the children's hospital at Westmead

The Sydney children's Hospitals Network

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The Australasian NIDCAP Training Centre

Info-sheet Sleep States

Sleep

Sleep is vital for growth and development. For preterm baby's sleep is often not easily recognised or defined with frequent fidgety movements. Supporting babies to achieve restful periods of sleep will help support the developmental of connections and pathways in their brains helping with their developmental outcomes.

Quiet or Deep Sleep

Deep sleep is also called quiet sleep because the baby moves very little apart from the occasional small startle. Deep or Quiet sleep is considered a mature sleep state and is seen more commonly after 32 weeks gestation.

Body movements/activity	Very little movement
Eye Movements	None
Facial Movements	None, except for occasional sucking movements at regular intervals
Breathing Pattern	Smooth and regular
Level of response	Only very intense and disturbing stimuli will arouse the baby.

What this means for caregiving:

- Deep sleep is restorative and baby's threshold to sensory stimuli is very high (i.e. they are less likely to wake up)
- Caregivers trying to feed an unresponsive baby in deep sleep will find the experience frustrating.
- Feeding will be more successful if nurses and parents respect the babies needs by waiting until they move to a more responsive state.
- Even if you use disturbing stimuli, chances are the baby will arouse only briefly, then return to deep sleep.
- Deep sleep is considered a mature sleep state and is seen after 32 weeks gestation

Light or Active Sleep

Light or active sleep is when the baby moves more. During active sleep you may see tiny fluttery movements of their eyes known as Rapid Eye Movements (REM). For adults light or active sleep is when we dream. For babies light sleep is when connections are forming in their brain, both light and deep sleep is important for a baby's brain development.

Body movements/activity	Some body movements
Eye Movements	Rapid eye movements (REM); fluttering of eyes beneath closed eyelids
Facial Movements	May smile and make brief fussy or crying sounds
Breathing Pattern	Irregular
Level of response	• The baby is more responsive to internal stimuli (hunger) and external stimuli (handling/noise) than when in quiet sleep. • When stimuli occur, the baby may remain in active sleep, return to quiet sleep, or wake up.

What this means for caregiving:

- Active sleep is associated with processing and storing of information and has been linked to learning.
- It accounts for the highest proportion of newborn sleep and usually occurs before wakening.
- Due to brief fussy or crying sounds during this state, caregivers who are not aware that these sounds normally occur may try to feed babies before they are ready to eat.

Supporting Sleep in the neonatal unit

- Where possible we try to not wake babies for procedures or caregiving unless it is absolutely necessary
- Skin to skin or kangaroo care is an easy way to support your baby's sleep as they not only sleep better on your chest the benefits last when they are placed back in their bed and they are more likely to sleep and be settled for longer
- Understanding how to settle a baby to sleep and what support they require getting to sleep as a newborn and as they grow is useful for parents and caregivers. Responsive Settling is an approach that focuses on the infants behavioural cues. Information can be found at: https://www.tresillian.org.au/media/1316/responsivesettling0-12months_tresillian_tipsheet.pdf

Information in this information sheet has been modified from the following sources:

- Blackburn, S., & Blakewell-Sachs (2003). Understanding the Behaviour of Term Infants. White Plains, NY: March of Dimes Birth Defects Foundation, and https://www.marchofdimes.com/nursing/index.bm2?cid=00000003&spid=ne_s1_1&tpi
- Caring for your baby in the Neonatal Unit: A parents handbook (2014) Inga Warren and Cherry Bond