SUGGESTIONS FOR FEEDING A BABY WITH A CLEFT PALATE

Feed the baby whatever is advised by his or her physician, nurse, public health staff member, or other designated person.

When positioning the baby for feeding, make sure that you can still cuddle the baby and make him or her feel loved.

For all infants, feeding serves several 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.

Try to stay calm and relaxed when feeding the baby so that the baby does not "feel" your tension or stress.

The baby should be fed in a semi-upright to upright position so that the fluid will flow downward into the baby's stomach and not up into the baby's nasal passages or into the Eustachian tubes that go to the middle ears. The head should be lined up with the body so that the head tilts neither forward nor backward (in relation to the neck/chest) and isn't turned to one side or the other. Always feed the baby so that his/her head is positioned higher than his/her stomach. Feeding the baby in a mostly reclining position can lead to contamination of the middle ear and ear infections (which the child is already at risk for if he/she has a cleft palate). (NOTE: There are occasionally some exceptions to having the baby in this semi-upright to upright position for eating. For example, some children with neurological weakness of the swallowing muscles in their throat are helped by having the head tilted toward the chest so that the upper part of their airway moves under the base of the tongue, thus protecting the airway from liquids and food coming from the mouth. This "head down" or "chin tuck" position, though, can make it difficult for some children to get food moved to the back of the mouth for swallowing. Also, some children with unilateral vocal cord weakness are helped by having their head turned to one side or the other when they eat).

For a child with a cleft palate, some liquid or food will most likely escape out of the nose during feeding. Be ready with a soft cloth to wipe away the escaping liquid or food and go on with the feeding. After feeding the child, be sure to wipe the nose and cleft area clean.

Some children "drip" milk from the nose for a while after the feeding is over. This is simply milk that was still in the nasal area. It should simply be wiped away. You might want to follow a milk feeding with some water to help clean the excess milk from the nasal passages.

Know that it might take time and effort to find a feeding method or equipment that works well for your child. You might have to try different strategies.

Don't give up if a particular bottle or nipple does not work right away. See if you can: 1) Use it a different way; 2) hold the child in a better upright position; or, 3) give the child time to get used to the bottle or nipple.

If the baby tires easily when being fed (because the baby has to use more effort to suck and swallow because of the cleft palate), you can offer smaller, more frequent feedings. However, don't feed the child so frequently that he/she becomes a "snacker" and eats only enough to satisfy some of their hunger but not enough to meet nutritional needs.

After a feeding routine has been established, most babies should complete a feeding in 18-30 minutes. An infant requiring a longer period of time might be working too hard and might 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 might become "snackers," taking in just enough nourishment to take the "edge" off their hunger but not enough to meet their nutritional requirements.

Many types of nipples are available for feeding the child with a cleft lip and/or palate. However, many infants with clefts do fine with regular nipples if the nipples are soft enough and allow an easy flow of milk.

Cross-cut nipples often work best (nipples with an X-shaped cut). They give a good flow of liquid when the baby squeezes the cross-cut open. To make the cross-cut in the nipple, turn the nipple "inside out" and use a sharp razor blade to cut a small "x" on the end of the nipple. Making the cut on the inside of the nipple might help the milk to flow in a better way when the baby sucks on the nipple. Make the cut large enough so that liquid *drips* out by itself when the bottle is held upside down. After making the cross-cut, turn the nipple back out (put the correct side out). Some people prefer to make the cross-cut without turning the nipple inside out to make the cut.

Nipples with large single holes often do not work well because the baby has little control over the amount of liquid that comes out. A larger hole might be better if the child needs this to help when sucking a thicker liquid/puree consistency food (i.e., a liquid mixed with a "baby cereal" when the child is old enough to eat that).

As indicated above, regular nipples can work well for some children with a cleft. Or, sometimes putting a cross-cut in a regular nipple and using the correct positioning for the baby as well as the nipple can be all that is needed to feed the child by bottle. Sometimes, though, regular nipples are too short or not shaped well for the baby with a cleft palate. If that is the case, try a special nipple made for a child with a cleft palate (see information below). Or, sometimes a nipple made for a premature baby or a nipple known as an "orthodontic" nipple (such as those with the brand name Nuk or Pur) works best.

Often finding the best nipple is a matter of "trial and error." A soft, thin-walled nipple that compresses easily and a nipple that allows the milk to flow at a moderate pace (neither too fast nor too slow) often works best. A nipple that is not too short or too long is

important. Short nipples might not make sufficient contact with the palate and tongue, and long nipples might trigger the infant's gag reflex. Also, a feeding method that does not interfere with the normal swallowing mechanism or the normal activity of the oral-facial muscles is desired.

To put any nipple on a bottle, push the nipple through the nipple "collar" (or plastic "ring" that screws on to the bottle with the nipple in place). Do not try to put the nipple on the opening of the bottle and then screw the ring on top of that. It will be difficult to get the nipple to fit if you do that.

The position of a nipple in the nipple "collar" ("ring") might have to be changed to make it in the correct position to best feed the child. For example, the nipple should be positioned so that the cross-cut on the nipple is in the best position for the baby to squeeze the milk out with his/her tongue against a hard part of the roof of the mouth.

As the baby gets older, you might need to change the type of nipples you use. Do not change the nipple too quickly, though, because this might confuse the baby.

The following nipples and/or bottles might be used with children with a cleft palate:

- A "regular" baby bottle and nipple with a cross-cut might be all that is needed along with correct positioning and rate of feeding. Sometimes it can be helpful to find a softer plastic "regular" bottle because it can be compressed at least a little in rhythm to the baby's sucking pattern. Or, bottles with disposable liners that can be squeezed when the child is drinking might make feeding easier. (Squeeze all the air out of the liner before feeding.)

- A "preemie" or premature baby nipple might work better for some children because these nipples are very soft and easy to compress.

- An orthodontic nipple such as the one made by Nuk or Pur might be better for some babies because the slightly wider, flatter shape at the end might be easier to compress between the tongue and top of the mouth. Different sizes of Nuk, Pur, or similar nipples can be tried.

- 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. Some parents find that it is helpful to substitute an orthodontic nipple (Nuk, Pur, other) for the nipple on this bottle, while other parents prefer the original nipple.

  A great advantage of this bottle is that it is soft and can easily be squeezed in rhythm with the infant's suck and swallow.

Some parents have found that this bottle has a tendency sometimes to leak around the "collar" ("ring"). If it does, parents are advised to use a bib or other soft cloth under the baby's chin while feeding. Some parents have found that using a "collar" ("ring") from a regular bottle to replace the one on the Mead Johnson Cleft Palate Nurser will eliminate the leaking.

- 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 in relation to the baby'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. The regular-size Haberman nipple is a standard length nipple. The "mini" size Haberman nipple is shorter, like a "preemie" 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. The bottle is not soft though it is pliable.

- A Ross Cleft Palate Assembly Nipple is sometimes used for a child with a weak suck. The nipple is soft and shaped like a long, thin tube that is placed in the baby's mouth to direct the flow of milk past the cleft. The length of the Ross Nipple can be trimmed to the size needed by the child.

- There is also a nipple with a "rubber palate piece" on top that is designed to obdurate the open cleft. Most children have a great deal of difficulty with this nipple, possibly because the nipple portion of this cannot be positioned in the mouth toward a hard area where the child can compress the nipple.

Some children might be helped by a "feeding obturator." Other children do not do well with this device, or they do well with a regular or special nipple and bottle and do not need an obturator. The feeding obturator is a plastic (acrylic) piece that is made by a dentist, prosthodontist, or orthodontist to fit in the top of the child's mouth to function like a hard palate. It can serve as an "artificial palate" or hard part in the top of the mouth for the child to squeeze the nipple against with his or her tongue and also help to keep liquid out of the nose. To make a feeding obturator, the dental specialist must first make a mold of the top of the child's mouth with a "putty" type substance then take the mold to a lab where it is hardened and the obturator is made to fit the child's mouth. There is a string attached to the front of some obturators so that the adult can hold the device and keep it from moving back in the child's mouth and choking him or her. If an obturator is

used, the child's mouth must be carefully inspected daily to make sure there is no irritation from the obturator. The obturator must be cleaned well each day. Also, if an obturator is used, a new one must be made periodically as the child grows (i.e., frequently in young children).

When using any nipple and bottle to feed the child, the nipples, bottle, and nipple "collars" ("rings") should be washed and cleaned carefully before each use. Clean with a soft brush, soap, and hot water. Squeeze water through the nipple holes during washing and rinsing. Rinse well with hot water. Sterilize the nipples and bottles when indicated.

Nipples can be sterilized and softened by boiling. Boil *new* nipples for three minutes. *After the first use*, a nipple should be carefully cleaned before each feeding. *If the child has been ill* (i.e., has had an infection in the mouth or throat, has been vomiting, or had other sickness), additional sterilization of the nipple and bottle is needed.

Repeated use and sterilization of nipples might cause the opening in the tip of the nipple to become larger. This might make it difficult or unsafe for the child to swallow. Inspect the nipple and bottle before each feeding to make sure that they remain safe for the child.

When a child has an intact palate, he or she can compress liquid from the bottle by pressing the nipple between the tongue and the roof of the mouth. An infant with a cleft of the palate must squeeze the liquid out of the nipple by compressing the nipple between the tongue and whatever portion of the hard part of the roof of the mouth is there (for example, the "bony", hard edges of the upper gums or jaw, or any part of the hard palate that is there).

For children with a *complete or large cleft in the center, or both sides, of the hard and soft palate,* position the nipple to one side or the other so that the nipple can be compressed by the child's tongue against a hard part of the roof of the child's mouth. A child with a cleft that is more on *one side of the hard and soft palate* should have the nipple angled in the mouth toward the side that has more of the palate intact (the "larger" side of the palate). If you put the nipple in the mouth where the cleft of the hard palate is, the child does not have something hard to press the nipple against AND, therefore, has to work very hard to get any liquid out of the nipple (and might not get any!). He or she also will be more likely to have liquid go in the nose if the nipple is placed in the center of the mouth where the cleft of the hard palate is.

A child who has *only a cleft in the center of the soft palate* might be able to have the nipple held in the center of the mouth because the nipple can be pressed by the child's tongue against the hard palate that is intact. The child should still be held in a semi-upright position for feeding to reduce the chances of liquid going in the nose.

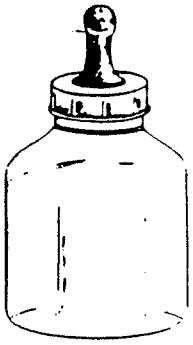
A child who has *only a cleft lip* (and not a cleft of the palate or a cleft in the "gum"/jaw area behind the lip at the front of the hard palate) can usually use a regular nipple for drinking. Sometimes a softer nipple will be easier for the child to use. In addition, sometimes this child with the cleft lip only is helped by being held in the slightly reclining

position so that liquid will not spill out of the lips as easily as if the child was held "straight up." If the child has a cleft on *one side of the lip*, it can be helpful to place the nipple on the side that does not have the cleft. If the child has a cleft on *both sides of the lip*, you will need to try different placements of the nipple to see what works best for the child. It might also help to gently hold a finger over the opening in the lip to help compress the child's lip around the nipple and keep more of the liquid in the mouth. Some children with a cleft of lip might be able to breastfeed.

Babies normally learn a suck/breathe rhythm when being fed. If you use a squeezable bottle to help feed your baby who has a cleft palate, you must try to learn what rhythm or pattern of sucking and breathing is used by the child so that you will know when to squeeze the bottle. Using a squeezable bottle is a way of increasing the flow of liquid and conserving the baby's energy so he or she won't get tired when being fed. You can increase the flow of liquid as the baby sucks by putting gentle pressure on the bottle. Squeeze and then release the bottle. Do not continuously squeeze and do not squeeze so much that the baby is overwhelmed by the amount of liquid and chokes or is in danger of liquid going into his or her airway. Practice squeezing the bottle into a bowl until you are sure what pressure to use when squeezing. The pressure applied to the bottle must be in rhythm with the infant's suck and swallow (approximately every two to three swallows). Wait for the baby to swallow before squeezing again. To determine when the baby is sucking and swallowing, watch jaw compressions, feel swallowing movements at the top of the neck, and/or look for movements in the neck (i.e., the larynx, or voice box, in the neck usually moves up with swallowing and this is seen in muscle movement in the neck).

The child with a cleft palate might swallow more air than usual when feeding, thus requiring more frequent opportunities to burp. Also, some babies with clefts tend to "spit up" more often than children without clefts. Again, more frequent burping might minimize "spit ups." Some spitting up is not usually a health problem, but if the child is vomiting or if the child is spitting up most of what is eaten, a physician should be consulted.

NOTE: After cleft lip or palate surgery, your child's physician or health care staff working with him or her will make recommendations about feeding your child while the surgical site heals. You must be very careful in following these recommendations so that you will not delay the healing of the surgical site or possibly cause the area to be damaged. Damage might occur from using an incorrect feeding technique (i.e., bottle-feeding the child after palate surgery), eating a food that can harm the fragile surgical area, or allowing the child to put fingers or other objects in the mouth that can damage the area that has been operated on. If you have any questions regarding the best way to give liquids or food to the child after surgery, you must ask the physician or health care staff working with him or her.



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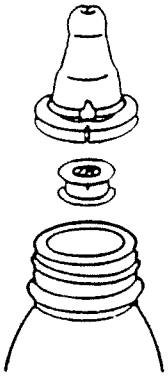

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