



NCCU CLINICAL GUIDELINES
SECTION: 4

THERMOREGULATION

Section 4: Thermoregulation
Neonatal temperature ranges
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Neonatology Clinical Guidelines
King Edward Memorial/Princess Margaret Hospitals
Perth Western Australia
Authorisation & review by
Neonatal Coordinating group

NEONATAL TEMPERATURE RANGES

NORMAL RANGE

36.5^o – 37.4^oC for all infants measured per axilla.

The neonatal temperature is monitored per axilla using digital thermometers. Flank temperatures may be monitored using skin temperature probes.

An infant's core body temperature will generally be higher than the recorded skin temperature, with a difference of ~0.5^oC in term infants; the difference may be narrower in very preterm or ill infants. If the temperature measured is out of the parameters of the target range, review the infant to establish if the cause is endogenous or environmental.

NOTE: Skin temperature probes may be inaccurate if there is significant peripheral shutdown.

EFFECTS OF RAPID HEATING / COOLING

Infants are to be warmed /cooled slowly to prevent rapid metabolic changes, vasodilation/constriction and shock.

- Aim to raise or lower the infant's temperature by 0.5^oC per hour.
- During cooling or warming the temperature should be monitored continuously with a peripheral temperature probe, if available. If not then check axilla temperature 15 minutely.
- Attach manual infant temperature probe under the axilla
- Ascertain the accuracy of temperature probe checking the PA temperature when the probe has reached a stable temperature reading.
- Continuous monitoring can be achieved with a temperature probe. However, frequent evaluation is required with axillary temperature checks every 30 - 60 mins to determine temperature is within normal limits.

FURTHER READING

Knobel, R. B., Holditch-Davis, D., Schwartz, T.A. (2010). Optimal body temperature in transitional extremely low birth weight infants using heart rate and temperature as indicators. *JOGNN*, 39(3-14).

Ringer S (2013). Care Concepts: Thermoregulation in the Newborn, Part II Prevention of Aberrant body temperature. *Neo Reviews* 14 ;e221