A Nurse's Guide to Promoting Breast Milk Nutrition in Infants With Cleft Lip and/or Palate

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The craniofacial defect of cleft lip and/or palate involves an altered physiological anatomy that affects an infant's ability to generate negative pressure for proper suction during feeding sessions.

- *Cleft lip* affects infant's ability to establish a complete seal around the nipple for proper latching.
- *Cleft palate* affects infant's ability to coordinate intraoral muscle contractions for negative pressure generation.

Difficulties in feeding may compromise normal growth and development. Persistent feeding issues may affect the infant's motor, language, and behavioral development. In addition, feeding difficulties may disrupt the maternal–infant bonding process.

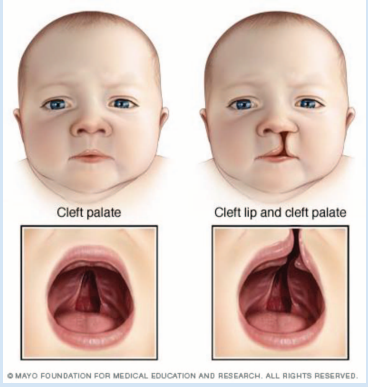
CHALLENGES OF INFANTS WITH CLEFT LIP AND/OR PALATE

- Negative oral cavity pressure inhibits ability to generate sufficient sucking pressure to effectively feed. This may result in poor weight gain and failure to thrive.
- Frequent nasal regurgitation caused by ineffective swallowing increases the risk of recurrent upper airway and ear infections.
- Increased risk of developing dental caries since the abnormal orofacial cavity may be difficult to clean.
- Prolonged feeding sessions cause infant fatigue.
- Maternal–infant bonding may be compromised due to infant difficulties with latching and stabilizing the nipple during breastfeeding sessions.

EDUCATING CAREGIVERS

- Explaining the growth implications related to cleft lip and/or palate increases caregivers' understanding about the importance of implementing optimal feeding practices.

FIGURE 1



Visual illustration of infant with cleft lip in comparison with infant with cleft palate. Reprinted with permission from the mayo foundation for medical education and research.

FIGURE 2

Author's mother and brother with left-sided cleft lip and palate. Reprinted with permission from Nicole Diane L. Burca.

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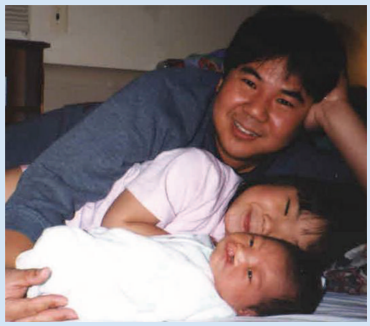
FIGURE 3



The author with her father and brother with cleft lip and palate. Reprinted with permission from Nicole Diane L. Burca.

FIGURE 4

Maintaining upright position while breastfeeding infant. Reprinted with permission from ©The Nemours Foundation/ KidsHealth.

FIGURE 5

Feeding infant with Haberman Special Needs feeder. Reprinted with permission from the Cleft Palate Foundation. http://www.cleftline.org/who-we-are/what-we-do/feeding-your-baby/.

- Breast milk contains protein, carbohydrates, fats, vitamins, minerals, enzymes, and prebiotics. These nutrients facilitate hormone, immune, and cognitive development.
- In infants able to breastfeed, breastfeeding stimulates orofacial muscle development and coordination. Flexible nipple and breast tissues allow for better suction, while skin-to-skin contact facilitates maternal–infant bonding.

ASSESSING SUCKING ABILITY

- Gently feel the inside of the infant's mouth to determine placement and extension of the cleft.
- Place index finger on infant's tongue and evaluate ability to generate mechanical movements.
- Considerations include lip seal, rhythm, suck strength, and coordination with swallowing.

RECOMMENDED FEEDING TECHNIQUES FOR INFANTS WITH CLEFT LIP AND/OR PALATE

Step 1: Maintain upright position
- Provides midline orientation with head and neck alignment.
- Facilitates fluid transfer and decrease the risk of nasal regurgitation during feeding.
- Minimizes risk of milk reflux into the Eustachian tubes, which subsequently decreases the infant's risk of developing ear infections.

Step 2: Provide lip, cheek, and chin support
- Stabilize infant's jaw to establish a platform for sucking movements.
- Position the middle finger under infant's chin and place the index finger between the chin and the lower lip.
- If breastfeeding, position mother's breast to the side of the palate most intact to avoid the nipple being directed into the cleft.

Step 3: Assess infant's reaction
- Determines a need for a pause in feeding or a change of pace.
- Cues include changes in the infant's color, O_2 saturation, respiratory rate, and sucking rhythm.
- Keep each feeding session to 20 to 30 minutes.

Step 4: Frequently burp the infant
- Decreases the incidence of regurgitation after feeding by reducing the amount of air in the stomach.

Step 5: Consider assistive feeding devices
- Helps compensate for feeding difficulties caused by orofacial clefts.
  - Compressible bottles may be squeezed to increase fluid extraction in coordination with the infant's suck–swallow patterns.
  - Specialized nipples release fluid with minimal compression while encouraging sucking efforts.

Step 6: Consider manually expressing milk
- Apply warm compress or massaging breast tissue to soften breast and stimulate milk supply.
  - Increases flexibility in breast tissue to facilitate lip seal.