



NEONATAL CARE

NEONATAL CARE ON THE WARD

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Key words: umbilical cord, cord care, umbilical cord care, postnatal education, postpartum education, neonatal care, neonate, infant, eye care, swaddling, rooming-in, diaper, diaper rash, nappy rash, nappy dermatitis, thrush, nystatin

This guideline contains information on the following subjects:

- [Rooming-In](#)
- [Wrapping/swaddling](#)
- [Umbilical cord care](#)
- [Skin care](#)
- [Nappy change and prevention / treatment of dermatitis](#)
- [Elimination](#)
- [Eye Care](#)

ROOMING-IN

Mothers are encouraged to 'Room-In'. The neonate remains at the mother's bedside for the greater part of 24 hours, whether breastfed or formula fed. The routine is modified to meet individual needs.

This allows the neonate flexible feeding routines, reduces risk of cross-infection, promotes bonding/attachment, and allows observation of infant behaviour.¹ 24 hour rooming-in decreases risk for cross-infection and risk of neonatal infections.^{2, 3} Studies have shown improved breastfeeding outcomes with rooming-in.⁴

WRAPPING / SWADDLING NEONATES

- Generally infants who are swaddled arouse less in sleep, and sleep longer. Swaddling is supported in neonates with neonatal abstinence syndrome. It is also helpful in regulating neonatal temperature but is associated with hyperthermia is misapplied.⁵ A possible risk with swaddling is increased risk for hip dysplasia, however a swaddling technique ensuring that the neonate's hips can flex and abduct in a safe position to allow normal hip development may lessen risk of developmental dysplasia of the hip.⁶
- Avoid overly tight wrapping as it prevents neonatal movement which generates heat.⁷
- Small and preterm infants may benefit from hats to reduce heat loss.⁷

UMBILICAL CORD CARE

Research has not shown, in high-income hospital settings, any advantage to using antibiotics, antiseptics⁸, creams, or powders for prevention of infection over just keeping the cord clean and dry.^{3, 8} However, chlorhexidine cord care has been associated with reduced infection in developing countries and community birth.⁹ The cord normally separates 5- 15 days after birth, however separation may be delayed by the use of topical antimicrobials,⁸ premature birth, caesarean section, or low birthweight neonates.³

UMBILICAL CORD CARE

1. Clean the skin / cord junction when soiled (e.g. urine or stools or sticky material as cord separates⁷) with a cotton bud moistened from tap water. Do not use cotton wool balls as they may leave filaments behind.²
 2. Dry the skin / cord junction after bathing.²
 3. Instruct the mother on cord care, hand hygiene, and how to assess for signs of infection.^{2, 7}
 4. The nappy should be folded down to expose the cord at nappy changes until cord separates^{2, 10}
 5. The cord clamp remains on the stump until separation occurs, however, if required, may be removed when the cord stump is dry (usually after 24 hours).
- Note: Cord clamp removers are single use only items and must not be used on other neonates**
6. Observe the umbilicus and the surrounding area for signs of infection each shift and / or each nappy change. Signs of infection include:

- swollen cord³
- inflamed skin³ e.g. redness or umbilical 'flare'⁷
- 'smelly' cord (caused by anaerobic bacteria)
- neonate has a fever, lethargy or poorly feeding (septicaemia)³
- abnormal, serous or purulent discharge⁷ e.g. pus

7. Inform the paediatric team if /or when signs of umbilical cord abnormalities are evident or general signs of infection in the neonate are present.⁷ Rapid onset neonatal septicaemia requires prompt medical review/treatment.⁷ Consider obtaining a swab from the site for microscopy and culture.²

SKIN CARE

OBSERVATION

- Inspect the skin, including between digits, for rashes, septic spots, excoriation or abrasions with cleansing and nappy changes.¹¹
- Observe for changes in skin colour⁷ e.g. jaundice, mottling, dusky, pallor, plethora

GENERAL PRINCIPLES

- Promote skin integrity by avoiding skin friction caused by hard fabrics, acid/alkaline substances and pressure.⁷
- Minimise length of time skin is exposed to irritants such as vomit, urine and stools, soiled or wet clothing.¹²
- Avoid the use of biological powders, fabric softeners and starch when laundering baby clothing.¹²
- Chemicals used in baby products can damage epidermal lipids and are unnecessary to care for the neonate's skin.¹¹
- Peeling skin requires no treatment.^{7, 11} Usually post-term skin that is dry and cracked will shed within several days to reveal smooth skin.¹¹ However if the mother is concerned then dry skin can be safely moisturised with sunflower oil. This does not contain oleic acid which is known to be associated with disruption to the structure of skin cells and can lead to breakdown of skin integrity.¹³
- Surplus vernix is a natural moisturiser and can be gently massaged into the skin^{7, 13}
- Report any abnormalities of the skin to the paediatric team for review.⁷

CLEANSING

- Defer bathing the neonate until their temperature is stable above 36.5⁰C, usually after the first 24hrs.⁷ During the first 24hrs, the neonate is particularly susceptible to temperature instability.⁷ Due to the risk of hypothermia, bathing does not occur immediately after birth unless there is an infection risk by vertical transmission from the mother (e.g. Hep B, HIV).⁷ Daily bathing is not required¹¹, however while in hospital the mother should be given opportunities to gain confidence bathing her baby.¹² Bathing the infant in a bath is superior or at least equal to sponge bathing (less heat loss, no difference in cord healing, more comfortable for babies). Bathing makes a baby calmer and quieter than washing.¹⁴
- The temperature of the water during bathing should be 36⁰C¹² - 36.7⁰C.⁷
- As some chemical baby products can damage epidermal lipids, bathing in plain water 1-2 times weekly for the first month⁷ and using cotton balls for daily cleansing is suggested.¹¹ However, cleansing with artificial detergents or liquid baby cleansers seems comparable with or even superior to water alone.¹⁴ If soap is used it should be a mild non-perfumed pH-neutral soap,^{14, 15} This avoids causing a high skin pH which leads to higher rates of bacterial proliferation and enzyme activity and interruption to the skin barrier function.¹⁴
- Warmed towels and clothing, a draught-free environment, avoiding exposing the neonate unnecessarily, and drying the neonate promptly and thoroughly support temperature maintenance.⁷

PARENTAL EDUCATION

Provide education about:

- Bathing and prompt, thorough drying techniques, water temperature, and maintenance of skin integrity⁷ e.g. soaps, detergents, clothing
- Avoidance of use of hot water bottles, electric blankets, wheat bags, gels packs in the infant's cot.⁷
- Temperature management e.g. environment, clothing¹¹

NAPPY CHANGE AND PREVENTION/TREATMENT OF DERMATITIS

GENERAL INFORMATION

Nappy rash/dermatitis is often caused by a loss of epidermal barrier function from skin friction, overhydration and faecal enzyme exposure.¹⁶ Prolonged exposure to urine and faecal material cause the skin to become macerated and more permeable to irritants. Nappy usage is associated with an increase in skin pH leading to activation of destructive enzymes on the skin.^{17, 18} The majority of nappy rash cases will become colonised with *Candida albicans*.¹⁶ Frequent nappy changes and allowing nappy free time decreases the risk. A nappy rash lasting more than 72 hours has a greater chance of being complicated by *Candida albicans*.¹⁷ If the infant has been prescribed antibiotics this further increases the risk for *Candida albicans*.¹⁸

PARENTAL EDUCATION

Prevention and management of nappy rash/dermatitis by:

- Hygiene measures including hand washing¹⁹
- Clean female genitalia by wiping towards the anus.
- Frequent nappy changes¹⁷, and changing of nappy when soiled. Ensure the genital area is cleansed of stools and urine.¹⁹
- Avoid use of harsh soaps¹⁶ or detergents¹⁹, and products containing fragrances, preservatives and other ingredients with irritant or allergic potential.¹⁷ Use a soap substitute.¹⁶
- Avoid use of powders which contain cornstarch, talcum, baking soda or boric acid.¹⁷
- Use barrier creams only if the neonate has frequent nappy rash. Barrier creams should not be routinely used.¹⁹ Apply during periods of nappy rash at each nappy change.¹⁶
- Allow some nappy free time when practical¹⁹
- Studies indicate that use of disposable nappies shows improved skin condition when compared to washable nappies¹⁷, however this is determined by parental choice.¹⁹ Educate parents that if using cloth nappies, change 2 hourly and avoid using plastic overpants /nappy liners.¹⁶

- If nappy rash is present, avoid baby wipes and use a damp cloth/cotton balls and soap substitute where possible.¹⁶ Some modern skin wipes may be used due to their mildness plus their containing of emulsion-type watery or oily lotions.²⁰
- Observe the genital area for thrush which appears as a spreading centrifugal rash. Treat with Nystatin cream applied topically as directed.¹⁶ Review by a midwife, child health nurse or general practitioner (GP) is recommended.
- If there is inadequate response to treatment, other factors and underlying conditions (e.g. non-compliance to treatment, allergy, infection, psoriasis) may be involved.¹⁶ Parents should seek medical review.
- Arrange paediatric or GP review if the infant has excessive stooling. This can occur with infection, malabsorption problems, or with opiate withdrawal.¹⁰

NAPPY CHANGE

1. Perform hand hygiene.
2. Remove the nappy and note the contents.
3. Clean the area with warm tap water or a baby skin care wipe. If disposable nappies are being used and only urine is passed then washing is not required. Apply a clean nappy.
4. Replace the soiled linen and perform hand hygiene. Document the nappy change/ contents.

ELIMINATION

Parental education should include discussion regarding:

- Normal patterns of urine output and stool excretion⁷
- The possibility that urates may be passed in neonatal urine in the first 48 hours.⁷ Urates found after the first few days, when fluid intake has increased, may indicate dehydration.⁷
- That the female neonate may discharge white mucoid discharge or pseudo-menstruation resulting from circulating maternal hormones which may persist for up to 10 days.²¹

EYE CARE

Routine cleaning of the eyes is not required unless discharge is present.

See [Clinical Guideline, Obstetrics & Midwifery: Neonatal Care: Eye Infections: Neonatal.](#)

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National Standards – 1- Care Provided by the Clinical Workforce is Guided by Current Best Practice; 3- Preventing and Controlling Healthcare Associated Infections

Legislation - Nil

Related Policies -

Other related documents – KEMH Clinical Guidelines: Obstetrics & Midwifery: [Neonatal Care](#) Section

RESPONSIBILITY

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