1. PURPOSE

To provide the appropriate care to the dam after calving. Proper nutrition and health monitoring in the days that follow are essential for a cow’s health, reproduction, productivity and longevity.

2. RESPONSIBILITY

2.1 All permanent, casual and student staff
2.2 Dairy Manager
2.3 Lead Technician
2.4 Veterinarian

3. MATERIALS

3.1 G1 ration
3.2 Glycol-P (or equivalent) and dosing applicator
3.3 Calcium bolus and dosing applicator
3.4 Fresh Cow Supplement (e.g. Fresh Cow Alpha)
3.5 “Fresh” card
3.6 “2nd cut hay” card
3.7 Anti-inflammatory (e.g. Anafen)
3.8 Thermometer
3.9 Blue leg bands
3.10 Keto Test Strips
3.11 Milker Action Sheet
3.12 Treatment binder

4. GENERAL

4.1 A “fresh cow” ration balanced by the herd nutritionist is necessary for the dam’s maintenance and production. A ration balanced for energy, protein, fiber, vitamins and minerals is important to maintain health and promote an early return to a positive energy balance.

4.2 After calving, the cow’s reproductive tract needs to recover both physically and physiologically, in order to resume cycling and become ready for the next pregnancy.

4.3 During this period, dairy cows are at risk of developing calving related diseases, such as hypocalcemia, metritis (uterine infection), ketosis and displaced abomasum.

4.4 Cows with an abnormal parturition (dystocia with or without retained fetal membranes) should be monitored carefully because they are at greater risk of developing metritis, fever and hypocalcemia.

4.5 Health monitoring of postpartum cows during the first few weeks after calving is crucial. Sound management, thorough preventative protocols, and treatment of post-partum disorders associated with calving such as ketosis, milk fever, uterine infections, retained fetal membranes, displaced abomasum and udder edema, is required to reduce the unnecessary use of antibiotics and hormones. These health disorders are evaluated by monitoring rectal temperature, appetite, rumen function, ketones and milk production. Cows should be treated promptly according to the farm’s protocol and/or veterinarian’s recommendations.
5. PROCEDURE

5.1 Record the calving under the “Début de lactation” section of the treatment log.
5.2 Monitor for expulsion of placenta (usually within 8 hours after birth).
5.3 If the dam is not standing after calving;
   5.3.1 Encourage her to get up to clean her calf. If not, move calf closer to her and give her some time.
   5.3.2 If dam refuses to get up after 1-hour rest and more encouragement, notify lead technician or dairy manager. A difficult calving may require application of an anti-inflammatory drug. Consult with Farm Manager or Herd Veterinarian for further instruction.
   5.3.3 Monitor for cold ears and lethargy (indicative of milk fever). A cow with milk fever will have cold ears, will be unable to stand and will require calcium treatments and hydration therapy.
5.4 Prepare Fresh Cow Alpha;
   5.4.1 Pour 1 package of Alpha electrolyte and 250 ml Glycol to rubber pail. Add lukewarm water and mix.
5.5 Offer the cow/heifer some Fresh Cow Alpha supplement as she is cleaning the calf. Continue replenishing the pail with lukewarm water until the cow stops drinking.
5.6 When the dam has stopped cleaning her calf, offer group 1 (G1) ration and 2nd cut hay.
5.7 POST-PARTUM TREATMENT PROTOCOL:
   5.7.1 Restrain the cow using a halter.
   5.7.2 CALCIUM:
      5.7.2.1 Administer 1 Calcium bolus, orally
      5.7.2.2 Place blue leg bands on hind legs to indicate milking instructions. Refer to appendix DC-A-4D: Leg Band Color Index.
      5.7.2.3 Administer a second calcium bolus after 12 hours if symptoms of milk fever are observed.
   5.7.3 GLYCOL:
      5.7.3.1 Administer 250 ml Glycol-P orally using the glycol dosing applicator (twice daily for 3 days).
      5.7.3.2 On day 4, test for ketosis by placing one drop of milk on a Keto Test strip.
      5.7.3.3 Refer to Table 1 for Keto Test Results Protocol.
5.7.4 Record treatment protocols for Glycol and Calcium Bolus for fresh cows in the blue treatment binder.
5.8 Record all administered substances in the Treatment Log.

TABLE 1: Keto Test Results Protocol

<table>
<thead>
<tr>
<th>Keto Test Result</th>
<th>Protocol</th>
</tr>
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<tbody>
<tr>
<td>-/ Negative 0-50 µmol/l</td>
<td>Discontinue Glyco treatment</td>
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</tbody>
</table>
| +/- Inconclusive 100 µmol/l | Continue Glyco treatment (1x/ day for 4 days)
| | Repeat Keto Test
| | Interpret and follow protocol based on results |
| + Positive 200 µmol/l | Continue Glyco treatment (2x/ day for 3 days)
| | Repeat Keto Test
| | Interpret and follow protocol based on results |
| +++ Very Positive 500-1000 µmol/l | Intravenous administration of dextrose may be required.
| | CONSULT with dairy Herd Manager or Lead Technician for further treatment instruction.
5.9 Record the cow’s number and name to the Milker Action Sheet and to the list of “Blue Band” cows.

5.10 Milk cow according to the appropriate SOP:

- DC-608: Milking Fresh Cows
- DC-609: Milking Pail Cows in Tie Stall
- DC-610: Milking Pail Cows in Box Stall

5.11 POST-PARTUM MONITORING:

5.11.1 Regularly monitor cows after calving for clinical signs of post-partum disease or illness;

5.11.1.1 Decreased appetite/ weight loss
5.11.1.2 Reduction in milk yield
5.11.1.3 Fever
5.11.1.4 Depression
5.11.1.5 Dehydration
5.11.1.6 Cold ears
5.11.1.7 Foul smelling vaginal discharge
5.11.1.8 Swollen mammary gland(s)

5.11.2 If clinical sign(s) are present;

5.11.2.1 Take rectal temperature and record in dairy Treatment Log.
5.11.2.2 Refer to Table 2: Post-Partum Conditions in Cattle.

5.11.3 Cows must be examined by the herd veterinarian 14-28 days after calving.

5.11.4 Refer to SOP 310: Cow Health Monitoring for other diseases (infections, enteric, metabolic, etc.) which can be secondary to post-partum illnesses.
# TABLE 2: Postpartum Conditions of Dairy Cattle

<table>
<thead>
<tr>
<th>Description</th>
<th>Cause</th>
<th>Symptoms</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>Ketosis</td>
<td>The inability of the liver to keep up with the glucose demand during early lactation</td>
<td>Occurs in early lactation (1st 6 weeks)</td>
<td>Concurrent with other peripartum diseases (abomasum, retained fetal membranes, metritis, mastitis)</td>
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<tr>
<td></td>
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<td>1. Test for the presence of ketone bodies in urine or milk</td>
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<td>2. Propylene glycol administered orally (250-400ml (8-14 oz) twice daily for 3 to 5 days</td>
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<td>3. If decreased DMI, milk production (&lt;30%) and ketotest over 200, administer bolus IV administration of 500 ml of 50% dextrose solution</td>
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<td>4. Additional treatments ONLY per veterinarian’s instructions:</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>a. Administration of 5-20 mg/ dose glucocorticoids I.M. (Dexamethasone)</td>
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<tr>
<td>Uterine</td>
<td>Inversion of the uterus</td>
<td>Within 7 days of calving</td>
<td>Difficult calving, excessive pressure when pulling a calf, severe straining, retained placenta</td>
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<td>Prolapse</td>
<td></td>
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<tr>
<td>Retention of</td>
<td>Failure to expel fetal membranes within 24 hr after parturition. Normally, expulsion occurs within 3–8 hr after calf delivery.</td>
<td>Dystocia, milk fever, twin births</td>
<td></td>
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<tr>
<td>fetal</td>
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<td>membranes</td>
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<tr>
<td>Metritis</td>
<td>Inflammation of the uterus</td>
<td>Within 10 days of calving</td>
<td>Excessive bacterial challenge</td>
</tr>
<tr>
<td>Endometritis</td>
<td>Inflammation of endometrium</td>
<td>3 weeks to 3 months post partum</td>
<td>Retained placenta, poor calving hygiene, dystocia, calves born dead, overweight cow</td>
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### Pyometra
- **Description**: Accumulation of pus in the uterus
- **Cause**: Chronic endometritis
- **Symptoms**: Affected cows do not appear ill but may be presented as not seen in heat.
  - Enlarged, doughy uterus – may be mistaken as a pregnancy
- **Treatment**: Consult with the herd manager or Lead Technician Contact the Herd veterinarian

### Udder Edema
- **Description**: Mammary swelling (edema)
- **Cause**: Excessive accumulation of fluid in extravascular spaces of the udder and surrounding tissues
  - Impaired blood and lymph circulation from the lower abdomen because of fetal pressure in the pelvic area.
- **Symptoms**: Mammary swelling (edema)
- **Treatment**: 1. Treat with cold water therapy. Gently spray the udder with cold water for 15 minutes for at least 2 consecutive days.
  2. For severe cases:
     - 2.1 Notify dairy manager or lead technician.
     - 2.2 Anti-inflammatory treatments are administered in severe cases and under the consultation of the Dairy Herd manager, Lead Technician, and/or Herd Veterinarian.
  3. Record all observations and/or treatments in the Dairy Treatment Log

### Displaced Abomasum
- **Description**: Displacement of the abomasum
- **Cause**: Calving
  - Lack of muscle tone of the abomasum
- **Symptoms**: Inappetance
  - Reduced milk yield
  - Reduced rumination
  - Ketones will be present in blood, milk, and urine
- **Treatment**: Reduce feed intake
  - Consult with the herd manager or Lead Technician
  - Contact the herd veterinarian

### Milk Fever
- **Description**: Milk and colostrum drain calcium from the blood and cow is not able to replace the calcium quick enough.
  - High producers are more susceptible.
- **Cause**: Low blood calcium levels
- **Symptoms**: STAGE 1: (<1 hour)
  - Loss of appetite
  - Excitability, nervousness
  - Hypersensitivity
  - Weakness, weight shifting and shuffling of hind feet.
  - STAGE 2: (1-12 hours)
    - Dull appearance and listlessness
    - Cold ears, dry nose.
    - Muscle tremors
    - Constipation
    - Low body temperature, rapid heart rate
  - STAGE 3:
    - Inability to stand
    - Loss of consciousness leading to coma and death.
- **Treatment**: 1. Calcium treatment
  2. Hydration therapy
  3. If cow is down and unable to stand - call the veterinarian
1. REFERENCES


Document Status and Revision History

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