FEEDING IN THE LATE PRETERM INFANT

Late preterm babies have a wide range of feeding abilities. Some babies can eat without any difficulty as soon as they are born. Others may need assistance with feeding. Late preterm babies can have difficulty because they may not have the stamina to take enough milk. They also may be unable to coordinate eating and breathing. For these situations, infants may need to stay in the hospital until they show maturity with feeding. Parents may be surprised that a baby of this size may have any feeding difficulty and require a longer time in the hospital. However, this is not unusual, and almost all late preterm infants are feeding well and are ready to go home around their due date.

Signs of Feeding Immaturity

In the first few days and weeks of life, late preterm infants can have very different feeding abilities. Some infants feed very vigorously soon after birth and continue to feed well. However, other infants may feed very vigorously soon after birth but then tire and feed less effectively when they are a few days old. Some may show very little interest in feeding from the very beginning.

Signs that an infant has feeding immaturity include:

- Needing to be awakened for feedings,
- Falling asleep during feeding, and
- Eating only small amounts.

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Breastfeeding infants may not latch strongly to the breast or may not have the strength to effectively draw milk from the breast. Some late preterm infants may appear to be nursing well but they may not actually be drawing enough milk from the breast. Mothers can learn how to recognize when an infant is effectively nursing by hearing the baby swallow and seeing milk in the baby's mouth.

Infants may also show that they have feeding immaturity if they cannot coordinate their breathing with feeding. This occurs because their reflexes are immature and they are not able to coordinate sucking, swallowing, and breathing at the same time. When this happens, infants may cough, spit, or appear to be choking. This can lead to a change in their color (pale or bluish) and the monitor can show a decrease in their heart rate or oxygen saturation (see Breathing Chapter).

Impact of Feeding Immaturity

Preterm infants may not have the energy to take an appropriate amount of feeding. This can lead to a low amount of a specific type of sugar, called *glucose*, in the baby's bloodstream. When this level is low, it is called *hypoglycemia*. Having a normal glucose level is important for all babies because glucose is an essential substance that helps many organs in the body, such as the brain, to function properly.

If a late preterm infant is unable to take an adequate amount of milk, he/she may be unable to gain weight and may become dehydrated. Late preterm infants who do not eat enough are also more likely to develop a yellow color to their skin (called jaundice)

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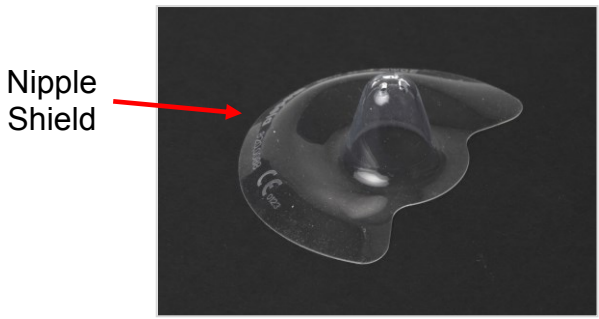
that requires treatment (see Jaundice chapter). If an infant does not suck well enough to empty the mother's breast, the mother's milk supply may diminish over time.

Treatment of Feeding Immaturity

Late preterm infants may require support with their feeding while they are in the hospital. However, they will be able to feed maturely without any support within days or weeks after birth.

Breastfeeding mothers will benefit from the support of lactation specialists to ensure that their infant is breastfeeding effectively. Mothers of late preterm infants can enjoy skin-to-skin time with their baby to help increase their milk supply and begin to learn about their infants' feeding cues. For babies who do not initially breastfeed well, pumping soon after delivery may provide early colostrum and help to establish a mother's milk supply.

Late preterm infants may need to breastfeed more frequently. Many late preterm infants may benefit from using a *nipple shield* during breastfeeding because it helps them to draw milk from their mother's breast more effectively.



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Most late preterm infants who require a nipple shield for initial feeding are able to outgrow their need for it at approximately 2 to 4 weeks after their due date.

Infants may require additional assistance with feeding if they are unable to take enough volume of milk or if they have a low concentration of glucose in their blood. In this situation, infants may be fed expressed breast milk. This milk can be given to the baby in a variety of ways, including by a(n):

- Bottle,
- Oral syringe, or
- Supplemental nursing system.

Some infants may require supplementation with formula or donor breast milk if the amount of expressed breast milk is not sufficient. If a baby drinks an appropriate amount of expressed breast milk or formula but the blood glucose concentration still remains low, the expressed breast milk or formula can be supplemented with extra calories.

If a baby requires supplementation with formula or extra calories, it is important to remember that this is a short-term issue. For the mother whose goal is to exclusively breastfeed, this supplementation is usually a temporary solution while waiting for the infant to mature.

Placement of a temporary *feeding tube* may be needed for infants who are unable to take enough milk by breast or bottle. This is a soft, flexible, plastic tube that passes from the nose or mouth into the stomach.

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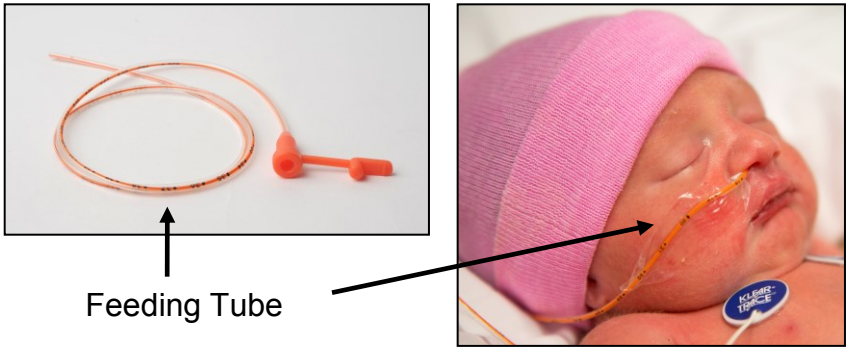

When this feeding tube is inserted from the nose into the stomach, it is called a *nasogastric tube* or NG tube. If the tube is inserted through the mouth and into the stomach, it is called an *orogastric tube* or OG tube. Expressed breast milk or formula can be given through this feeding tube. The amount of feeding given through the feeding tube depends on how much the infant takes from the breast or bottle. As the infant matures, he/she will be able to drink more on his/her own and be given smaller and smaller amounts of milk through the feeding tube. When the infant has a mature feeding pattern, the feeding tube will be removed.

If a baby is unable to drink enough breast milk or formula to establish a normal glucose level or requires assistance with breathing, a fluid containing glucose can be given into the infant's blood vessel. This requires placement of a catheter into a vein in the infant's hand, arm, foot, leg, or scalp. If an infant requires this intravenous fluid for more than a few days, electrolytes, fats, carbohydrates, and protein can be added to the glucose water. Intravenous fluids are also a temporary treatment while the infant progresses to taking more feedings by mouth or in the feeding tube.

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Families should be reassured that the feeding supports described in this section are temporary. This additional care will only be needed until the baby is able to feed independently.

Transition to Home

After discharge to home, families of late preterm infants will continue to receive support from their pediatric care provider. Additionally, families may be followed by a visiting nurse and a lactation specialist for breastfeeding mothers. As the baby continues to gain weight consistently, the pediatric care provider will guide families about decreasing supplemental calories, increasing breastfeeding periods, and discontinuing the nipple shield.

Conclusion

Late preterm infants may have a wide range of needs for feeding support before they demonstrate mature feeding skills. Many families find it helpful to be involved throughout their infants' hospital course to become familiar with their babies feeding cues and comfortable with feeding. Most late preterm infants are able to feed maturely and be ready to go home close to their expected due date.

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