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October 2020

Breastfeeding

THE PRETERM INFANT

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Breastfeeding and the Preterm Infant

Breastfeeding is a basic survival mechanism for babies, especially the vulnerable pre term infant, and those who are born prematurely can SUCCESFULLY breastfeed.

Preterm and low birth weight babies

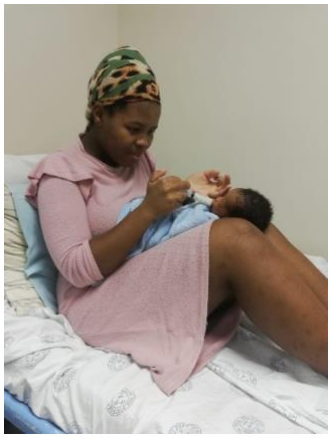
Benefits of breastfeeding for preterm and low birth weight babies

- Breastmilk is easier to digest and better tolerated than formula milk by the immature gut of the Prem.
- Breastmilk contain antibodies that protect the baby against infections. Research has shown that prems who receive formula are 6-9 times more likely to develop NEC (Necrotizing Entero Colitis) than breastfed prems.
- Increased intelligence, improved motor development later in life. (Prems may be slow developers.
- Brings mother and baby closer together. Improves bonding, especially in the scary High Tech NICU

Especially the vulnerable pre term baby , admitted into the NICU or High Care needs to have the mother's colostrum fed to the baby, 1-2mls only, to seal off the baby's gut and to ensure good gut integrity, BEFORE the baby starts swallowing the threatening hospital resistant organisms in the air of the NICU, leading to infection and sepsis. This colostrum is NOT A FEED. So even is a baby is kept nil per mouth on the day of admission, he/she needs the drops of colostrum, fed ORALLY, not down the nasogastric tube (otherwise all the good fats cleave to the inside of the nasogastric tube), to seal off the gut.

Usually, breast-feeding can be established within the first hour or 2 after birth if the baby weighs more than 1, 5 kg (>30 weeks). If the baby weighs less than 1, 5 kg, breast-feeding depends on the baby's physical condition.

Preterm formulas and human milk fortifiers may make the mother worry that her milk is not good enough for the baby. If used, they should be temporary until the mother is producing sufficient quantities of breastmilk. Use no bottles. Encourage babies to "practise" at the breast as early as possible, following each session by tube or cup feeds. Here finger feeding: i.e. when the baby suckles on the mother's small finger, while breastmilk is given SLOWLY via a 5ml syringe into the corner of the baby's mouth. This way of feeding works perfect, as the entire volume of feed required is swallowed, other than cup feeding where milk is often spilt, AND the baby's suckling reflex is stimulated, thus preparing the baby to eventually successfully breastfeed. See picture of finger feeding.



Kangaroo Mother Care (KMC) is the corner stone of successfully breastfeeding a Pre-Term Infant. It consists out of four parts:

- **1. Kangaroo position**

LBW and premature babies are nursed skin-to-skin between their mother's breasts. Skin-to-skin care may be intermitted at first, but should gradually become continuous and persist until the infant weighs at least 2000g.
KMC should start, irrespective of gestational age or weight. KMC may be practiced continuously or intermittently. Non-resident mothers should practice KMC throughout every visit and keep the baby skin to skin for AT LEAST 60 minutes, as this is the length of a sleep cycle for the baby.

- The infant is dressed in a nappy and a cap and placed in an upright position against the mother's bare chest, between her breasts and inside her blouse. Both mother and infant are covered with a blanket or jacket.

- This skin to skin contact has many benefits for the Pre term Infant:
    - The baby is physiologically more stable (pulse, respiratory rate, saturation) as the baby secretes endorphins with vagal nerve stimulation.
    - This continuous skin to skin contact ensures energy reserved to grow
    - Skin to skin contact improves the mother's milk volume.
    - Promotes bonding between the mother and baby.
    - Earlier and exclusive breastfeeding is promoted.
    - Better oxygenation.
    - Better digestion of feeds
    - Thermoregulation.
    - More regular breathing pattern
    - Less acquired hospital infections.

2. Kangaroo nutrition
Infants should be fed own mother's milk, either by breastfeeding on demand or by expressed breast milk via nasogastric tube, finger feeding or cup.

- Weight is not an accurate measure of ability to breast-feed; maturity is a more important factor.

- The baby should be allowed to breastfeed freely. Adequate and regular feeding is essential, particularly at night. Infants under 1500g should be fed every hour and infants over 1500g every 2 hours. NOT 3 hourly as most hospital routines are. These babies have tiny tiny stomachs, and do much better with smaller feeds more frequently, than large bolus feeds 3 hourly.

- Breast milk should be the first, second and third choice: it is cost-effective to admit mothers in a Lodger Mother Facility or KMC Unit for this reason alone.

- With early and continuous skin-to-skin contact, even infants of 30 weeks gestational age are able to breastfeed exclusively. The key is KEEPING BABY IN SKIN -TO –SKIN CONTACT. The baby may need to be tube-fed at first. The mother's milk can be expressed and fed to the baby via a tube. Research has shown that babies who are fed breast-milk via a tube vomit less than those who are fed formula. It is important that a tube-fed baby receives oral stimulation: The mother's nipple in the baby's mouth. The baby should remain in the Kangaroo Position while receiving a tube feed and the mother should hold the feeding funnel. The mother may adjust the position of the baby to breast- or cup feed. The baby should not be fed in the incubator, crip or cot while the mother is visiting.

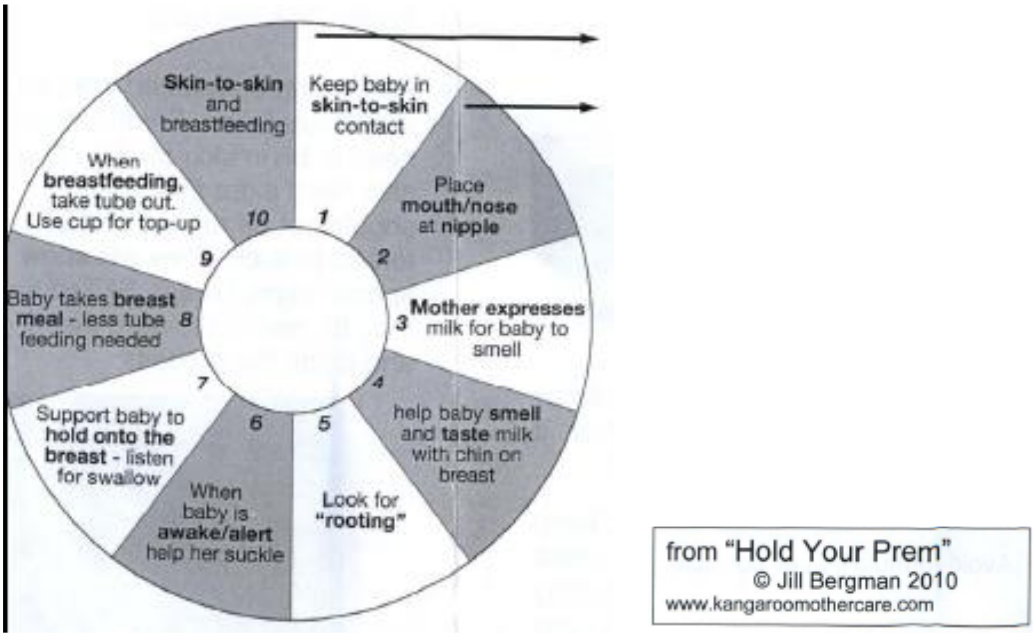
Baby receiving tube feed while mouth is on mother's nipple. (Courtesy M Franklin)

- KMC enables the baby to go to the breast whenever he wants, therefore encouraging on-demand feeding, 1-2 hourly.

Pre feeding cues:

- Licking lips, mouth movements
- Turning the head towards the breast
- Smelling the nipple
- Touching the nipple with her hands
- Nuzzling.

- See ***10 small steps to breastfeeding the Pre Term infant***. (Courtesy Jill Bergman from 'hold Your Prem" www.kangaroomothercare.com)



10 small steps to breastfeeding the Pre Term infant:

1. Baby must be in Skin-to-Skin Contact.
2. Baby smells the nipple.
3. Baby smells the breastmilk.
4. Baby tastes the breastmilk on the nipple.
5. Baby will make mouth movements, rooting reflex. (Prems may only sip the milk at first)
6. Baby must be awake and alert for suckling.
7. Baby latches on and swallows milk.
8. First breastmilk meal. (Steps 1-7 go fast for full term infants. Prems may need successive alert times).
9. Baby feeds frequently. (For prems every 60-90 minutes).
10. Mother and baby are together continuously (Credit Jill Bergman)

Encourage the mother if her baby is doing ANY of these above steps at first.

Putting the baby to the breast

- Put the baby to the breast when he is in a light sleep state, as seen with rapid eye movements under the eyelids.
- Hold him with his body "tummy to mummy" supported along the mother's arm to control head movement.
- The mother will probably need to support her breast, with four fingers under the breast and her thumb on top (dancer hand position, or C-hold), to help the baby keep the breast in his mouth.

- To increase milk flow, massage and compress the breast each time the baby pauses between suckling bursts (unless the flow is more than the baby can regulate).

Ways the mother can encourage Breastfeeding:

- Gently rub with fingers in small circles near the outside of the baby's mouth and cheek area near jaw line.
- Using smallest finger, rub same area inside the mouth.
- Massage soft tissue under the chin bone to stimulate muscles used for breastfeeding.
- Encourage baby to suck at fist.
- Frequent attempts to latch on to the breast encourage stimulation of necessary sensations for breastfeeding behaviour.

Teaching mothers what to expect at feeds

- Expect that the baby will pause frequently to rest during the feed. Plan for quiet, unhurried, rather long breastfeeds.
- Stop feeding attempts if the baby seems too sleepy or fussy. The mother can continue to hold her baby against her breast without trying to initiate suckling.
- Avoid loud noises, bright lights, stroking, jiggling or talking to the baby during feeding attempts.
- Expect some gulping and choking, because of the baby's low muscle tone and uncoordinated suckle. If this interferes with comfortable feeding for the baby, the mother can position her baby so the back of his neck and throat are higher than the breast. If the mother leans back, she can assist in slowing the milk flow to the back of the throat. She can also express some milk before the feed to relieve some of the pressure.

Evaluating the feed

- Show mothers how to watch and listen for swallowing as a sign that the baby is receiving milk.
- If the baby can attach to the breast but does not suckle correctly, consider using a tube feeding device at the breast (e.g. breastfeeding supplementer).
- Expressed hind milk, or the cream portion of breastmilk that has risen to the top of the storage container, can be given to the baby if a higher-calorie feeding is needed.

3. Kangaroo support

Support of the mother-infant dyad: NEVER SEPARATE A MOTHER AND HER BABY. This will always depend on the context and should be a dynamic process of development and improvement.

Hospitals are so focused on the small baby, but forget the Mother,s emotional wellbeing. She has been plucked away from her home, family and familiar environment and has to sometimes stay up to 3 months in hospital….Hospitalized, but not ill.

Helping mothers to build and maintain their milk supply

- Begin expressing breastmilk as soon as possible or at least within six hours of birth.
- Hand expression is very effective but an electric pump that pumps both breasts at the same time can save time. Pump for 10-15 mimutes at a time, and NOT ONLY the volume required to feed the baby. Oversupply in milk can be donated to the hospital's Breastmilk Donor Bank.
- Express eight to twelve times every 24 hours i.e. every 2-3 hrs.

4. Kangaroo Discharge.

This is when the baby is discharged and the mother continues KMC and exclusive breastfeeding at home. The mother "WEARS" her baby from birth up to the first 6 weeks of the baby's life.

This is where a KMC Wrap. Thari. Sling come in very handy. Remember to support the Preterm baby's head and neck with the wrap. Premature babies have a respiratory pattern that is called "Periodic breathing". They "forget" to breathe. When a baby is tied in front onto the mother, the mother's exhaled CO2 carbon dioxide, accumulates inside the wrap at the baby's face and this CO2 is the baby's respiratory drive.

Conclusion:

Early and continuous skin-to-skin contact between the mother and the preterm baby is the foundation of successful and exclusive breastfeeding. Pre term babies need unrestricted access to the mother's nipple to "practice, taste, smell, and play with" and eventually successfully breastfeed.

The baby knows the "HOW TO BREASTFEED" part. Its instinct. His brain is wired to do it right. A caring, patient Midwife and Neonatal Nurse plays a key role in supporting the mother infant dyad to exclusively breastfeed. BREAST IS BEST… EVEN FOR THE VERY SMALL AND VULNERABLE ONES.

References:

1. ***Hold your Prem*** by Jill Bergman, 2010 ISBN: 978-1-9204-15-2. Available from jill@kangaroomothercare.com.
2. ***WHO/UNICEF BFHI 20 HOUR COURSE FOR MATERNITY STAFF 2009.***