

## THERMAL WEANING – INCUBATOR TO OPEN CRIB TRANSFER OF INFANT (NEONATAL)

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### Critical Points

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1. The goal of thermal weaning is to evaluate the infant's ability to maintain an axillary temperature of 36.5 to 37.5°C in an open crib without an increase in caloric expenditure as assessed by normal growth.
2. RNs can initiate thermal weaning without a provider order; however, an assessment of readiness should be made in collaboration with the medical team.
3. Guidelines for initiation of thermal weaning include:
  - Weight = more than 1600 grams
  - Age 32 weeks or more and appropriate size for gestation
  - Medically stable (no increase in apnea or bradycardia episodes)
  - Able to maintain a stable axillary temperature of 36.5 – 37.5°C in air mode of the incubator
  - Sustained weight gain of 15-30 grams per day
4. Infants transitioning to an open crib should not be placed near a window or drafty area.
  - Infants weaned to open cribs are dressed at all times.
5. Success of weaning is measured by the infant's weight gain, temperature stability, and clinical condition after weaning.
6. Larger preterm infants may be cared for in an incubator for improved observation, concern about weight gain, or with a provider order.

### Equipment

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- Crib or bassinette

### Procedure

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#### THERMAL WEANING

1. Assess readiness criteria, including minimal weight, stability, and growth for the past week.
2. Dress infant in shirt, diaper, and swaddle/cover with 1-2 blankets.
3. Change incubator mode to air control.
4. Monitor and record infant's axillary temperature one hour after the change, then every 3-4 hours if stable.
5. Lower incubator temperature by 0.5 to 1°C daily until 25-26°C (77-78.8°F) is achieved.
6. Place infant in open crib when infant has been in incubator on air control at 25-26°C for a minimum of 24 hours with stable axillary temperatures within target range.
7. Monitor infant's temperature one hour after being placed in open crib

## THERMAL WEANING (*continued*)

8. Dress infant in appropriate clothing and use up to two blankets to maintain temperature.
9. Consider omitting bath on the first day in an open crib.
10. Return infant to incubator if infant:
  - Cannot maintain axillary temperature of at least 36.5°C with 2 blankets
  - Develops an increased oxygen requirement
  - Is medically unstable
  - Loses weight or fails to gain weight
  - Develops difficulty in feeding
  - As determined by the medical team
11. Notify Provider of infant's failure to tolerate weaning.

## DOCUMENTATION

1. Document infant's tolerance or intolerance of procedure in a nursing note.

## Troubleshooting

Problem	Suspected issue	Action
Inability to maintain temperature within 36.5 to 37.5 °C range	<ul style="list-style-type: none"> <li>• Thermal stress from environment</li> </ul>	<ul style="list-style-type: none"> <li>• Confirm room temperature is between 72 –78°F in the nursery.</li> <li>• Confirm area is draft-free and crib is away from windows.</li> <li>• Consider checking blood glucose to screen for hypoglycemia associated with cold stress.</li> </ul>
Change in physiologic status, such as: <ul style="list-style-type: none"> <li>• Respiratory Distress</li> <li>• Apnea</li> <li>• Bradycardia</li> <li>• Failure to gain weight</li> </ul>	<ul style="list-style-type: none"> <li>• Thermal stress, intolerance of weaning</li> </ul>	<ul style="list-style-type: none"> <li>• Check temperature</li> <li>• Notify Provider</li> <li>• Place infant back into incubator.</li> </ul>

## References

Level of Evidence (FAME*)	Level*	Reference
	E3	Barone, G., Corsello, M., Papacci, P., Priolo, F., Romagnoli, C., & Zecca, E. (2014). Feasibility of transferring intensive cared preterm infants from incubator to open crib at 1600 grams. <i>Italian Journal of Pediatrics</i> ,40(1), 41. doi:10.1186/1824-7288-40-41
	E2	New, K., Flint, A., Bogossian, F., East, C., & Davies, M. W. (2011). Transferring preterm infants from incubators to open cots at 1600 g: A multicentre randomised controlled trial. <i>Archives of Disease in Childhood - Fetal and Neonatal Edition</i> , 97(2). 88-92. doi:10.1136/adc.2011.213587

## THERMAL WEANING (*continued*)

E1	New, K., Flenady, V., & Davies, M. W. (2011). Transfer of preterm infants from incubator to open cot at lower versus higher body weight. <i>Cochrane Database of Systematic Reviews</i> . doi:10.1002/14651858.CD004214.pub4
* FAME Scale details: See nursing policy, <a href="#">Procedure, &amp; Competency Development, Review, &amp; Approval</a>	

## Procedure History

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