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Hwy 89 Veterinary Services: 7434 Hwy 89 Mount Forest, ON N0G 2L0 519-323-9002
1-800-663-2941 Fax 519-699-2081
linwoodvet@linwoodvet.ca

We will provide industry-leading, reliable, knowledgeable service, in a friendly, courteous and timely manner, to benefit our clients and the communities we serve.

St Clements Clinic Hours: Mon-Fri 7am – 5pm Closed Saturday
Linwood: Hours Mon-Fri 8am-5pm & Sat 8am-12pm
Hwy 89 Clinic: Mon-Sat 7am-1 pm

NOTE: BOTH 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 519-323-9002**

APRIL 2019 NEWSLETTER

Clinic News

Clinics will be closed April 19th to observe Good Friday and there will be no delivery service. Emergency vet services are always available.

ProAction Update

We are now offering Classroom training sessions for Biosecurity plus any new information on the past sections of ProAction (Animal Care, Traceability, Food Safety). Classroom training is covered by funding secured by DFO. If you're interested in attending please call the clinic and get your name on the list!

Starting in April/May there will be further training available in the form on On-Farm training. This training covers what was talked about in the Classroom Training session but is tailored to your farm. DFO covers half the cost of the on farm training session, with the remainder of the cost ($160) to be deducted from your milk cheque.

We will continue to offer our on farm visits before your Validation Month as preparation. We sit down and go through all the requirements of ProAction, look at records and ensure you have everything you need to pass with flying colours. We have gotten great feedback from the FSRs that these on farm visits significantly increase pass rates for our clients.

Calcium Options for Fresh Cows

A guide to what's out there and in what situation should you use what product

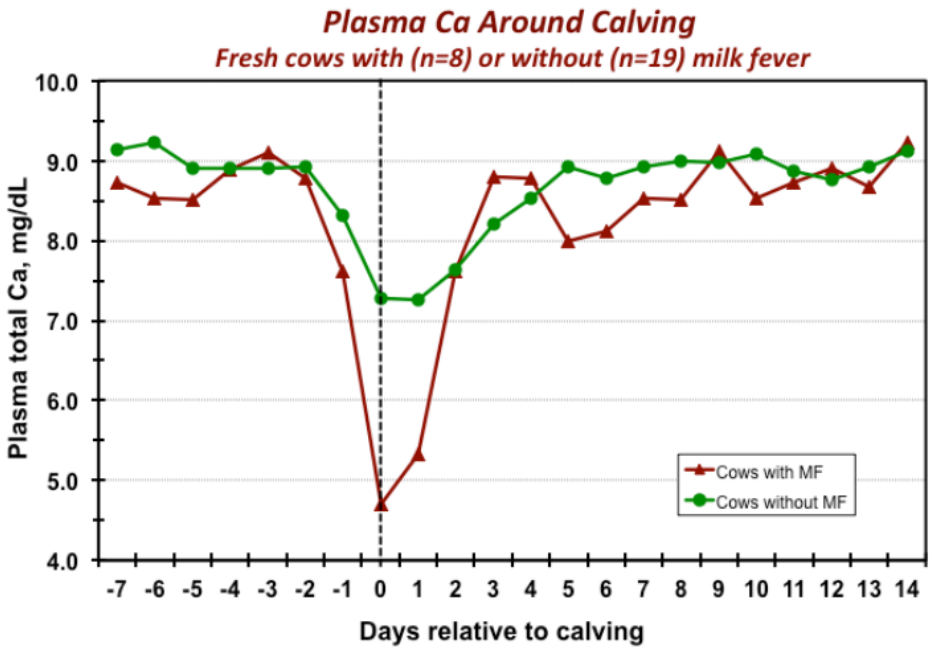


Figure 1. Plasma concentrations of total calcium before and after calving in mature Jersey cows with or without clinical milk fever (Kimura et al., 2006).

As noted in the graph above, even cows without milk fever have a blood calcium drop around calving. A lower blood calcium around calving makes many of our transition diseases more likely. Subclinical and clinical hypocalcaemia (milk fever) can lead to uterine prolapses, retained placentas, metritis, decreased fertility, mastitis, ketosis, decreased dry matter intake, displaced abomasums and lower milk production. This is why a good dry cow program & transition cow program is so important and why the use of supplemental calcium at calving is economical.

Calcium Bolus (Bovikalc®)
When To Use It:

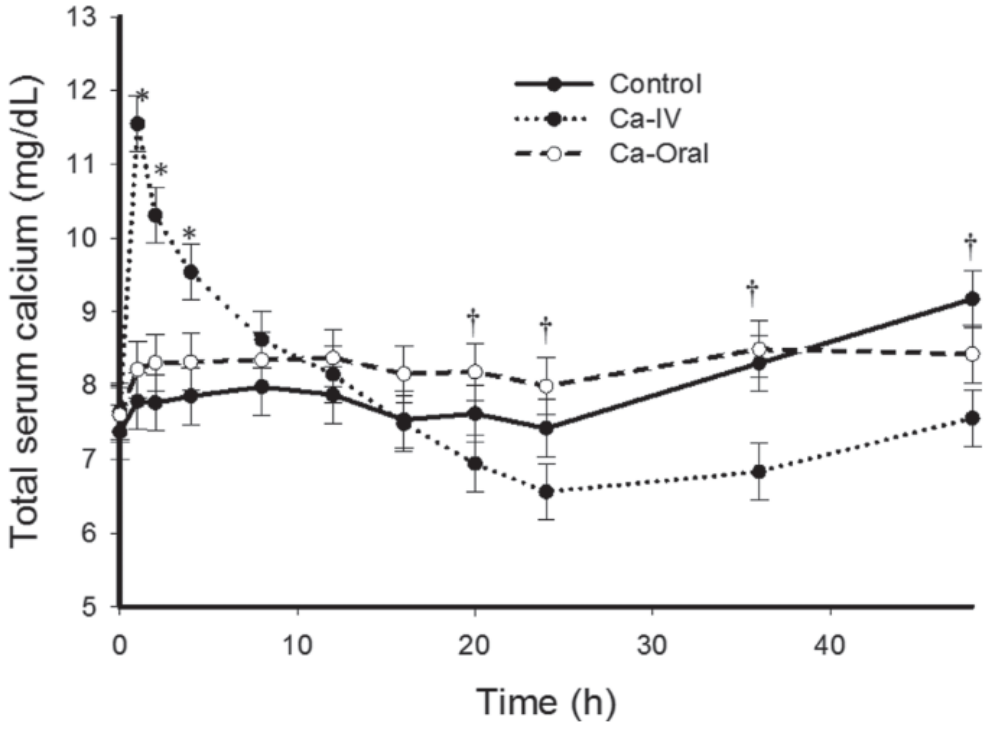
- At calving and 12 hours later for prevention (Lactation 2 and up)
- Older cows will benefit from a 3rd & 4th bolus (24 hours and 36 hours after calving)
- Clinical milk fever cows (cold, shaking, and/or down) will benefit from calcium boluses but this is NOT sufficient as treatment alone. A calcium bolus alone is not sufficient for a cow that is showing signs of milk fever (ie. cold ears)

What's In Them:

- A mix of Calcium Chloride +/- Calcium sulphate, calcium proprionate, calcium carbonate

How They Work:

- Boluses bring up the blood calcium level in a clinically normal cow within 1 hour and hold that level for 12 hours. Think of a calcium bolus as low level calcium release over 12 hours. This can be seen in the graph below from Blanc et al. 2014.



IV Calcium (Calcium Borogluconate, Cal Plus)
When To Use It:

- In clinical hypocalcemic cows. These are cows showing the following signs, shaking, stumbling, cold to touch, down, laying flat out)
- IV Calcium is NOT needed for a cow that is standing, can walk normally and her ears are just a little cold. SubQ calcium is sufficient for that type of cow.

What's In Them:

- 23% Calcium Borogluconate

How They Work:

- IV Calcium brings up the blood calcium almost immediately in cow, one bottle provided 10.8 g elemental calcium and most clinical milk fever cows need about 6 g. IV Calcium spikes the blood level to higher than normal levels and generally lasts 4-6 hours followed by a rebound period of low calcium. This rebound period is why we suggest also suggest giving a bolus alongside IV Calcium to a down cow. This can be seen in the graph above from Blanc et al. 2014.

Subcutaneous Calcium (Calcium Borogluconate, Theracalcium)
When To Use It:

- As prevention of milk fever in older cows, 2+ lactations
- For treatment of clinical milk fever (cow still standing but ears cold) alongside an oral bolus.

What's In It:

- 23% Calcium Borogluconate
- Calcium Gluconate and Calcium Glucoheptonate

How They Work:

- The graph below illustrates that SubQ calcium raises blood levels fairly quickly and maintains them for approximately 6 hours. Theracalcium keeps blood levels elevated longer compared with Calcium Borogluconate.
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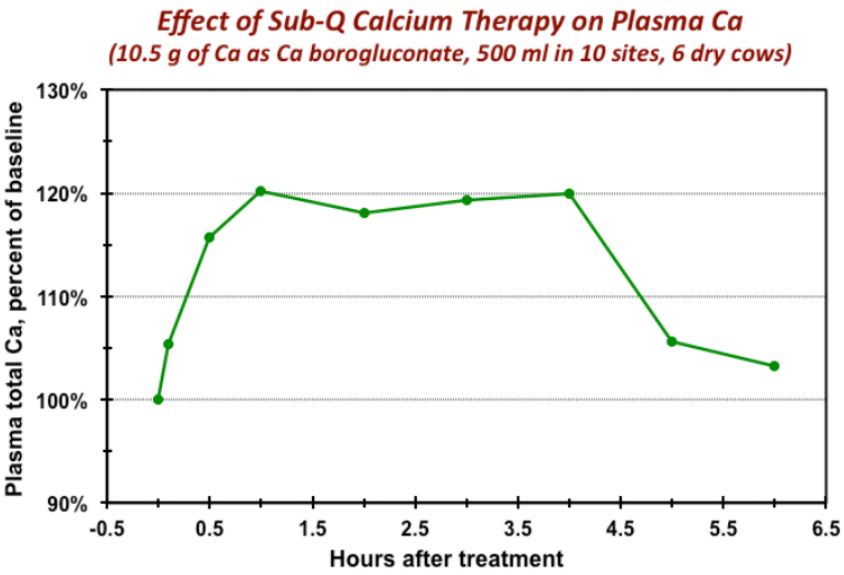

Figure 10. Effect of subcutaneous administration of 500 ml of 23% calcium gluconate on plasma total calcium, expressed as percent of baseline. The 500 ml solution was divided into 10 different sites (Goff, 1999).

The Important Points:

Lactation 2+ showing no signs of milk fever:

- Treat with Calcium Bolus at calving and 12 hours later.

- Alternative Treatment: 100mL Theracalcium SQ in a minimum of 2 spots at calving & repeat in 12 hours.

Lactation 2+ standing, slightly decreased DMI, ears slightly cold, no other signs:

- Treat with SQ Calcium (1 bottle Calcium Borogluconate or 100mL Theracalcium) & Calcium Bolus orally to be repeated in 12 hours.

Lactation 2+ down, cold, unable to rise:

- IV Calcium +/- SQ Calcium + Calcium Bolus at time of treatment and repeated in 12 hours
- Also it is important to note muscle damage starts occurring within 4 hours of a cow being down so a cow that cannot rise 1-2 hours after IV Calcium treatment should be lifted for best recovery chances.
- Older cows would benefit from an additional 3rd and 4th bolus at 24 and 36 hours post calving to avoid recurrence of milk fever.