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## MILK FEVER TREATMENT PROTOCOLS

Milk fever is due to low blood calcium in cows. Signs include being down or weak, off-feed, having cold ears or skin, tremors, bloating, scant amounts of dry manure, and a below-normal temperature. Milk fever most often affects mature cows. If it occurs before calving, labor may be slowed or stopped.

**Mild milk fever** when the cow is still standing may be treated with oral calcium products like Calcium gels, Milk Fever Drench, and some calcium boluses. These are typically administered twice daily. If a cow is already too weak, be cautious that she does not inhale oral treatments into the lungs. Generally, a cow that is already down needs intravenous therapy. An alternative to oral treatment for mild milk fever is the administration of 23% calcium gluconate subcutaneously (under the skin). A 500cc bottle can be divided up into 3 to 4 locations. Note that these treatments can also be used as follow-ups to the successful treatment of more severe cases.

Cows down with milk fever need intravenous calcium therapy. Cows down on their sides needed to be pulled upright before starting the treatment to prevent them from inhaling stomach contents into the lungs. Give one bottle of 23% calcium gluconate slowly intravenously. If the cow is still down after a few hours, give a bottle of Norcalciphos, Cal-Phos #2, or CMPK injectable slowly intravenously.

**Downer cows** often are result of the cow being down too long, especially when on a hard surface with poor footing. Muscle and nerve damage can occur because of the weight of the cow interfering with blood flow to the legs. Pain and inflammation are the result making the cow even less likely to stand. Banamine (flunixin) can be given intravenously at a dose of 1 to 2 cc per 100# once to twice per day (WITHHOLDING).

Often down cows just do not have the strength to get to their feet despite the medications. Lifting with hip clamps or slings or using a float tank can be helpful in getting them up that first time. Because the use of hip clamps can be damaging to the cow, lift them early and try to lift them only once. Lifting also allows checking for signs of nerve damage that might result in a poorer prognosis.

There are other treatments and procedures that can be discussed. If you have other techniques that you find useful, we would be happy to discuss them with you.