MILK FEVER: new ideas about an old disease

   HYPOCALCEMIA, ALSO KNOWN AS "milk fever" or "periparturient paralysis" is a metabolic disease that has been been plaguing dairy cattle for over 100 years.

   High producing cows entering their third lactation or higher are more prone to getting milk fever. These cows have difficulty maintaining blood calcium levels in an appropriate range as their bodies adjust to the sudden change in milk production induced by calving.

   Every muscle in the cows body requires calcium to function normally. A deficiency can therefore result in the following clinical signs; reduced feed consumption, reduced manure output, general muscle weakness including muscle tremors, cool body temperature, weak heart sounds, inability to get up and eventually death if left untreated. This disease typically occurs within 48 hours of calving. It is also possible for animals to have "sub-clinical" milk fever. These cows have a low blood calcium level but do not exhibit the traditional signs of classic milk fever.

   Sub-clinical milk fever occurs in approximately 25% of first lactation animals and 45% of second lactation or higher animals. Clinical milk fever is seen in 5-7% of third lactation and higher animals. Like any other disease, early intervention is the key to success when treating cows with milk fever.

   Treatment options include a variety of products ranging from intravenous (IV) calcium, long and short acting injectable products, and oral liquids and pastes. Oral products often come in a range of calcium formulations including calcium chloride, proprionate and carbonate and their absorption time can be variable. Please notethat the doses may differ among these products. Cows can be given oral or subcutaneous (SQ, under the skin) injection products immediately after calving to aid in the prevention of the more advanced stages of disease and becoming down cows. Cows that are down as a result of low calcium levels need to be given IV calcium as soon as possible to give them the best possible chance to get up. This is the fastest acting treament you can give. Giving a down cow calcium under the skin is NOT an effective way to manage her condition. Often times this method of treatment does not get enough calcium into her blood fast enough to cure a down cow. This is also true for oral products as they are the slowest to absorb into the cows blood stream. Allowing cows to MILK FEVER

   linger with low calcium levels, whether they are up or not, will increase the chances of them developing the following "side effects":
     * Reduced feed intakes
     * 2-7% decrease in milk yield for the entire lactation
     * 40% higher risk of developing ketosis
     * 66% higher risk of developing metritis
     * More difficulty getting pregnant
     * Reduced neutrophil activity (cells that fight infection) which can lead to overall increased risk of infection in general

Luckily, advancements in dairy nutrition have aided in the prevention of this condition over the years. Having a well balanced dry cow ration will aid in the transition of these cows into lactation. Consult your feed advisor as nutrition is a critical component to milk fever prevention. If individual animal treatment is required, remember the following:

* Use clean equipment -clean needles, syringes and hoses
* One bottle of calcium intravenously (IV) and one bottle subcutaneously (SQ, under the skin) is an appropriate dose
* Give IV calcium slowly
* When giving calcium SQ use straight calcium as it is less irritating than products with other ingredients (ie dextrose)
* Give SQ calcium in multiple sites (minimum 2 spots) to prevent local irritation reactions
* SQ calcium lasts for 6 hours
* Caution when using oral calcium that it is not accidentally inhaled by the cow as these products are VERY irritating and inhalation may result in a severe pneumonia
* Cows requiring more than 1 treatment may have other underlying conditions and you should consult your veterinarian