

## **NEWS ARTICLE for Sunday, May 25, 2003**

### **Equine Laminitis (Founder)**

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Horses, in fact all livestock, will eat, in total dry matter, 2% to 3% of their body weight. What and how much they eat is up to us, as managers, to control. Dry matter is the 100% dry part of a feed. All feeds contain some moisture, so we need to convert the 100% dry feed to an "As-fed" basis. Oats contain 90% dry matter or 10% moisture/water. So do most sweet feeds, pellets, and hay. Corn contains 86% dry matter, 14 % moisture and pasture contains 20% dry matter or 80% water.

As an example, a 1000 pound horse will eat 25 pounds of dry matter. To determine the "As-Fed" basis, what is actually being eaten, divide the dry matter the horse will eat by the % dry matter in the feed. That means, this 1000 pound horse will eat 28 pounds of oats, sweet feed, pellets, or hay. If the horse is on pasture, he will eat 125 pounds of grass.

Early season forage will be highly digestible and will contain as much as 25% crude protein and 73% TDN (total digestible nutrients or energy). The 1000 pound horse, mentioned above, needs about 2 pounds of protein and 10 pounds of TDN daily. If the horse eats 28 pounds of dry matter pasture, it will get 5.6 pounds of protein and 21.8 pounds of TDN. A carbohydrate overload from this high quality feed can cause a horse to founder. Generally, grass founder is a milder condition as compared to grain founder, however the potential damage can be the same.

Laminitis, also known as founder, is a condition that affects the feet of all equine. Founder is an inflammatory condition of the laminae, or the layer between the outer hoof wall and the underlying bone. This can be compared to the tissue under your own finger or toenails. It is thought that circulatory disruptions, excessive blood flow, cause the inflammation and subsequent pain.

Ponies are more commonly affected than horses and mules, with both males and females equally at risk. The cause is multifaceted and may include one or more of the following: carbohydrate overload (overeating grain, lush pasture), drug induced (cortisone), retained placenta, allergic reactions, or prolonged standing.

Affected animals are in a lot of pain and have trouble walking. If the front feet are primarily affected, the horse will stand with his rear feet under the body to take weight off of the front. Other horses may lie down to take the weight off of all the feet and may refuse to get up. The hooves will be hot and painful.

Immediate treatment is a must, or permanent damage may result. The causative problem should be determined and corrected first, and then your veterinarian and farrier can decide on the treatment. Horses that do not respond to initial therapy may develop chronic laminates and may have to be managed for the duration of their life.

Preventing founder is far better than having to treat it and is quite simple. Avoid all likely causes: don't overfeed, don't over-water after exercise, don't allow your horse or pony to become overweight, and use only appropriate medications. And above all, manage

your horse's grazing habits this Spring. Control the amount of forage your horse can consume by limiting pasture size.