

## Breastfeeding Your Premature Baby with a Nipple Shield

Nipple shields are often recommended to help premature babies breastfeed during the final part of the hospital stay and the first weeks at home. If your baby's doctor, nurse, or lactation specialist has suggested that you try a nipple shield, you probably have several questions about how the shield helps your baby breastfeed, and how to use it correctly. Answers to the following questions will give you the basic facts about nipple shields for premature babies. Then, your baby's nurse or lactation specialist can help you breastfeed with the nipple shield, so that you can be sure that it is working effectively for you.

### What is a Nipple Shield?

A nipple shield is a small, ultra-thin silicone device that fits over the nipple and areola (the darkened part of the breast), and is used during breastfeeding. It is not the same thing as a breast shell, which is worn during pregnancy or between breastfeedings in order to gradually make the nipple longer and easier for babies to grasp. Mothers have used nipple shields for centuries, but until very recently, nipple shields were thicker, and often complicated breastfeeding problems instead of helping them. Newer model, silicone nipple shields have been tested with premature babies, and the results show that the babies take more milk with the shields than without them during the early weeks of breastfeeding.



### Why does a Premature Baby need a Nipple Shield?



Several studies have shown that breathing rates and oxygen levels of premature babies are better during breastfeeding than during bottle-feeding. However, these same studies indicate that premature babies often tend to drink less milk from the breast than from the bottle. Mothers describe these differences in drinking by saying that their premature babies “slip off” of the maternal nipple while they rest between sucks or that they fall asleep within minutes of being placed at the breast. Researchers think that these feeding behaviors occur because premature babies have lower suction pressures than full-term babies.

Suction is an important part of breastfeeding, because it allows the baby to pull or draw the mother's nipple into the mouth, and thereby “stay attached” throughout the feeding. Researchers think that nipple shields help make up for these lower suction pressures in premature infants, because the shields create the suction that the babies cannot produce at this time. As a result, the babies drink much more milk from the breast than they could if the shield were not used. Because suction pressures increase as premature babies approach their expected birth dates, nipple shields are necessary only until about that time.

## How Should I Use the Nipple Shield?

The newer model ultra-thin nipple shields are easy to use, but all mothers need someone to help them use the shield for the first few times. The shield should be placed over the breast so that your nipple fits into the nipple chamber of the shield. Position the shield so that the cut-out area is over the part of the breast where your baby's nose will be. You can use a little sterile water to help the shield stay against your skin. Then, place your baby in the football position, with one hand supporting your breast. Tickle the side of your baby's mouth with the nipple portion of the shield. Wait until your baby opens his mouth widely and then gently guide the shield upward over the tongue. It is not necessary to push or force the shield into your baby's mouth. Then, use the hand holding your baby's head to guide your baby onto the shield. As your baby starts to suck in response to feeling the shield, continue to guide the head toward you so that your baby's nose is almost touching your breast. As you move your baby closer to the breast, you will gradually feel stronger suction pressures, a clue that your baby is using the shield effectively.



Mothers often say that they feel their babies won't be able to breathe if they are positioned so close to the breast. However, the nipple shield cannot work correctly unless your baby has his lips over the base of the nipple shield. In this position, your baby can squeeze the milk from the breast with each suck, and you will feel a different, stronger type of suction than if your baby has his lips over the elongated chamber of the shield only. Remember, to be effective, the tip of the shield must be in the back part of your baby's mouth, and the shield should not move in and out of your baby's mouth during sucking. With a little practice, you will be able to feel when your baby is sucking correctly with the shield.

## How do I Know that my Baby is Drinking Enough Milk with the Shield?



When a mother has an abundant milk supply and her premature baby sucks effectively with the shield, the milk usually flows rapidly through the shield to the baby. You may notice milk dripping from the opposite breast or a tingling sensation in the breasts, both of which are signs of the let-down reflex, meaning that your milk is being released from the breasts. Most babies respond to this rapid milk flow by sucking more slowly and regularly. You may hear your baby swallowing or see milk dripping around your baby's mouth. When you remove your baby from the breast, you'll see that milk has collected in the chamber of the shield. These are signs that the shield is working effectively to help your baby drink milk.

However, the only way to really know for sure that your baby drinks enough milk is to have the nurse show you how to measure the amount of milk your baby drinks by weighing your baby before and after the feeding. This procedure, called test-weighing, is a very accurate measure of milk intake when performed with an electronic scale, such as the BabyWeigh™ scale.

# How Long do I Need to Use the Shield with my Premature Baby?

Researchers who studied the nipple shield found that mothers of premature babies used the shield, at least for some feedings until their babies' expected birth dates. By that time, mothers said that their babies had enough suction pressure to draw their nipple into the mouth during breastfeeding, and that they stayed awake long enough to take enough milk at the breast without the shield. You will notice this change in suction over time by looking at the position of your nipple in the shield chamber after your baby feeds. The baby's growing suction pressure pulls the mother's nipple further into the shield chamber. Watching for this change in the position of your nipple inside the shield is another way to determine when you can stop using the shield.

In studies, most mothers gradually stopped using the shield over the first few weeks at home. Some found that they did not need the shield for certain feedings during the day when their babies were more awake and eager to feed. Gradually, as their babies matured, the mothers stopped using the shields completely. Other mothers found that their babies were eager to eat at the beginning of breastfeedings, but that they fell asleep before they had taken enough milk. These mothers started the feedings without the shield, and put it on once the babies started to fall asleep, so that the babies would feed for a longer time. Either way, your baby will outgrow the need for the shield around the time of the expected birth date. Overall, the nipple shield will be just a short part of the breastfeeding experience for you and your premature baby.

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