



NCCU CLINICAL GUIDELINES
SECTION: 4

THERMOREGULATION

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Humidity
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Neonatology Clinical Guidelines
King Edward Memorial/Princess Margaret Hospitals
Perth Western Australia

HUMIDITY

KEY POINTS

Humidity is used to reduce Transepidermal Water Loss in infants **30 weeks gestation or less and less than 1500 gms birth weight** .

All infants 30 weeks gestation or less will require humidity due to the immaturity of their skin. The less the gestational age of the infant the higher the humidity required. .

Note:

- **The provision of high humidity is difficult to achieve on a radiant warmer and can only effectively be delivered in closed incubators. However, on occasions it will not be possible to nurse an infant in a closed incubator.**
- **The use of external humidity to reduce radiant heat output is essential, the radiant warmer should be completely covered with plastic , use of a thermal tunnel is recommended . Utilising these measures will reduce the radiant heater output to the lowest percentage possible thus decreasing the TEWL that occurs with the use of radiant heat.**
- **This process should be observed at any given time for low birth weight infants nursed on radiant warmers**

It is recommended that infants less than 27 weeks be commenced in 80% humidity when in incubators. However this should be gauged according to skin integrity, gestational age , corrected age and the required set temperature of the incubator.

Weaning the humidity should be commenced during the first week of life when the infant is able to maintain a per axilla temperature within the target range . Weaning should commence at 5 % intervals over the period of a week to around 50% at the end of the first week of life.

The weaning of humidity should be alternated with the weaning of the incubator temperature until the required level is reached that is suitable to maintain a PA temperature within the target range. Attention should be made to the incubator temperature prior to weaning the humidity.

During the second week of life the humidity can be reduced to 40 % and there after ceased if the incubator is at or less than 34 degrees. Some infants will require humidity for up to 3 weeks of age.

Incubator humidity is provided by acetic acid or water, this will depend on the incubator used.

Rain out this should not occur. It usually means there is a mismatch between humidity set and the incubator temperature. A bubble plastic sheet over the top of the incubator will stop environmental issues that affect the top and walls of the incubator.