

For Your Information

Courtesy Of:

Cotati Large Animal Hospital

8079 Gravenstein Hwy, Cotati, CA 94931

(707) 795-4356 (707) 578-4760

Gene Harlan, DVM Calvin Dotti, DVM Andrew Wirz, DVM Sally Venable, DVM

www.cotatilargeanimal.com

Grass Tetany

Hypomagnesemia (grass Tetany) is a Magnesium ion deficiency of the blood and cerebral spinal fluid. Hypomagnesemia can occur in both males and females, adults and calves, and beef and dairy cattle. The highest incidence is in lactating beef cows within 60 days of calving that are pastured on cool season grasses. Hypomagnesemia is usually associated with hypocalcemia (milk fever).

Magnesium is present in most of the body tissues, but about 70% of it is in bone and teeth which is not readily available. Since Magnesium is critical for normal body function and the body stores are not particularly labile, the Magnesium must be supplied by the daily diet. The average daily requirement for a cow is at least 20 grams per day. Milk is high in Magnesium and Calcium. Therefore, the requirements increase for both in milking cows.

Adverse weather that causes cows to decrease their feed intake precipitates clinical signs. Also, pastures that are heavily fertilized with Nitrogen and Potassium cause rapid plant growth with reduced Magnesium uptake in the forage. These extremely low levels of Magnesium in the forage can cause the cows to quit eating entirely, thereby worsening the condition.

The signs of grass tetany may vary, but cows usually separate themselves from the herd and are alert and hyper-excitable. They may charge. Muscle quivering with head and neck tremors with a high stepping foreleg gait may be observed. Most of the time, they are found down and unable to get up. Abnormal behavior with bellowing and convulsions can precede death. Other diseases that cause similar signs include Rabies, viral infections, nervous ketosis, heavy metal toxicity (lead and arsenic), rye grass staggers, and tetanus.

Because of the need for rapid treatment, the diagnosis is often made on the basis of clinical signs and history. Affected cattle are usually grazing lush, rapidly growing pastures late in the fall and early spring and are heavy milkers. Treatment is often unsuccessful if the cow is already comatose, and sometimes the animal dies during treatment. The doctors at this practice have had better results treating grass tetany if the animal is tranquilized first to prevent it from becoming too excited and going into shock. We will also give both Calcium and Magnesium products. It is fairly common to see relapses.

Prevention consists of several methods, which all require adequate Magnesium supplementation on a daily basis. Prevention requires increasing daily Magnesium intake. The most common method of accomplishing this include supplementing the grass forage with mineral supplements that are palatable and high in Magnesium and Di-Calcium phosphate, and supplementing with a legume hay, which are mostly high in Magnesium.

For additional questions, please contact your regular veterinarian.