

The Academy Of Breastfeeding Medicine

ABM Protocols

A central goal of **The Academy of Breastfeeding Medicine** is the development of clinical protocols for managing common medical problems that may impact breastfeeding success. These protocols serve only as guidelines for the care of breastfeeding mothers and infants and do not delineate an exclusive course of treatment or serve as standards of medical care. Variations in treatment may be appropriate according to the needs of an individual patient.

ABM Clinical Protocol Number 3

Hospital Guidelines for the Use of Supplementary Feedings in the Healthy Term Breastfed Neonate

Definitions:

- **Supplementary Feedings:** Feedings provided in place of breastfeeding. This may include expressed or banked breast milk. Any foods given prior to 6 months, the recommended duration of exclusive feeding, are thus defined as supplementary.
- **Complementary Feedings:** Feedings provided in addition to breastfeeding. This term is used to describe foods given in addition to breastfeeding after 6 months, a "complement" to breastfeeding needed for adequate nutrition.

Background

Given early opportunities to breastfeed, breastfeeding assistance and instruction the vast majority of mothers and babies will successfully establish breastfeeding. While some infants may not successfully latch and feed during the first day of life, they will successfully establish breastfeeding with time, appropriate evaluation and minimal intervention.

Small colostrum feedings are appropriate for the size of the newborn's stomach and are sufficient to prevent hypoglycemia in the healthy, term, appropriate for gestational age infant. (1;16;19) Healthy term infants also have sufficient body water to meet their metabolic needs.(11;14;15) Thus, the majority of breastfed infants will not require supplementation. Because some breastfeeding women question the adequacy of colostrum feedings, they may benefit from reassurance, assistance with breastfeeding technique and education about the physiology of breastfeeding.

Supplementation can prevent the establishment of maternal milk supply and have adverse effects on breastfeeding (e.g. delayed lactogenesis, maternal engorgement); alter infant bowel flora; sensitize the infant to allergens (depending on the content of the feeding and method used); and/or interfere with maternal-infant bonding.(3) Before any supplementary feedings are begun, it is important that a formal evaluation of each mother-baby dyad, including a direct observation of breastfeeding, is completed. The following guidelines address indications for, and methods of supplementation for the healthy, term (37-42 week), breastfed infant.

Indications for Supplemental Feedings

1. Indications for supplementation in term, healthy infants are few.(13) (Table 1)

Table 1: Indications for Supplementation in Term, Healthy Infants

1. Hypoglycemia, unresponsive to appropriate frequent breastfeeding (1)
2. Separation
 - a) Maternal illness resulting in separation of infant and mother (e.g. psychosis, eclampsia or shock)
 - b) Mother not at the same hospital (e.g. maternal death)
3. Infant with inborn error of metabolism (e.g. galactosemia)
4. Infant who is unable to feed at the breast (e.g. congenital malformation, illness)
5. Maternal medications (those contraindicated in breastfeeding) (4)

A few other clinical situations may arise where supplemental feedings may be indicated. Table 2 lists possible indications for the administration of such feedings. The physician must decide if the clinical benefits outweigh the potential negative consequences of such feedings.

Table 2: Possible Indications for Supplementation in Term, Healthy Infants

- 1) Infant indications
 - c) Hypoglycemia documented by laboratory blood glucose measurement (not bedside screening methods) after infant has had adequate opportunity to breastfeed (1)
 - d) Clinical evidence of significant dehydration
 - e) Weight loss of 8% to 10% accompanied by delayed lactogenesis (day 5 or later)
 - f) Delayed bowel movements or continued meconium stools on day 5
 - g) Insufficient intake despite an adequate milk supply
 - h) Hyperbilirubinemia
 - i) Breastfeeding jaundice where intake is poor despite appropriate intervention
 - ii) Breastmilk jaundice when levels reach >20-25 mg/dl in an otherwise thriving infant and where a diagnostic interruption of breastfeeding may be helpful
 - i) Low birthweight
 - i) When sufficient milk is not available
 - ii) When nutrient supplementation is indicated
- 2) Maternal Indications
 - a) Delayed lactogenesis (day 5 or later) and inadequate intake by infant
 - b) Intolerable pain during feedings unrelieved by interventions
 - c) Unavailability of mother due to severe illness or geographic separation
 - d) Primary glandular insufficiency (primary lactation failure), as evidenced by poor breast growth during pregnancy and minimal indications of lactogenesis, breast pathology or prior breast surgery resulting in poor milk production
 - j) Delayed lactogenesis
 - i) Retained placenta (lactogenesis probably will occur after placental fragments are removed)
 - ii) Sheehan syndrome (postpartum hemorrhage followed by absence of lactogenesis)

Adapted with permission from: Powers NG, Slusser W: Breastfeeding update. 2: Clinical lactation management. Pediatrics in Review 1997; 18:147-161

There are common clinical situations where evaluation and breastfeeding management may be necessary, but supplementation is **NOT INDICATED** including:

2. The sleepy infant with fewer than 8-12 feedings in the first 24 to 48 hours with less than 7% weight loss and no signs of illness
3. The infant with bilirubin levels less than 20 mg/dl after 72 hours of age when the baby is feeding well, stooling adequately and weight loss is less than 7% (2;6)
4. The infant who is fussy at night or constantly feeding for several hours
The sleeping mother

Recommendations

1. Healthy newborns do not need supplemental feedings for poor feeding for the first 24-48 hours, but babies who are too sick to breastfeed or whose mothers are too sick to allow breastfeeding are likely to require supplemental feedings.(13)
2. Supplemental feedings may require a physician's order and informed consent of the mother. When not medically indicated, efforts to dissuade maternal requests for such feedings ought to be documented by the nursing and/or medical staff. All supplemental feedings should be documented, including the content, volume, method and medical indication or reason.
3. When supplementary feeding is necessary, the primary goals are to feed the baby and optimize the maternal milk supply while determining the cause of poor feeding or inadequate milk transfer.
4. Whenever possible, it is ideal to have the mother and infant room-in 24 hours per day to enhance opportunities for breastfeeding and hence lactogenesis.(13)
5. If mother-baby separation is unavoidable, establishment of milk supply is poor or questionable, or the baby is not removing milk from the breast, the mother needs instruction and encouragement to pump or manually express her milk to stimulate production and provide expressed breastmilk as necessary for the infant.
6. Optimally, mothers need to express milk each time the baby receives a supplemental feeding, or about every 2 to 3 hours.(7;13) Mothers should be encouraged to start expressing on the first day, or as soon as possible. Maternal breast engorgement should be avoided as it will further compromise the milk supply and may lead to other complications.(13)
7. All infants must be formally evaluated for position, latch and milk transfer prior to the provision of supplemental feedings.(17) Most babies who remain with their mothers and breastfeed adequately lose less than 7% of their birth weight. Weight loss in excess of 7% may be an indication of inadequate milk transfer or low milk production.(5;12) While weight loss in the range of 8-10% may be within normal limits, if all else is going well and the physical exam is normal, it is an indication for careful assessment and possible breastfeeding assistance.
8. The infant's physician should be notified if:
 - a. The infant exhibits other signs of illness in addition to poor feeding.
 - b. The mother-infant dyad meets the clinical criteria in Table 1.
 - c. The infant's weight loss is greater than 7%

Methods of Providing Supplemental Feedings

When supplemental feedings are needed, one of the following techniques may be used: a supplemental nursing device at breast, cupfeeding, spoon or dropper feeding, finger-feeding or bottle-feeding.(8-10;17;18), There is little evidence about the safety or efficacy of most alternative feeding methods and their effect on breastfeeding, however, when cleanliness or refrigeration is sub-optimal, cupfeeding may be the best choice.(18) Cupfeeding has been shown to be safe for term infants and may help to preserve breastfeeding duration among those that require multiple supplemental feedings.(8;9)

Choice of Feeding

Expressed human milk is the first choice for supplemental feeding (17) but expressing sufficient colostrum in the first few days may be difficult. The mother may need reassurance and education if such difficulties occur. If the volume of mother's own colostrum does not meet her infant's feeding requirements, pasteurized donor human milk is preferable to other supplements. The physician must weigh the potential risks and benefits of other supplemental fluids, such as standard formula or protein hydrolysate formula, with consideration given to available resources, the family's history for risk factors such as atopy, the infant's age, the amounts needed, and the potential impact on the establishment of breastfeeding.

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