founder (Laminitis)

Founder, also known as laminitis, is strictly defined as inflammation of the lamina. A horse's foot consists of bones, tendons, joint spaces, blood vessels, nerves, and 'laminae'. The hard hoof wall is smooth on the outside but is corrugated on the inside. This rough inner surface matches a similar surface on the soft, vascular 'sensitive' part of the foot known as the lamina. The two structures are held together by 'interdigitation', which you can create on yourself by holding your hands together so that the tips of one set of fingers are touching the base of the opposing hands' fingers making a flat sheet. This delicate relationship is what keeps the hoof attached to the horse while standing, galloping, jumping, or playing. Inflammation of these laminae can occur in a variety of situations, and the result is laminitis.

Laminitis Symptoms

Laminitis can be mild, and laminitis can be devastating. In the worst cases, the hoof wall and the rest of the foot lose connection with one another, and due to the amount of weight each foot must support, the bones and other inner hoof structures pull away from the hoof wall. This can cause 'rotation' of the coffin bone relative to the hoof wall, or 'sinking' of the bones too close to the ground. Both of these can be identified with x-rays of the foot, and horses with severe cases need to be humanely destroyed because of the great pain it causes. However, this is the worst-case scenario. More mild cases are painful for a period of days but then improve without major changes to the structure of the foot. In the middle are cases of laminitis that develop small changes in the foot which can often be managed with corrective shoeing, dietary modifications, and good management in an attempt to limit further bouts of laminitis. Sometimes laminitis occurs without any identifiable cause, but there are certain things that you as a horse owner can control.

Cause of Laminitis

Events which suddenly change the environment of your horse's intestines are the most common culprits for severe laminitis. Too much time on rich spring pasture, a late night raid on the grain bins, drinking too much cold water after exercise, and occasionally antibiotics or other drugs all alter the bacterial population in the gut. Death of certain bacteria, which are normally present in the gut, leads to release of certain chemicals (endotoxins) into the body causing many problems, including inflammation of the laminae. Another common reason for laminitis to occur is changes in the hormone and chemical balance of the horse caused by an overgrowth of a part of their brain called the pituitary gland. This is extremely common in middle-aged to older horses, and is sometimes called a pituitary tumor or Cushing's disease. Affected horses may have a long wavy haricoat that doesn't shed out, bulges above the eyes, excess fat on the rump or neck, and often laminitis. This can be screened for by blood tests, and there are drugs as well as management changes that can help these horses to live a comfortable life.

Signs of laminitis

Signs of early laminitis include a reluctance to walk or turn, increased warmth to the feet, and increased pulses in the arteries of the foot that run over the back of the fetlock

and pastern. Knowing what is normal for your horse will help you recognize a problem. Because laminitis can be very serious, you should contact your veterinarian if you suspect laminitis. They may take x-rays of the feet, put special pads or cushions on the feet, and prescribe drugs that will provide pain relief and decrease inflammation. Other drugs like Aspirin or Trental are often prescribed to improve blood flow through the laminae in an attempt to minimize the severity of disease. Deep soft bedding is recommended to provide support and comfort for your horse.

Long term management

Long term management for laminitis includes careful attention to any changes in diet, special trimming or shoeing of the affected feet, and medication or management for pituitary hyperplasia, should that be a risk factor for your horse. Know what your horses feet feel like every day, and have your veterinarian help you learn how to identify early signs of laminitis.