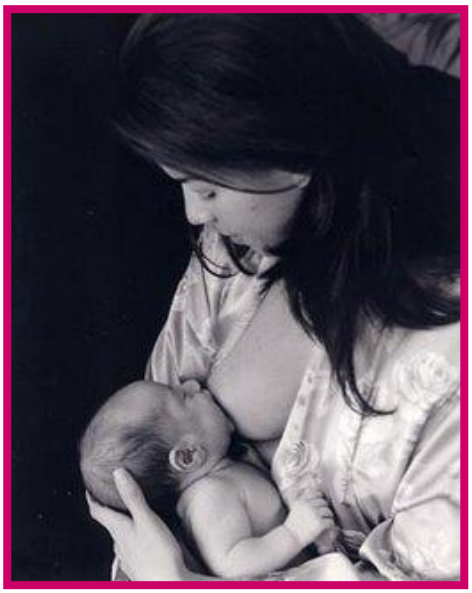
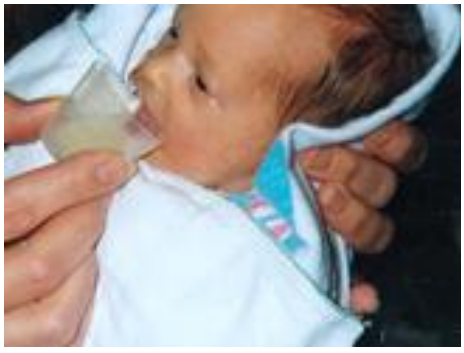
Supplementation of the Term Newborn Infant

Self-Learning Package

Developed by Shirley Bezditny RN BN Staff Development





Supplementation

Background:

The most recent scientific evidence indicates that exclusive breastfeeding (only breastmilk, no food or water except vitamins and medications) for the first 6 months is associated with the greatest protection against major health problems for both mothers and infants.

Definition:

Supplemental feedings: feedings provided in place of breastfeeding. This may include expressed breastmilk or banked breastmilk and/or breastmilk substitutes/formula.

Exclusive breastfeeding is recommended for the first 6 months. Supplemental feeding should not be given to breastfed infants unless there is a medical indication for such feedings.

Step 6: Infants are not offered food or drink other than human milk for the first 6 months, unless medically indicated.

Supplemental feeding of a breastfeeding infant is appropriate only in the following instances:

- **Medically indicated**
- **Requested by mother**

Medical Indications for Supplementation.

1. Maternal / infant separation
2. Maternal illness (sepsis, psychosis, shock etc)
3. Herpes simplex virus type 1- avoids direct contact with active lesion on breast and infant's mouth. Breastfeeding is permissible on unaffected breast.
4. Active TB lesion: breastmilk must be discarded.
5. Mother on medications which are contraindicated when breastfeeding
    - Radioactive agents, cytotoxic chemotherapy
    - Refer to ***Medications and Mothers' Milk*** by T.W. Hall
    - Motherisk at 1-416-813-6780 or www.motherisk.org
6. Infant demonstrating clinical signs of dehydration
7. Hypoglycemia or at high risk for hypoglycemia **AND** not feeding effectively
8. Weight loss greater than 8-10% **AND not feeding effectively** at the breast **may** require supplementation.
    - Perform thorough examination and assessment of sleep/wake patterns, milk transfer, voids, stools, and blood glucose as appropriate.

    Note: Large volumes or a bolus of IV fluids during labour may artificially increase infant's birth weight and may lead to an artificially large weight loss.
9. Infant who is unable to feed at the breast (e.g. congenital malformation, illness)
10. Refer to UNICEF/WHO (2009) Acceptable medical reasons for use of breastmilk substitutes.

The following are not rationale for supplementing an infant able to effectively breastfeed:

- To quiet a fussing baby when mother is available
- To let mother sleep or rest
- To prevent weight loss/dehydration
- To prevent hypoglycemia in well full term infants without identified risks factors
- To prevent sore nipples

A mother who is looking for supplementation may be indicating that she is having difficulties feeding and caring for her baby. It is better to help the mother overcome the difficulties than to supplement and ignore the problems.

The majority of breastfed infants will not require supplementation

When Parent(s) Requests Supplemental Feedings:

- Explore reasons for requesting supplementation
- Provide evidence based information
- Provide with Information sheet "Breastfed Babies Don't Need Formula"
- Promote skin-to-skin: increased STS time can encourage more frequent feeding
- Support the mother's informed decision
- Reinforce that breastfeeding support is available at any time.
- Teach appropriate manual expression and/or pumping to prevent engorgement and to protect breastmilk supply. (Manual expression is the preferred method over electric pumping in the 1st 24 hours.)

Getting through the Second Night without Supplementing

Second night- common time when breastfed babies are supplemented.
This may be a time when baby wants to be on the breast constantly, often from 9 pm to 1 am or maybe earlier and later.

What is going on?

- This is not about hunger, "starving the baby" or "not enough milk" or using mom as a pacifier.
- This is a NORMAL phase in the transition to extra uterine life.
- Baby is coping in an over-stimulating environment and needs his mother.

We need to reassure mom that this is normal and not because she is starving her baby .Let baby fall asleep at the breast; transfer gently to bassinet after the baby has fallen into a DEEP REM sleep.

Anticipatory guidance is helpful as this could happen at home on the 3rd night as well. Discussing this as well as growth spurts/cluster feeds to prevent perception of "not enough milk". Stress the importance of night feedings→increase prolactin levels to ↑milk production and establish breastfeeding. (Refer to page #9)

Negative impact of supplements:

- Overfill a baby's stomach so the baby does not suckle at the breast.
- **Insufficient milk supply**: infant suckling at the breast results in the release of prolactin (hormone that stimulates breastmilk production). Breastfed babies who receive artificial feedings will breastfeed less frequently and for shorter periods, thus decreasing nipple stimulation and milk production.
- **Engorgement**: Less frequent breastfeeding can result in inadequate drainage of the breast, engorgement, and decreased milk supply.
- **Nipple preference:** breastfeeding and bottle-feeding require different mechanisms for sucking. It is best to prevent artificial nipple preference in a breastfed infant by not giving an artificial nipple for the first 4-6 weeks while the infant is learning to breastfeed.
- Reduce the protective effect of breastfeeding thus increasing the risk of diarrhea and other illnesses (alter infant bowel flora).
- Expose the baby to possible allergens and intolerances that could lead to eczema and asthma.
- Reduce the mother's confidence if a supplement is used as a means of settling a crying baby. **Perceived** insufficient milk supply is the most common reason for weaning before mother's breastfeeding goals are met.
- Be an unnecessary and potentially damaging expense.

Care Plan Related to Supplementing a Breastfed Baby:
Encourage practices that support breastfeeding.

1. A thorough assessment of mother and infant and breastfeeding is required before supplementation is begun.
2. Attempt to optimize breastfeeding whenever possible prior to beginning supplementation. When optimizing breastfeeding, the baby should be assessed for proper latching and positioning and for effective sucking and swallowing, including milk transfer.
3. Gentle waking techniques along with skin to skin contact should be attempted for 5-10 minutes (or longer) if baby is sleepy. Gently rousing the infant(change diaper, massage, etc) every 2-3 hours is more appropriate than automatically supplementing.
4. Frantic infants may be calmed with skin to skin contact and hand expressed colostrum so that effective breastfeeding may follow.
5. Use breast compression to increase intake.
6. For early supplementation, cup or teaspoon feeding are optimal methods for mother to "hand express" and feed small amounts of colostrum.
7. Feed baby whenever baby exhibit feeding cues
8. Encourage frequent breastfeeding and skin to skin contact.
9. Continue to encourage breastfeeding at least 8 times in 24 hours (after Day 1).
10. Communicate breastfeeding plan to public health nurse for follow-up at home.

Community Resources

☑ Public Health Nurse
☑ Breastfeeding Hotline (1-888-315-9257)
☑ La Leache League (257-3509 or 1-866-750-6236) www.lllc.ca
☑ Women's Hospital Breastfeeding Clinic (204-787-1166)
☑ Dr. Jack Newman http://www.drjacknewman.com/

Choice of Supplemental Feeding

- Expressed breastmilk (best choice)
- Donor breastmilk (pasteurized)- not available here
- Artificial breastmilk- formula fortified with Iron
- Supplement with glucose water is not appropriate (ABM #3)-associated with rebound hypoglycemia and weight loss

Volume of Supplemental Feeding

- age and size of infant (remember the small tummy size)
- by infant cue to satiation

Tummy Size

- 1st 2 days- size of a dime
- Days 3 to 6- size of quarter

Feeding amounts for healthy term infants

Age	Intake (mL/feed)
1st 24 hours	2-5 mL (no more than 10mL)
24-48 hours	5-15 mL
48-72 hours	15-30 mL

Method of Supplementing (refer to page #8)

Decision making with the family is a priority-consider effectiveness and practicality of method.

- Cup, teaspoon, small syringe feedings are recommended initially
- Finger feeding, tube/syringe at breast, supplemental nursing system (SNS)
- Bottle

Documentation of Supplementation

- Mother's informed verbal consent (refer to page #7)
- Reason for supplementation (medical; mother's decision)
- Type (example EBM , ABM)
- Amount
- Method (cup, teaspoon, syringe, etc)
- Method and frequency of expressing breastmilk (if long term)

Points of Emphasis:
Low volume colostrum feedings (normal) in the first 48 hours are appropriate for the size of the newborn's stomach and are sufficient to prevent hypoglycemia in the healthy term newborn.

Early supplementation of the healthy newborn is not necessary and interferes with breastfeeding. **Prevention is the best approach!**

- Early feeds
- Effective feeds (swallows!!)
- Thorough assessment of feedings
- Maternal education regarding realistic expectations

Inappropriate supplementation may undermine a mother's confidence about her ability to meet her infant's nutritional needs and give inappropriate messages that may result in continued supplementation of the breastfed baby at home. (ABM #3, 2009).

Supplements given within the first 48 hrs may lead to an increased risk of breastfeeding problems by Day 3 and Day 7 (Dewey et. al 2003).

Normal Frequency of Feeding:

First 24 hours:

- Frequent skin to skin (unlimited breast access) has positive influence on the frequency of infant feeding in the first 24 hours.
- Very small amounts of colostrum 2-5 mL may be an adequate feed.
- After an unmedicated, uncomplicated birth most infants feed 4-6X in 24 hours.
- When an infant has been impacted by a complicated birth and/or labour medication, frequency of feeding may vary- maintaining skin to skin and access to the breast is critical to normal feeding in the first 24 hours.

After 24 hours:

- Infant feeding increases to reach at least 8 times in the 24-48 hour period
- Infants may cue frequently over a 2-6 period "cluster feeding". They usually sleep the longest after a cluster feed session.

Anticipatory Guidance:

- Stomach size is small – size of a dime or chickpea for the first 3 days
- Breastmilk digests in 60-90 minutes
- Encourage mother to offer the breast as often as the infant cues.
- Frequent feedings reduces the re-absorption of the bilirubin and enhances the establishment of an adequate breastmilk supply

Interventions:

- encourage increased skin to skin contact
- Review with mother/family infant feeding cues & waking techniques
- Assess latch and positioning, swallowing, milk transfer and assist as needed.
- Build confidence, taking note of positive features

Handout Given
"When Supplementation is Requested"
(Source: Women's Hospital Winnipeg, December 2010)

Breastfed babies don't need formula.
You can make all the milk your baby needs!

Breast milk is the best food for babies. It is better than all baby formulas. Breastfeed your baby often and without formula.

Frequent good breastfeeding:

- Helps you to make lots of milk
- Keeps your baby's blood sugar stable
- Limits newborn jaundice
- Is all your baby needs for normal growth

Formula can:

- Increase allergies
- Increase obesity and diabetes
- Increase tummy and chest infections
- Interfere with "latching" on the breast.

Formula should <u>not</u> be given to breastfed babies without good medical reason.

If your baby needs formula for a medical reason, it can be given in ways that support breastfeeding.

Women's Hospital Dec2010

SUPPLEMENTATION/ALTERNATIVE FEEDING METHODS

Feeding System	Strengths	Limitations
Cup feeding/ Teaspoon  	• Does not contribute to nipple confusion • Optimal method for early or short term supplementation • Mother can hand express small (normal) volume of colostrum into cup; this ensures infant receives colostrum • Helps tongue move down and forward • Allows baby to pace his/her feeding • Does not cause breathing problems or oxygen de-saturation. • Provides positive feeding experiences	• Does not teach sucking at the breast • Does not increase milk supply • Term babies can become accustomed to the cup and not go to the breast.
Syringe/Dropper 	• Can be used to entice baby to latch at the breast • Can reinforce proper sucking • Can create milk flow to establish and regulate sucking • Rewards sucking attempts	• Often needs a second person to help • Is a foreign object in the mouth • Milk can be improperly injected into the mouth • Is a slow way to feed baby
Finger Feeding 	• Can be used to train disorganized baby for sucking at breast • Keeps tongue down, forward and cupped • Delivers milk only with correct sucking action	• Baby may not learn to draw nipple into mouth if finger is simply inserted through closed lips • No breast stimulation • Potential for irritation of palate from tubing
Feeding Tube at Breast/SNS	• All feeding experience is at the breast- less opportunity for faulty imprinting • Frequent breast stimulation for enhanced milk production • Consistent practice & reinforcement for latch and suckling at breast • Establishes milk flow to encourage & regulate nutritive sucking pattern	• Only useful if baby can "latch" • Can be cumbersome & unappealing • Need expert follow-up & teaching • May be expensive for some • Improper tube placement may increase problem
Bottle Feeding 	• Faster & easier for baby to obtain milk • Does not require large time expenditure	• May create nipple confusion • Ease of use may decrease mother's desire to continue breastfeeding • Artificial nipple may weaken baby's suck • Does not teach sucking at breast • Does not increase milk supply • Babies can become accustomed to the bottle & may not go to breast • May induce bradycardia, apnea & O2 de-saturation • Possible improper oral configuration

"Getting through the second night"
With your breastfed baby

You've made it through your first 24 hours as a new mom. And now it's your baby's second night!

All of a sudden your little one discovers he's no longer back in the warm and comfortable womb where he has spent the last 8 to 9 months – and its scary out here!

All sorts of people have been handling him and he is not used to all the noises, lights, sounds and smells.

He has found one thing though **– his voice** – and every time you take him off the breast where he has drifted off to sleep, he protests loudly!! And this goes on for hours! Moms are concerned that they "do not have enough milk" and are "starving their baby". That is **NOT** the reason for this behavior.

This sudden awakening is because your breast is the most comforting place your baby can be. It's the place where he can hear your heartbeat and soothing voice – it's closest to home!

This pattern during the 2nd night is universal for all babies! Remember – your baby needs you right now - you are not "spoiling your baby".

So what do you do??

- First of all, know that this is **normal newborn behavior**!
- Newborn babies cluster feed for several hours at a time – for snuggling and your colostrum!
- A good latch is important during cluster feeding to prevent sore nipples.
- The best thing to do after a good feeding is to let your baby fall asleep at the breast.
- Then gently slide your nipple out of your baby's mouth.
- Don't move – don't burp – just snuggle with your baby until he falls into a deep sleep.
- Then gently transfer him to a bassinette.
- The "second night" reassures your baby that you are still with him **and** increases your milk supply!
- Be aware that this can happen at home too – your baby may need some extra snuggling after a very busy day.

Source Courtesy of Women's Health Program June 09

References:

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