

# NWV'S CALVING SCHOOL – NORMAL PRESENTATION

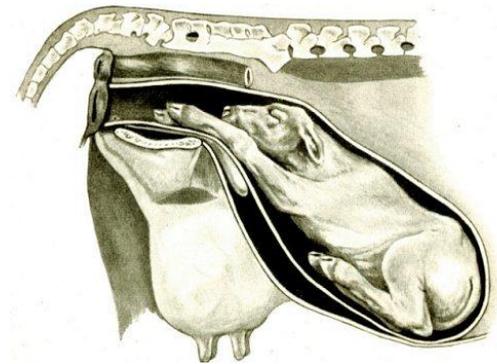
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## Normal Progression

- Stage 1 (2-6hr+) - pelvic ligament relax, teats distend, restless behavior, dilation of cervix
- Stage 2 (2hr - cow, 2-4hr - heifers)- begins with rupture of chorioallantoic membrane → active labor and appearance of bluish amniotic sac
  - Feet and the head are presented in the birth canal → stretching of the vaginal wall → Ferguson reflex (abdominal and uterine contractions)
- **When to intervene:**
  - If there is not calving progress within 1 hour after the water bag's appearance.
    - If the cow has been trying for over 30 minutes without progress
    - If the cow has not been trying for over 2hrs without progress
    - \*Frequency of observations (approx every 2 to 3 hours for first calving heifers and 4 to 5 hours for adult cows) is critical to determine when to start counting.
  - If the cow quits for more than 15-20 minutes (rest should not last >5-10min)
  - If the cow or calf is showing signs of stress or fatigue
    - Calf with swollen tongue, yellow meconium staining
    - Cow with rectal bleeding
  - If you suspect the calf is in an abnormal presentation/position/posture
  - First-calf heifers: once the nose/feet of the calf are out - help finish
  - Backward presentation: help out

## Normal Anterior Presentation

Normal anterior presentation, dorso-sacral position, with normal posture (both legs, head and neck extended).



## Placing of chains

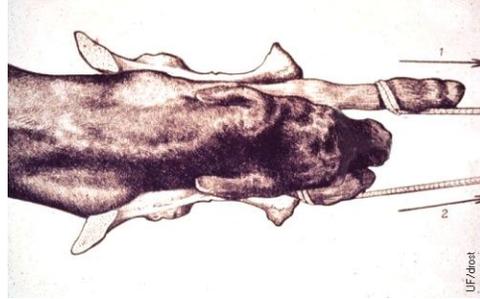
- Below the fetlock above the hoof
  - BUT...chains sometimes fall off when relaxed
- Above the fetlock joint
  - BUT...too much force placed on the metacarpal/metatarsal bones (can lead to fractures)
- BEST = Above the fetlock joint and then a half-hitch below the fetlock joint
- Large link of chain should be on the dorsal aspect

## Sizing the fetus

- If both pasterns extend 15 cm+ beyond the vulva this indicates that the point of the shoulders

have passed through the critical bony pelvic inlet (iliac shaft)- the narrowest part of the birth canal and that there should be enough room for the fetal hips to pass between the iliac shafts

- Since the shoulder (pectoral) girdle is the greatest diameter of the calf, the entire calf should now be able to be delivered by traction, while rotating the calf to accommodate the hips
- The calf is in anterior longitudinal presentation, dorso-sacral position, with normal posture
  - “walk the calf through the pelvis”
  - One leg is pulled by one person until the pastern is 15 cm outside the vulva and held there.
  - If the second leg can be pulled equally far (again by one person) outside the vulva, the calf should be able to be delivered per vagina by traction



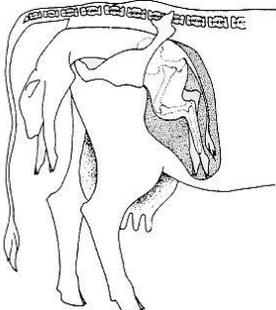
### Stretching the vulva

- After it has been determined that there is enough room for the calf to be delivered per vagina, it is helpful to stretch the lips of the vulva, especially in heifers
- Forearms are inserted halfway to the elbows. Next, with the fingers folded, the arms are wedged apart in the direction from 11 o'clock to 5 o'clock and alternately from 7 o'clock to 1 o'clock, for 10 or more repetitions
- During delivery of the hips the vulva lips should be also be stretched over the greater trochanters of the calf with the flat of the hands

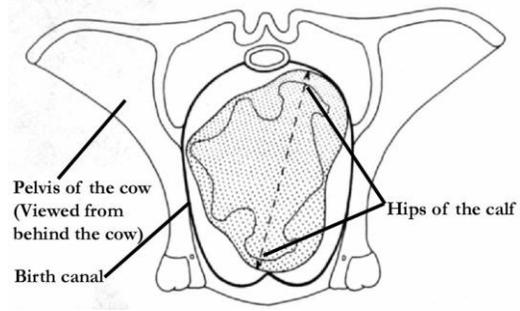
### Pulling the calf

- Lots of clean lubrication!
- Work with the cow- timing your pulling with straining or contractions
- Follow the natural lines of calf delivery, making use of both the natural curvature of the calf and the birth passage.
  - Pull horizontal or slightly upward direction until the head and trunk (chest) are delivered
  - Pull in a downward direction towards the cow's hocks until delivery is complete

### Avoiding Hiplock



- The cross section of the fetus at the level of the hips, through the greater trochanters, is wider (horizontally) than it is tall (vertically). This is just opposite to that of the pelvis of the cow.



- To prevent hiplock the fetus should be rotated as it enters the pelvic inlet (as soon as the head is out), allowing the greater trochanters more space.
- Once the head is out, stop pulling. The assistant switches to pulling on the opposite leg and the obstetrician places one arm and hand all the way underneath the calf and inserts the other hand between the legs, and folds the fingers above the head, locking them with the fingers of the other hand. When the cow strains, the assistants pull while he pulls the head towards his / her knees - rotating the calf and the hips



- The calf should be rotated ~45 degrees (between 45-90degrees)
- Once the hips are past the iliac shafts of the cow, rotate them back to a dorso-sacral presentation and pull the calf in a downward arch towards the udder of the cow.

Normal Posterior Presentation

Normal posterior longitudinal presentation (backwards), dorsosacral position, and normal posture (both legs extended).

- Because of the proximity of the umbilical cord as it approaches the pubic brim it will often be pinched off or severed before the calf is able to breathe

