

# FEEDING ISSUES IN THE NICU



## *Frequently Asked Questions (FAQ)*

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Difficulty feeding and swallowing are frequent problems that the baby born preterm is faced with. Feeding and swallowing problems can complicate medical management, result in prolonged hospitalizations, and result in hospital re-admissions. Often parents report that feeding and swallowing difficulties are the most stressful complication of prematurity.

### ***Should I expect to have difficulty feeding my baby?***

Unfortunately feeding and swallowing problems are not uncommon for preterm babies. While most parents look forward to feeding their baby because of the close bond that feeding enables, some parents of preterm infants find feeding very stressful. If you find that feedings are very stressful and frustrating for you or your baby, there may be an underlying feeding problem which should be addressed. Fussing and crying during feedings, arching, refusing to nurse or take a bottle, difficulty finishing his feeding, color changes and choking, are all indicators of difficult feeding. We recommend that these problems be assessed by a dysphagia specialist who can help you learn your baby's feeding patterns and identify areas in which you can support your baby's feeding. Feeding should not be stressful for you or your baby.

### ***Should my baby born prematurely be able to suck?***

Yes, assuming her cranio-facial anatomy is intact. Studies have shown that the fetus is capable of sucking and swallowing amniotic fluid as early as 13 weeks gestational age (GA). Although coordination of the suck-swallow-breathe pattern does not emerge until approximately 32 weeks GA, your baby should demonstrate the ability to suck. If your baby seems to have difficulty producing a suck or has a weak suck, a feeding evaluation may be warranted. There are therapy techniques to facilitate tongue patterns for efficient sucking skills. Keep in mind however, that there is a huge difference between the skill of sucking and the skill of coordinating sucking and swallowing with breathing.

### ***Why are preterm infants more prone to feeding difficulties?***

There are many different answers to this question. Babies born early do not experience the same environment as babies who are born full term and discharged home with mom. Compare for a moment the differences between your home and the hospital environment. The loud noises and stress in the NICU can affect a baby's ability to rest and organize. Unfortunately the medical procedures which saved your baby's life are also the same procedures that may complicate feeding development and interfere with a baby's ability to suck and swallow. Babies born pre-term are also at risk for neurological complications which in turn affect sucking and swallowing abilities.

### ***What can I do to reduce the negative effects of the NICU environment?***

Hopefully your baby's NICU follows developmental guidelines to support her development and feeding. Easy ways include dim lights, low noise volumes, quilts on her incubator or crib, supportive positioning and handling, and supportive feeding schedules and methods.

### ***Is there anything I can prepare for at home?***

Yes. Providing a supportive home environment can facilitate your baby's organization, development, and feeding. Reduce the noise level at home. Turn the TV and radio off. Reduce the number of visitors. If you do have visitors, limit the amount of time and the number of people who hold your baby. Stay home and relax. Try to recruit friends and family to run your errands for you.

### ***How long should it take to feed my baby?***

Most babies should be able to comfortably finish the required amount within 30-40 minutes.

### ***Feeding often takes an hour. Should I be concerned?***

Yes. If feeding is taking longer than 30-40 minutes, he may be expending many of the valuable calories that he is working so hard to intake, therefore making weight gain difficult. Lengthy feedings may indicate feeding difficulties which may cause complications if not resolved.

### ***Should I be concerned if my baby coughs and chokes during feedings?***

Yes. Studies have shown that the typical 1:1:1 ratio of suck-swallow-breathe, which occurs one time per second during nutritive sucking, is achieved by 37 weeks GA in most preterm infants. If your baby coughs and chokes during feedings or has episodes of oxygen desaturation or color changes, apnea (stops breathing), or bradycardia during feeding you should ask your doctor for a referral for a feeding evaluation. This evaluation may be able to identify feeding techniques and/or positions which would help your baby to feed safely and efficiently. A modified barium swallowing study may also be ordered to rule out dysphagia (swallowing disorder) or aspiration. (see FAQ: MBS).

Coughing or choking during feeding is a clinical indicator of aspiration. Aspiration means that food or liquid penetrates the airway below the level of the vocal folds. In other words, “it went the wrong way” into the lungs instead of the stomach. Aspiration can be dangerous as it may lead to upper respiratory infections and aspiration pneumonia. Trace aspiration is also linked to asthma.

### ***We have been discharged from the hospital and my baby is still choking during feeding. What should I do?***

Make sure that your pediatrician is aware that your baby is coughing and choking during feeding so that consultation to a feeding specialist can be made. Choking and coughing are clinical indicators that the milk went down the “wrong way” (aspiration). The risk of aspiration must be reduced promptly to avoid upper respiratory complications, aspiration pneumonia, further feeding problems and possible re-hospitalization.

### ***What happens during a feeding evaluation?***

If your baby is experiencing feeding difficulties or feeding for you or your baby is stressful, an oral sensori-motor feeding evaluation is recommended. During this evaluation, your baby’s sucking skills will be evaluated during nutritive (actual feeding) and nonnutritive sucking (suucking not during feeding) to make sure that his oral motor structures are intact and that your baby uses safe and efficient feeding patterns. Your baby’s ability to coordinate sucking and swallowing with breathing will be evaluated. You will learn to identify his feeding patterns and cues (the way he communicates) and be able to make changes to support his feeding skills and to reduce the chance that problems may arise. If problems do arise, you will be taught how to best handle them. If it is decided that further evaluation is necessary to better understand his feeding and swallowing, a modified barium swallowing study may be recommended. Please see FAQ: MBS for further details. A modified barium swallowing study is a non-invasive test which uses video x-ray to take video pictures of your baby’s feeding and swallowing function. Most young babies don’t mind the procedure at all and parents are encouraged to do the feeding. In addition to evaluation of swallowing, this assessment tool may identify interfering factors which need to be addressed by other specialists.

### ***If my baby typically falls asleep during feedings, should I wake him up to finish?***

This is a hard question. For most babies if you fight them to stay awake to feed, you have already spent a lot of his energy as he fights to avoid feeding. Fatigue is often seen as premature infants are nipple feeding. It is a problem particularly if they tire out before they have taken an adequate volume of calories or if feeding compromises them medically (e.g., oxygen desaturation, apnea, bradycardia). Feeding requires significant work for a premature infant, so every effort must be made to support the infant’s energy level and organization throughout the entire day, not just during feeding. During a feeding, attend to your baby’s behavioral cues and support his need for rest. Taking several brief breaks during a feeding can allow your baby to finish with more energy and more efficiently than if trying to finish the entire feeding before he goes to sleep. A pediatric feeding

and swallowing specialist can provide ways to support your baby's feeding, therefore conserving energy, which enables him to finish his feeding using just the right amount of energy.

### ***My baby feeds best when she is sleeping? Is this ok?***

When a baby "sleep eats", she is communicating that feeding is so difficult that she is placing herself in a very low alert state. Some feel that babies choose this low level of alertness so that they can process sensory input at a low level which in turn makes it less distracting. Often babies who have difficulty coordinating suck and swallow with breathing because their respiratory rate is so rapid, choose to "sleep eat". Because as a baby matures, their feeding needs to be more volitional rather than reflexive in nature, it is important to identify the factors interfering with her ability to feed awake. It is very important that she become an active partner in the feeding process.

### ***Should I be concerned if my baby loses milk out of the corners of her mouth while feeding?***

Perhaps. Liquid loss, when milk or formula comes out of the mouth while a baby is sucking, can occur for two very different reasons. First, some infants have inadequate strength or support for the lips to seal the nipple and/or wide and ungraded jaw excursions that do not allow the lips to seal the nipple. Jaw and cheek support provided by the feeder can aid in reducing liquid loss in this case. A second reason an infant may lose liquid from her mouth appears purposeful. Infants who have a strong suck may purposefully "squirt" liquid from their mouths for protection, as though the bolus was too large to swallow safely. These infants seem to choose to spit out the excess liquid rather than risking poor coordination of respiration and swallowing, which could lead to aspiration. In a sense, it is a protective mechanism. Liquid loss can indicate poor coordination of suck, swallow, and breathing; or simply that the nipple flow rate is too fast. It is important to monitor the times in which this loss or spillage occurs and seek the advice of a specialist to help identify the reason for the milk loss so the appropriate intervention is used.

### ***My baby does not have a strong suck and has difficulty pulling milk? How can I help my baby?***

The inability of an infant to produce milk flow may result from unbalanced suction and compression, the two components of sucking; wide jaw excursions; rapid suck rate; or compression (flattening) of the nipple. In these cases, the infant's peristaltic tongue movements or "wave-like" pattern which strips the nipple may be reduced or inefficient. The infant may also have reduced or limited tongue central grooving, which is the tongue shape necessary to hold the nipple. The infant may be observed to "bite" the nipple rather than suck. Feeding techniques such as providing tongue stimulation prior to feeding and providing jaw support and negative resistance during feedings may be effective in producing a more efficient sucking pattern. Changing the nipple to a standard rather than an orthodontic nipple may also reduce the biting pattern.

### ***What does it mean if my infant produces unusual noises during swallowing?***

Unusual noises during sucking and swallowing may indicate an inefficient suck pattern or a swallowing problem. For example, audible "hard" swallows often indicate an uncoordinated swallowing and breathing pattern. Often this swallowing pattern is accompanied by air swallowing. High-pitched sounds during the swallow, may indicate difficulty with airway maintenance, possibly from airway collapse (e.g., tracheomalacia, laryngomalacia, or tracheolaryngomalacia). Wet respirations, or "gurgly" sounds, heard while feeding, may indicate milk in the nose, in the larynx, or on the vocal folds. A clicking sound during sucking may indicate that your baby has lost the latch of the nipple. Should you hear any of these sounds while your baby is feeding, consult your doctor. Your doctor will most likely suggest a feeding evaluation and possibly a Modified Barium Swallow Study (MBSS) in order to provide insight into the cause of your infant's noisy feeding.

### ***My baby spits up a lot of milk after almost every feeding. Is this something that she will just out-grow?***

Babies who frequently spit up may suffer from gastroesophageal reflux (GER). This is a condition commonly known to many adults as heartburn. GER is the retrograde movement of stomach contents into the esophagus

and is not uncommon in infants. GER often resolves without further difficulty. However, in some cases it can lead to feeding problems or even refusal to eat. Complications of GER may include recurrent vomiting, failure to thrive, reactive airway disease, aspiration, and esophagitis (inflammation of the throat). In addition, there are six behaviors which have been found to be associated with the onset of GER: discomfort (crying or frowning), emission of liquid or gas, yawning, stridor, stretching, and mouthing. If your infant does exhibit clinical signs of GER, the problem can be managed in three ways: pharmacologically, behaviorally (including postural adjustments and environmental changes), or surgically in the most severe cases. The best course of action for your infant should be determined by her medical team. Please refer to the What is Gastroesophageal Reflux FAQ .

***My doctor recommended that I thicken my baby's feedings and now she now cannot suck it through the nipple.***

Thickening liquids is a common recommendation made for babies who reflux or have difficulty coordinating sucking and swallowing with breathing. Thickened liquids are heavier and may be more difficult to reflux. Thickening liquids may be recommended to slow down the flow rate affording the baby more time to coordinate sucking and swallowing with breathing. Mixing the thickened liquids correctly is important and can support successful feedings. Pre-blending the dry rice cereal and carefully stirring and mixing the cereal with the formula or breastmilk will reduce clumping and clogging of the nipple hole. Simply place the dry rice cereal in a blender and pulverize it until it looks like flour. Then carefully mix it with the formula or milk making sure it is blended well. Don't be tempted to cut the nipple, if prepared correctly, most babies can take the liquid without manipulation of the nipple hole. Cutting nipple holes often increases a baby's risk of aspiration by increasing flow rate and reducing her ability to control and organize her swallowing.