



Mitchell Veterinary Services

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PREVENTION AND TREATMENT OF HYPOCALCEMIA (MILK FEVER)

Today's dairy cows are bred to produce large volumes of milk after calving. Calcium is a major element in milk that is required by the cow's nerves and muscles to function. A dry cow only needs 10 to 12 grams of calcium a day. Colostrum is very high in calcium. 10 litres of colostrum contains about 23 grams of calcium which is approximately nine times the cow's blood calcium level. After calving a cow needs to have 30 grams of calcium per day. This calcium will be absorbed from the cow's diet and also resorbed from her bones. The problem is that the fresh cow is not prepared to get all the calcium she needs. Over the first 10 days of lactation she will naturally increase the efficiency with which she absorbs calcium from her diet and produce more parathyroid hormone to resorb calcium from her bones.

Milk fever symptoms can vary depending on how low the blood calcium levels drop. In mild cases the cow has a reduced appetite, may appear cool and depressed and if not yet calved, will not proceed to calve as the uterus requires calcium to contract. As blood calcium drops, the nerves and muscles of the cow are unable to work and she goes down and is not able to get up. As the heart muscle weakens, her breathing becomes faster. She is unable to belch gas from the rumen and develops bloat. Without treatment of calcium intravenously, cows in this extreme condition will eventually die. Our goal is to prevent cows from reaching this critically low blood calcium level.

There are many products available for the prevention and treatment of milk fever in dairy cows. A properly balanced dry cow ration is the first step in reducing the incidence of milk fever in your herd. At calving calcium can be given in the form of oral pastes, liquids or boluses to increase the cow's digestive uptake of calcium. Injectables like calcium borogluconate and Theracalcium are also very effective. Many producers have adopted the use of Bovikal[®], giving a bolus on the day of calving and repeating it 12 hours later. Research has proven that even in lactation 1 animals and herds with a low incidence of milk fever, giving one bolus to all cows at calving aids cows to pass the placenta, have a better appetite, and transition from dry to milking.

New to the market this month is Calcitrace D3. Like Bovikalc, it has calcium chloride, a fast absorption form of calcium and calcium sulfate, a more slowly absorbed calcium. It also contains calcium phosphate which is a source of slowly absorbed calcium and phosphorus. Each bolus will provide 43 grams of calcium over 48 hours. Calcitrace D3 boluses contain magnesium and vitamin D3. The benefit of vitamin D3 is that it aids in the absorption of calcium from the intestine.

Calcitrace D3 is available in boxes of 12 for \$8.50 per bolus. Give Calcitrace D3 at the first signs of calving. In high risk cows, give a second bolus 24 hours later. Cows that are very weak or down should always be given calcium IV in addition to using a bolus.

Supplementing cows at freshening with calcium is very effective at preventing milk fever symptoms and assisting those cows to transition from the dry period to the milking herd with minimal health risks.

Rick

