



**CLEFT PALATE  
FOUNDATION**

## **Feeding An Infant With A Cleft**

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# **Feeding an Infant with a Cleft**

2006 Reprinting

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## Introduction

As a parent or caregiver, you naturally want what is best for your new baby—a happy and healthy life. The choice of how you feed your new baby is influenced by family traditions, social trends, cultural values, and previous feeding experiences. Babies born with cleft lip and/or cleft palate will be able to have their nutritional needs met using the right combination of appropriate positioning, feeding supplies, and adapted techniques. This pamphlet will help you understand the problems that sometimes accompany the feeding of babies born with facial clefts and what you as parents or caregivers can do to overcome these problems. The goal is for feeding to be enjoyable and nutritionally adequate.

## The Feeding Experience

For all infants, feeding serves several important functions, the most important of which is to provide nourishment for growth and development. However, feeding also provides an opportunity to strengthen the parent-infant bond, to exercise the oral muscles, and to encourage the infant to suckle for pleasure. These points should be taken into consideration when choosing a method for feeding your child. Feeding is a baby's major activity, and the interaction that takes place between the infant and the parent/caregiver during feeding promotes the positive feelings that encourage bonding. Sucking makes active use of the tongue and other muscles of the baby's mouth. Developing these muscles will help the baby successfully achieve future oral motor tasks such as cup drinking, chewing, and speech and sound production. Finally, because feeding provides the infant the pleasure of suckling, the best feeding technique is one that requires your baby to actively suck.



## Nourishing Your Infant

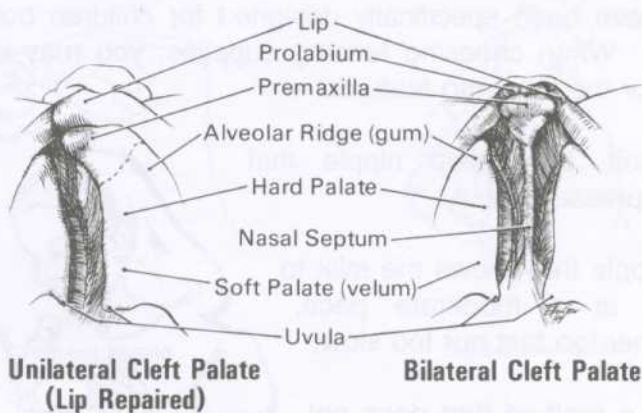
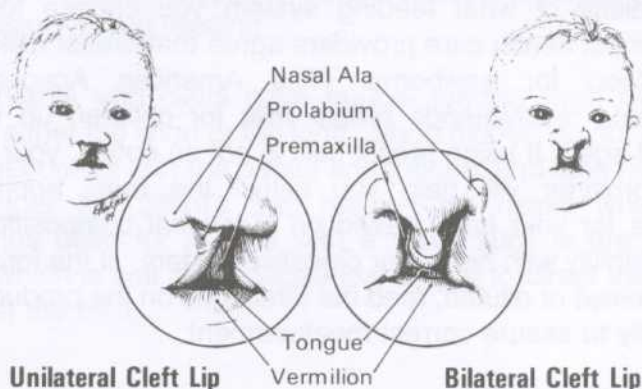
A full-term, healthy newborn generally needs 2-3 ounces of breast milk or formula per pound of body weight per day in order to gain weight appropriately. Therefore, an infant weighing 8-10 pounds will require 24-30 ounces of breast milk or formula per day (the equivalent of one can of store-bought ready-to-feed formula). It is normal for a newborn to lose up to 10% of birth weight during the first week of life. However, the quantity of breast milk/formula that he or she eats should slowly increase. By the second week of life, 18-24 ounces should be consumed in a 24-hour period. Remember that early problems with nasal regurgitation (the medical term for liquid coming through the nose), extended feeding times, and individual differences may influence the actual amount the infant takes in. Therefore, for peace of mind it is helpful to have your baby's weight checked once a week (preferably on the same day of the week, at the same time of day, and on the same scale) for the first four to six weeks of life. In this way, both you and your health care provider will know that adequate growth is occurring.

After a feeding routine has been established, most babies should complete a feeding within 30 minutes. An infant requiring a longer period of time may be working too hard and may actually be burning up some of the calories needed for weight gain. An infant who feeds every three to four hours generally has better weight gain than an infant who is fed in intervals of less than two hours. These babies may become "snackers," taking in just enough nourishment to take the edge off their hunger, but not enough to meet their nutritional requirements. Be sure to discuss any of these issues with your health care provider if they are of concern to you.



## Feeding Problems Associated with Cleft Palate

An infant with a cleft of the lip only or of the lip and gum ridge does not typically experience feeding problems. Like all newborns, learning how to "latch on" at the beginning of a feeding will quickly become second nature to him or her.



However, an infant whose cleft involves the palate will require some modifications in feeding technique, supplies, and positioning, because he or she lacks the usual separation between the nasal cavity and the mouth. These children often have a weak sucking ability and may experience problems such as nasal regurgitation, long feeding times, and difficulty coordinating swallowing and breathing. A baby with a cleft palate must squeeze the milk out of the nipple by compressing it between the tongue and whatever portion of the palate exists. He or she may swallow a lot of air while

feeding, necessitating frequent burping. Most problems of this type can be managed with adapted techniques.

## Feeding an Infant with a Cleft Palate

Regardless of what feeding system you choose for your baby, most health care providers agree that breast milk is the best food for newborns. (The American Academy of Pediatrics recommends breast milk for children up to one year of age.) If using breast milk is not an option, your health care provider will help you select the most appropriate formula for your baby based on nutritional composition and compatibility with his or her digestive system. If the formula is to be mixed or diluted, read the directions on the product label carefully to assure correct measurement.

There are several different bottles and nipples on the market that have been specifically designed for children born with clefts. When choosing feeding supplies, you may want to look for the following features:

- a soft, thin-walled nipple that compresses easily;
- a nipple that allows the milk to flow at a moderate pace, neither too fast nor too slow;
- and a method that does not interfere with the normal swallowing mechanism or the normal activity of the oral-facial muscles.



Many parents also want bottles that look "normal" and are easily and inexpensively obtained.

Regardless of what combination of nipple and bottle you choose, the goal is to make feeding easy for your baby while

still allowing him or her ample opportunity to suck. For this reason, a soft nipple is generally better than a hard one. Because "preemie" nipples are soft, they are often the first ones to be tried when more specialized supplies are unavailable. The NUK orthodontic nipple is another choice. As your infant grows and gains strength, he or she may graduate to a different type of nipple, particularly if the nipple is collapsing during feeding.

Some infants with clefts have trouble feeding from nipples that are either too short or too long. Short nipples do not make sufficient contact with the palate and tongue, and long nipples may trigger the infant's gag reflex. One nipple which is sometimes used for a child with a weak suck is the Ross nipple, which is soft and shaped like a tube to direct the milk flow past the cleft.



Cross-cut Nipple



Squeezable Bottle

Many health care providers recommend bottles with cross-cut nipples, which control the flow of milk using the baby's normal rhythm of sucking and swallowing. Cross-cut nipples have an X-shaped opening which allows the milk to flow only when the infant squeezes the nipple. Simply enlarging the hole in a nipple results in a constant flow of milk, loss of control when the baby tries to swallow, and increased difficulty in coordinating swallowing and breathing. Any nipple can be cross cut manually by using a single-edge razor blade.

Using a squeeze bottle or plastic bottle liner is another way of increasing the flow of milk and conserving your baby's energy. When using a plastic bottle liner, push all the air out of the liner before beginning a feeding, then apply intermittent pressure to the liner as the baby squeezes the nipple. This method minimizes the amount of air the baby swallows and makes sucking easier. Squeeze bottles (also referred to as "assisted delivery systems") for children born with cleft palate include the Mead Johnson Cleft Palate Nurser, the Haberman Feeder, and the Pigeon Bottle.



Mead Johnson Cleft Palate Nurser  
Mead Johnson Nutritionals  
Evansville, IN  
(812)429-5000  
(800)222-9123



Haberman Feeder  
Medela  
Crystal Lake, IL  
(815)363-1166  
(800)435-8316



Pigeon Cleft Palate Nurser  
Distributed by Children's  
Medical Ventures  
South Weymouth, MA  
800-377-3449 Hospital Orders  
888-766-8443 Parent Orders



Orthodontic Nipple  
Most drug stores  
and pharmacies

The Mead Johnson Cleft Palate Nurser has a soft, thin-walled nipple that is already cross cut. The long nipple is designed to direct the milk flow past the cleft. The bottle is soft and can easily be squeezed in rhythm with the infant's suck and swallow. This technique overcomes the baby's inability to create the vacuum needed to suck milk from the bottle. The bottle should be gently pulsed, not continually squeezed. Following the infant's own rhythm helps to ensure that he or she does not inhale milk into the lungs, an occurrence called "aspiration."

The Haberman Feeder has a large, squeezable nipple with a slit rather than a cross cut. Markings around the base of the soft, pliable nipple indicate the position of the slit relative to the infant's mouth. The markings allow the person feeding the baby to control how quickly the milk flows. A disc located inside the base of the nipple acts as a one-way valve to allow milk into the nipple, while reducing the amount of air in the nipple that the baby can swallow. This nipple comes in two sizes—regular and "mini." While the regular nipple is standard length, the mini nipple is shorter, like a premie nipple.

The Pigeon Bottle comes with a nipple that has a Y-cut (as opposed to an X cross-cut). The nipple is slightly larger and more bulbous than other types of nipples, fitting naturally into the oral cavity. It is firm on top and soft at the bottom to allow for easy tongue compression. An air valve prevents the nipple from collapsing while the baby is sucking. Tightening or loosening the collar on the bottle controls the speed of the flow of milk. The stopper, or back-flow valve, prevents the milk from flowing back into the bottle from the nipple and reduces the amount of air the infant swallows. Although the bottle is not soft, it is pliable.

No matter what nipple or feeding system you use, feeding is often easier if the nipple is angled to the side of the mouth so that milk is directed away from the cleft. In this way, the baby can squeeze the nipple between his or her tongue and upper gum. Your health care provider can help you choose the nipple or feeding system that will work best for you and your infant.

## Other Suggestions

Positioning your baby properly during feeding is also important. Holding him or her in an upright position will help to reduce the amount of nasal regurgitation (milk coming through the nose). The person feeding the infant may also want to elevate one or both feet on a stool or support the baby on a pillow for added comfort. Remember that even with proper positioning, some nasal regurgitation may occur. When this happens, stop feeding and allow the baby a few seconds to cough or sneeze. This short pause will allow your baby to clear his or her nasal airway and get ready to resume feeding.



Infants eat better when they are moderately hungry, not feeling starved. Therefore, parents may want to feed their baby when he or she is just waking up. Signs that an infant is waking include eye movements behind the eyelids, mouth movements, and moving the hands to the mouth.

Most children with cleft palate can feed adequately using the suggestions already offered in this booklet. However, some cleft palate/craniofacial teams suggest the use of a feeding appliance, also referred to as an obturator or palatal plate, particularly for children with very wide clefts. After taking molds of the roof of the baby's mouth, a plastic plate is created that will fit over the palate and provide a partial seal between the mouth and the nasal cavity. Dental specialists are the professionals who create, fit, and periodically check this type of appliance.

## About Direct Breastfeeding

Most health care providers agree that breast milk is best for infants. There is disagreement, however, about the best method for delivering breast milk to a baby with cleft palate. Most professionals who have treated a large number of children with cleft palate have noted that the vast majority of these children will not be successful at feeding directly from the breast. However, these providers would consider infants who are fed breast milk from a bottle "breastmilk fed."

An infant born with a cleft lip will probably be able to feed directly from the breast with minor adjustments. An infant born with a cleft palate, however, will have difficulty feeding directly from the breast, because of his or her inability to create enough suction to pull the milk out of the breast. If direct breastfeeding is nevertheless the only feeding method of choice, the following recommendations may be helpful:

- 1) Rent a bilateral electric breast pump to help keep up the milk supply;
- 2) Massage the breast before nursing to assist the "letdown reflex," allowing the milk to flow more readily;
- 3) Apply finger pressure to the areola to help the engorged nipple protrude;
- 4) Hold the infant in a semi-upright, straddle, or football-hold position (see illustrations);
- 5) Support the breast by holding it between the thumb and middle finger, making sure that the infant's bottom lip is turned out and that his or her tongue is under the nipple.



Direct breastfeeding is generally easier for mothers who have already breastfed another infant for at least three to six months. In this case, the mother's mammary ducts are already developed, and she knows what it feels like to have the breast emptied.

Direct breastfeeding for an infant born with a cleft palate takes time and encouragement from family members and health care providers. It may be difficult to find that support when there are other easy and effective methods of delivering breastmilk which are easily measured, ensure adequate weight gain, and allow the entire family to participate. Our experience with thousands of children with cleft palate shows that only a handful of these children have had even partial success feeding directly at the breast. Over the years, many mothers have shared with us their frustrations and feelings of failure and inadequacy when they tried to feed their newborns with cleft palate directly at the breast. Therefore, most cleft palate teams advocate bottles as the most effective way of delivering breastmilk.

## Introducing Solid Foods

An infant born with cleft lip and/or palate should be ready to eat strained foods at the same time as any other infant. Foods should be offered by spoon while the infant is in an upright position. Start with a thin mixture of cereal and formula. As your baby gets used to the lumpy texture, the consistency of the cereal can be thickened.

Initially, your infant may sneeze the food out of his or her nose. Eventually, however, he or she will become used to this new way of eating and will adapt accordingly, just like with the process of learning how to drink from a bottle. As before, a pause in the feeding and a quick wipe around the nose and mouth



with a moist cloth will get everyone composed and ready to start again.

You should check with your pediatrician about types of food for your infant during the first year. The Academy of Pediatrics recommends babies should stay on breast milk or formula for the first year. Babies should be drinking from a cup, eliminating the bottle, at 12 months of age. Solid foods are generally not introduced until six months of age.

## Final Thoughts

Your infant's surgeon will advise you about any special feeding techniques and dietary restrictions which will be required after lip and/or palate surgery. It is always helpful to obtain this information a few weeks before surgery so that you can familiarize yourself with any new equipment or ideas.

Many parents and caregivers also ask about cup drinking. The same guidelines that are used for infants without clefts can be applied to infants with clefts. Most babies are ready or interested in trying a cup around eight to nine months of age. Many types of cups are available; you may want to try several, as your baby may drink better from one style of cup than another. It may also be helpful to establish cup drinking prior to palate repair, since many surgeons do not allow an immediate return to bottle feeding after palate repair.

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[info@cleft.org](mailto:info@cleft.org)

As always, it is important to establish a relationship with your primary care provider that is based on trust and a mutual sharing of information. That person should be your first contact when questions or concerns arise regarding poor weight gain, the transition to solid foods, any needed adjustments in formula, and the interpretation of information provided by other specialists.

Remember that infants are remarkably adaptable. Given the right combination of supplies, positioning, and technique, along with reassurance, support, and information, your new baby will grow and thrive. So try to relax and enjoy feeding time! When in doubt, always contact your local care provider, your cleft palate/craniofacial team, or the Cleft Palate Foundation.



## The Cleft Palate Foundation

The Cleft Palate Foundation's mission is "to enhance the quality of life for individuals affected by facial birth defects through education, research support, and the facilitation of family-centered care." CPF is affiliated with the American Cleft Palate-Craniofacial Association (ACPA), a multidisciplinary society of health care professionals who treat children with clefts and other craniofacial anomalies. CPF and ACPA advocate a team approach to the care of these patients, in which specialists from a variety of disciplines work together to coordinate an individual's treatment.

CPF produced this booklet as well as other free publications and information sheets. In addition, CPF maintains a toll-free CLEFTLINE to provide information to anyone who has questions about clefting or needs information about local cleft palate/craniofacial teams and parent/patient support groups.



**1-800-24-CLEFT**

*...a lifeline to newborns with facial birth defects.*

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