

Calving Ease

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Cold Newborn Calf Care

- **Types of cold stress (hypothermia).**
- **If in doubt, use a thermometer!**
- **Prevention always works better than treatment.**
- **Treating mild hypothermia.**
- **Treating severe hypothermia – always consult with your veterinarian for the best protocol for your dairy.**

Types of Cold Stress (hypothermia)

All of us have climbed out of a warm pickup cab into frigid winter condition – Brrrr. Now imagine being soaking wet when you exit the warm cab into that freezing air – a lot more than Brrrr! That is the situation for a newborn calf. One minute in a warm 102F liquid inside mom and the next minute out on a bed of clean straw at below freezing temperature. Brrrr and double Brrrr.

This kind of cold stress, immersion hypothermia, promotes very rapid transfer of heat from the newborn calf. A calf born outdoors in a cold rain would have a similar experience.

A more gradual kind of heat loss can be due to environmental conditions, in spite of having a dry hair coat (exposure hypothermia). Can you picture a newborn lying on concrete in a drafty lane? This exposure hypothermia is no less threatening to calf survival than immersion hypothermia.

Remember, conditions that seem warm to people are often enough colder than a newborn calf's body and can result in hypothermia. Hard delivery or dystocia calves often suffer from hypothermia.

If in Doubt, Use a Thermometer!

Normal rectal temperature at birth may be one or two degrees (F) above the normal 102°F (38.9C). Within half an hour after delivery a calf's temperature should stabilize close to 102°.

What is abnormal? Mild hypothermia is often defined when body temperature drops below 100°. At this temperature expect to see shivering. Nose and hoof issues may feel unusually cool. Even if a calf is able to stand she may seem confused and uninterested in suckling. Dystocia calves may be hypothermic even if they do not shiver.

As rectal temperatures drop towards 95° (35°C) consider this severe hypothermia. As temperatures move toward 95° calves may stop shivering. These calves often are unresponsive,

Prevention is always better than treatment

1. **Dry off the calf.** Get the hair coat “fluff” dry – that is, the hair is dry enough to stand on end forming an insulating barrier around the calf’s body. For ideas on this process click [HERE](#) or go to www.calfacts.com and scroll down to “Drying Off A Calf.”
2. **Place the calf in a draft free place.** Remember the definition of a draft depends on both wind speed and temperature. A great summer location may be really bad in the middle of the winter.
3. Insulate the calf from the surface that she is lying on if it is colder than her body temperature. Plenty of dry bedding works well. Or, some farms have heated floors for newborn calf holding areas.
4. Put a clean, dry calf blanket on the calf after her hair coat is dry.

Treating mild hypothermia

Once we have diagnosed an abnormally low temperature (for example, 99-100°) we can do these things:

1. If not already done, feed plenty of high quality, clean colostrum – aim for 103° feeding temperature to warm the calf from the inside out. Use an esophageal tube feeder if the calf will not suckle. Aim for four quarts for large breed calves, allow for smaller volumes for smaller calves.
2. Be sure the calf’s coat is dry. Vigorous rubbing with a dry towel even if the coat seems dry will continue to stimulate better blood circulation.
3. Put on a calf coat.
4. Place the calf in a place where she can breathe warm air.
5. Heat lamps will stop radiation heat losses and warm the air immediately around the calf.
6. Recheck the calf regularly looking for improved rectal temperature (closer to 102°), less shivering behavior, and tissues that appear more pink.

Treating severe hypothermia

Once we have discovered a rectal temperature that is in the mid to low 90’s we have a case of severe hypothermia on our hands. Our goal should be to get recovery to normal temperature within 60 to 90 minutes.

1. If not already done, feed plenty of high quality, clean colostrum – aim for 103° feeding temperature to warm the calf from the inside out. Use an esophageal tube feeder if the calf will not suckle. Aim for four quarts for large breed calves, allow for smaller volumes for smaller calves.
2. Find a place to put the calf into warm water. Small plastic stock tanks (30 – 50 gallons) are sturdy and are easily pulled into a room where there is access to warm water. Even a deep wash sink will work. Key points to remember:
 - a. Keep her head above water!
 - b. Maintain body temperature water.
 - c. Expect warming to 102° to take roughly an hour if she starts in mid-90’s.
3. Follow through with care as you would for a calf with mild hypothermia.

You have saved a calf! Good. However, this calf’s body defense system has been significantly weakened. Observe this calf closely for the next few weeks for symptoms of diarrhea and pneumonia

References: Glenn Selk, Oklahoma State University Extension “Re-warming methods for severely cold-stressed newborn calves.” Accessed 23Dec15 <http://www.cattlenetwork.com/advice-and-tips/cow-calf/re-warming-methods-severely-cold-stressed-newborn-calves>. Ron Torell, Dr. Bill Kvasnicka and Dr. Ben Bruce, “Care of Hypothermic (Cold Stressed) Newborn Calves.” Accessed 23Dec15 <http://www.unce.unr.edu/publications/files/ag/other/cl788.pdf>

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Remember to search for “Calves with Sam” blog for profit tips for calf rearing.