

# Wrapping the VLBW Infant

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# Temperature Control



- Premature infants have become smaller and less mature
- The environment effects the vital function of the premature infant
- Despite advanced technology, ELBW infants exhibit cold body temperatures after delivery room stabilization



# Infant Temperatures



## Recommended Axillary Temperatures in Infants $\leq 1500$ grams

| Ranges                | Temperature   | Action Needed                               |
|-----------------------|---------------|---|
| Normal                | 36.5-37.5 ° C | Continue                                    |
| Potential Cold Stress | 36.0-36.5 ° C | Cause for Concern                           |
| Moderate Hypothermia  | 32.0-36.0 ° C | Danger; immediate warming of baby needed    |
| Severe Hypothermia    | < 32.0 ° C    | Outlook grave, skilled care urgently needed |

# Occlusive Wrap



- Occlusive wrap has been clearly established as effective in preventing hypothermia ( $<36.5$ ) in premature infants  $< 29$  weeks gestation in the DR and significantly improving admission temperatures.
  - ❑ Polyethylene works because it prevents evaporative loss but allows the radiant heat from the warmer to pass through
  - ❑ Occlusive wrap blocks air currents
- You can't just change one thing. You have to look at everything that drives the improvement. If you just increase DR temperature they will still be cold you must also use the wrap.
- Occlusive wrap permits heat to be gained by the infant through radiation and reduces the amount of evaporative heat loss.

# Potentially Better Practices (PBP)

- Evaluate gestational age and stabilization room or DR temperature
- Set RW temperature to 37.0
- Hat placed on RW
- Use of occlusive wraps in all infants < 29 weeks
  - Bowel Bag
  - Rectangular Wrap
  - Square Wrap
    - ***Directions for use a square wrap follows***

# Step 1 - Occlusive Wrap



- Open and set “wrap” at an angle if known delivery of VLBW infant.
- At the two side corners cut a slit in towards the middle.
- Only leave enough space in the middle to cover the infants back and side. *These slits will go over the umbilical area leaving it exposed for lines.*



# Step 1 - Occlusive Wrap

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# Step 2 - Occlusive Wrap



- When the baby is born place the infant directly on the wrap.
- If your institution requires you to dry the infant - **Use a patting technique.** *Remember you do not want to disrupt the few skin layers this infant has **so pat only.***





# Step 2 - Occlusive Wrap

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# Step 3 - Occlusive Wrap



- *Whether you have to dry the infant or not.*
- Place the baby directly on the wrap and remove the towel or blanket.



# Step 3 - Occlusive Wrap

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# Step 4 - Occlusive Wrap



- Take the top corner of the wrap at the head and place it over the head to the forehead.
- Then put the hat over the wrap to secure it.



# Step 4 - Occlusive Wrap

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# Step 5 - Occlusive Wrap



- The hat will hold the wrap in place while you wrap the rest of the baby.
- Before wrapping the baby place the leads, *if you are required to use them* (the pulse oximeter and the temperature probe).



# Step 5 - Occlusive Wrap

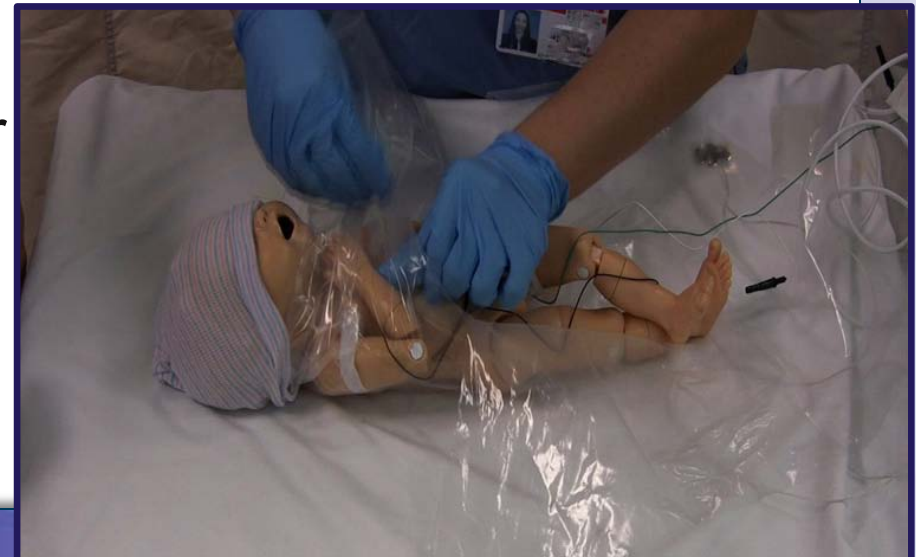
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# Step 6 - Occlusive Wrap



- Next, wrap the arms up with the hands at the face in a developmentally friendly position.
- Wrap each arm using the top angles that you have.
- Tuck the corners of the wrap around the baby.
- Then wrap the legs. For line placement the legs need to be wrapped straight down.
- The only part exposed after you wrap should be the umbilical cord. This will allow for line placement.





# Step 6 - Occlusive Wrap

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# Step 7 - Occlusive Wrap



- **Once the baby is wrapped do not unwrap.** Unwrapping for assessments and exams will cause the infant to get cold.
- Once the infant is stabilized in a warm environment and the wrap is removed further assessment can be done.
- If you are required to get foot prints prior to leaving the stabilization area you can peek just the foot out of the wrap, *but again it is not ideal to unwrap these small vulnerable babies.*



# Step 7 - Occlusive Wrap

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# Thermoregulation during Procedures



- A large clear drape should be used over the wrapped baby to do the procedures.
- The neonatal clear drapes cover the entire radiant warmer and the bed. The drapes have a very small opening that allows the umbilical cord to fit through.
- This again allows heat to transfer to the infant from the radiant warmer and does not require removal of the wrap.



# Thermoregulation during Procedures *MCC*

