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NOTE: CLINICS ARE CLOSED SUNDAY and NO DELIVERY SERVICE SATURDAYS AND HOLIDAYS

Orders for Delivery: Please, call BEFORE 9:30 am, for same day local delivery Monday to Friday

24 Hour Emergency Vet Service call any clinic number 1-800-663-2941 519-698-2610 519-323-

MARCH 2020 NEWSLETTER

Clinic News

Friday April 10, the clinics will be closed to observe Good Friday. There will be no delivery service that day. Vets will be available for emergencies.

MILK FEVER

Milk fever, also known as hypocalcemia, has been affecting dairy cattle for many years. Milk fever occurs due to a significant drop in blood calcium levels which occurs in the early stages of lactation. A typical dairy cow will secrete 20-30grams of calcium into her colostrum/milk early on. Many farmers recognize the condition easily in a recently calved (or close to calving) dam by the typical weakness, usually down animal, with cold ears and twitching skin. The symptoms we see in a milk fever cow are easily explained by what is happening with her blood calcium levels. Calcium is vital for muscle contraction; without sufficient calcium in the muscles, they cannot contract, so she appears weak or unable to stand. We often see a circulatory collapse which results in the typical cold ears; she isn't sending blood to her ears when she needs it for her organs! Calcium is also important for the nervous system so we see skin/muscle twitching while the nervous system is adapting to low calcium levels.

Although most farmers know about milk fever and have a treatment protocol in place, you may not know that there are 3 stages that occur while the condition progresses:

1. The cow is still able to stand and walk but is weak and ataxic (wobbly). She will have muscle tremors/skin twitching and will appear restless. Stage 1 is the BEST TIME FOR CALCIUM THERAPY! If she does not receive calcium at this stage, she will worsen and progress to stage 2.
2. The cow is now unable to stand or walk but is laying down in sternal (sitting upright) with a weak neck. The lack of calcium is now affecting her heart (which is made of muscle) so her heart rate is higher and the rhythm is irregular. Her intestines and bladder (also made of muscle) are affected, so she is not passing manure or urine normally. DO NOT WAIT TO TREAT THIS COW. If she does not receive calcium at this stage, she will worsen and progress to stage 3.
3. The cow is no longer able to sit upright and is laying flat in lateral (on her side). She is not responsive and appears unconscious. She will likely bloat, and her heart rate will become extremely high. This cow can no longer be treated and must be humanely euthanized.

Treating cows in stage 1 and early stage 2 often has good results, the cow is usually strong, standing, and behaving normally within a few hours. Some cows will need a second round of treatment before recovering completely. Typical treatment includes a bottle of calcium in the vein (IV), as well as a bottle of calcium under the skin (SQ). The two routes of administration allow for a quick spike (IV) in calcium levels and a delayed spike (SQ). Additionally, the cow can benefit from dextrose, phosphorus, an anti-inflammatory (such as Metacam, Anafen, or Banamine), and fluids. Dextrose provides energy, phosphorus is important for the calcium to travel in the blood, anti-inflammatories help prevent muscle damage, and fluids help the cow's circulation.

If stage 2 is left too long, and the cow has been down for more than a couple hours, the chances of her being able to stand up again decreases. *Every minute counts for a down cow!* With every extra minute of her laying down and unable to rise, she is damaging her leg muscles, making it harder for her to stand once her calcium levels are fixed.

Many farms have switched their focus from treating cows with milk fever once they are showing symptoms to **preventing** the milk fever from ever occurring. This can be done through dietary changes in the dry cow period, or by providing oral calcium at the time of calving. Most farms use a calcium bolus (such as Bovikal^c) which has 2 types of calcium in it - *calcium chloride* is released quickly from the bolus and provides an immediate spike in blood calcium levels while *calcium sulfate* is a slow release form and provides calcium over a 12-hour period. The typical recommendation is to give **two** boluses; the first at calving, and the second 12-hours later to give the cow a full 24-hours of support when she needs it most. First calvers often do not need this type of support, but it is very effective in higher lactation cows. Some cows will need more than oral calcium, so even if you start a prevention program on your farm, don't forget to look for signs of milk fever and get them treated.