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# BREASTFEEDING IN NICU



BREASTFEEDING MAY BE PROTECTIVE AGAINST SEVERAL  
PREMATURITY-RELATED CONDITIONS AND CONTRIBUTES  
SIGNIFICANTLY TO YOUR BABY'S HEALTHY DEVELOPMENT.

### WHY SHOULD I BREASTFEED AT NICU?

Human milk provides optimal “nutritional programming” for preterm infants and may be protective against several prematurity-related conditions (Riordan, 2005). Breast milk contributes significantly to your baby’s healthy development. Mother’s milk provides essential nutrients that are easy for infants to digest. It also helps to build up the baby’s immune system and can contribute to preventing allergic disorders such as eczema and asthma. Breast milk contains the right balance of nutrients for your baby to grow and develop and also provide antibodies to protect them from infection both now and the years to come.

This immunity is especially important for premature babies. Breastfeeding has also been shown to have a positive effect on a child’s intellectual development and can help prevent obesity and the onset of its related diseases in later life. It also has health benefits for the mother, reducing the risk of breast and cervical cancer, osteoporosis and postnatal depression. What’s more, it costs nothing!

### HOW DO YOU PROTECT AND MAINTAIN YOUR MILK SUPPLY WITH YOUR BABY IN NICU?

Your baby may not be ready to feed at the beginning, but you need to protect and maintain your milk supply for the time your baby is ready. One of the best things you can do for your baby at this stage is to provide your breast milk. Your breast milk is unique for your child. The earlier you start to express and the more often you express, the more milk you will produce for your baby’s growing needs. Ask your nurse care provider to help you start.

Depending on how early your baby is born, you may need to carry on expressing for many weeks, and at times this can feel uncompromising. Ask the nurses to show you how to double pump as this saves time and increases your milk supply. If you

have set up a good supply in the first couple of weeks, you can then be a little more flexible about when and how much you express.

#### GOOD TO KNOW:

- Start expressing within a couple of hours after giving birth; no later than six hours after birth. Ask the nurse/ midwife to show you how to use the technique of hand expression. You can start using the pump 48 hours after birth
- Aim to express eight to 10 times in 24 hours; express in clusters (two to three times close together) to give you a bit of space. However don’t leave it longer than four hours between expressions
- Stay close to your baby when expressing, or have a picture of your baby. Close your eyes and think about cuddling your baby
- Warm up and massage your breast prior to expressing milk
- Drink lots of water, rest well and relax

Pumping is recommended as your baby might not be strong enough to drain the breast and that is mandatory to increase and maintain milk production for the long run.

#### Consider the following ideas for maintaining your milk supply:

- Start a pumping schedule that matches your baby’s feeding needs. Pump at least eight times in 24 hours including one to two times during night. During the day time pump more often and more frequently, and at night pump every four hours. This will establish and increase your milk supply
- Single pumping: start by pumping one side until milk flow stops, then start on the other side until milk flow stops;

return to the first side to drain more milk and so on back and forth to both sides until you see milk stop flowing. This will help on maintaining maximum production and comfort. You can observe how much time it takes you for both sides as each mother will have her own time for full production

- Double pumping: use a double pumping bra to enable hands on breast compressions
- Drink plenty of fluids, at least two litres, and eat three healthy meals a day
- Keep going through the ups and downs of your milk supply
- If your supply remains low, you might want to consider renting a hospital grade pump

#### **Hands on pumping:**

It is highly recommended to do hands on pumping. Using your hands to compress the breast gently while pumping can contribute to a 48% increase in the total amount of drained milk and double the fat content (hind milk) (Jane Morton, 2016).

Watch the video mentioned below and learn the techniques on breast massage and compression while pumping:  
<https://med.stanford.edu/newborns/professional-education/breastfeeding/maximizing-milk-production.html>

#### **HOW TO HANDLE, STORE AND USE BREAST MILK?**

Breast milk for a preterm or sick baby can be safely stored and used at a later date, as long as the following guidelines are followed:

##### **Do's and don'ts of breast milk handling**

- Do wash your hands before pumping or handling milk
- Do store expressed breast milk in a clean, sealed container

- Do store the milk in small amounts (60-90ml) and leave some space at the top for expansion when frozen
- Do label all storage containers with the date and time of expression
- Do use fresh, unrefrigerated milk within two hours of expression
- If you are taking the expressed milk to the Neonatal Intensive Care Unit (NICU), keep it in a cooler bag with an ice pack until it can be refrigerated
- Do not add fresh milk to milk that is already frozen
- Do not thaw or warm breast milk in the microwave
- Once thawed, breast milk can only be used within 24 hours, stored in the fridge
- Do store in the main part of the fridge, not in the fridge door compartments
- Freeze the milk if it will not be used within next 48 hours



*Refer to Best Practice for Expressing, Storing and Handling Human Milk (2011) from the Human Milk Banking Association of North America for additional information ([www.hmbana.org](http://www.hmbana.org)).*

### **Tips for storing your milk for NICU and high-risk infants**

- Freshly expressed breast milk is safe at room temperature for two to four hours
- Store in a refrigerator for 48 hours (ideal)
- Store in a standard freezer for up to three months and in a chest freezer up to one year
- Milk can be thawed in the refrigerator or by swirling in a bowl of warm water (not shaken)
- Previously frozen and cold thawed but not warm:  $\leq 24$  hours in refrigerator. Thawed milk should not be refrozen
- Storage of fortified human milk: milk with fortifiers should be given as soon as possible after the fortifier is added and as quickly as tolerated. Time in refrigerator: 12-24 hours

*Refer to Best Practice for Expressing, Storing and Handling Human Milk (2011) from the Human Milk Banking Association of North America for additional information ([www.hmbana.org](http://www.hmbana.org)).*

### **BABY STEPS TO SUCCESSFUL BREASTFEEDING**

The time has come for you to start breastfeeding your baby. The first times could be just a trial of breastfeeding for 10-15 minutes to see how the baby is doing on the breast.

**Remember to remove some milk from your breast to make it soft and easier for baby to latch on. This will also prepare you to boost your milk supply. Consider the following tips for a smooth start:**

- Try to get as comfortable as possible
- Hold your baby close (skin to skin kangaroo care) prior to breastfeeding to make baby alert and ready
- Make sure baby's nose and toes are facing the same way, so they do not have to twist their head to feed
- Gently support baby's head and neck, making sure they can still move their head forward and backwards
- Express a little milk onto your nipple and let baby lick this

- Encourage baby to open their mouth by gently rubbing your nipple above their top lip
- When their mouth is wide open, bring baby closer so that your nipple reaches back into their mouth
- You will feel a drawing sensation as baby begins to feed, but it should not be painful
- Look and listen to your child and notice if they are swallowing as this will tell you that they are getting your milk
- If your child does not seem comfortable, try changing the way you hold them. Ask the nurses to help you find a position that suits you both



#### **GOOD TO KNOW:**

- The journey toward full-time breastfeeding takes time. Be patient with yourself and your baby
- Further progress on feeding takes time and efforts and your availability plays a great key
- The NICU team and the lactation consultants will work with you by observing your baby's feeding progress closely and planning his further needs

#### **PREPARING TO TAKE YOUR BABY HOME: INFORMATION FOR PARENTS**

Although you have been waiting for this day, it is okay to feel anxious a little about taking your baby home and looking after them without the support of the nurses and doctors. At this point, your baby can bottle-feed or breastfeed without breathing difficulty. Spend more time in NICU and actively participate and help in direct care activities and feeding your baby as much as possible. Before you leave, a feeding plan will be discussed with you based on your baby's needs and the team will discuss ways to tell if your infant is taking enough milk: either while feeding at the breast or by a bottle.

Ask as many questions as you need to make yourself aware and clear about your baby's needs and condition. Make sure you know the difference between a nutritive suck vs. non-nutritive suck. Observe your baby more often to make sure you are familiar with the coordination of sucking, swallowing, and breathing cycle when the baby is feeding. Be aware of the baby's voiding and stooling pattern.

We encourage you to ask your NICU nurse to schedule an

appointment with the lactation consultant when the infant starts breastfeeding and again several days before his or her discharge. This will help you get the practical knowledge about your baby cues, positions and latch on, milk supply, and any follow-ups needed with the lactation consultant, especially at two weeks post discharge.

#### **FEEDING YOUR BABY AT HOME**

It is the time that all parents are looking forward, taking the baby home. The healthcare team will help you create a feeding plan and determine whether you need to add or continue any supplements to your milk to help your baby grows.

#### **General aspects you need to consider at home:**

- You should continue to pump your breasts after each nursing, while the baby is learning to breastfeed. This is important for two main reasons:
  - Securing baby supplementation with enough milk with each feed
  - This will help you maintain enough supply till your baby sufficiently establishes the feeds at the breast
- During the first week at home, you may be pumping six to seven times per day after breastfeeding. If your baby gains weight that first week, you can drop to four to five pump sessions after breastfeeding. Continue to gradually drop pumping sessions every three to four days if your baby is gaining weight and no longer needs to take a supplemental bottle after breastfeeding
- Remember you can communicate baby feeding challenges or issues with your child's doctor or your lactation consultant.

### How to tell if the baby is getting enough milk

The following signs indicate that your baby is getting enough milk when breastfeeding:

- Your baby wakes up on his or her own and demands at least 8 feeds a day. This should be with a gap of two hours and not more than four hours. It is normal if the baby feeds more at night than in the day or vice versa and it is normal if he/she likes to extend one sleep up to five hours once a day
- Your baby latches and stays on the breast suckling and swallowing for at least 10 minutes before falling asleep
- Your baby will coordinate between sucking, swallowing and breathing. A few minutes after baby starts breastfeeding, he will start to suck deeply and slowly rather than short and fast
- You can hear or feel or see a swallowing
- Your breast softens during and after the feeding is over
- When you pump after breastfeeding you remove less milk from the side, you breastfeed than you do if you did not breastfeed from it
- Your baby has six to eight wet nappies and several dirty nappies every day (usually yellow mustard color)
- Your baby is gaining 170 - 227 mg/week (6-8 Oz/week) and growing well

#### GOOD TO KNOW:

Once you are home, be sure to contact your baby's healthcare provider if your baby is not feeding well. For example:

- Your baby does not wake up on his or her own to feed for more than two feedings in a row, has a weak suck, and falls asleep after only five minutes at the breast - it is likely that he or she is not drinking enough milk
- Spitting up more than usual
- Not passing two to three stools and having five to six wet nappies a day

### Can I breastfeed and use formula milk?

Exclusive breastfeeding is typically recommended for the first six months after birth, followed by continued breastfeeding as complementary foods are introduced, for two years or longer, as determined by mother and infant.

Although the NICU team encourages exclusive breastfeeding, in the case of prematurity and special care this can vary according to your baby's health needs. These requirements will be discussed with you by your baby's neonatologist.

The decision to supplement the baby with formula is due to some primary reasons: a shortage of available mother's milk supply, baby needs nutritional support as per your child's doctor evaluation and decision, and parents informed choice.

#### GOOD TO KNOW:

- Breastfeeding and bottle feeding require different techniques on the part of the baby. Sometimes babies find it difficult to breastfeed after they have been fed with a bottle or to change from one to another, but other babies seem to have no trouble with this.
- If you change your mind about mixed feeding it is possible to go back to solely breastfeeding.

Preparation of infant formula: new safety advice  
If you are bottle feeding make sure you discuss how to sterilise equipment, makeup and give a feed before you leave the hospital. Even if you think you know, check with your baby nurse care provider as some advice may have changed.

Powdered infant formula is not sterile. It may contain bacteria that can cause illness in infants. By preparing and storing powdered infant formula correctly, you can reduce the risk of sickness.



### TIPS

- Water used for mixing infant formula must be from a safe source
- The safest way to prepare a feed is using water that has been boiled and cooled to no less than 70°C (you can chill the water up to 15 - 20 minutes)
- This guidance is in line with World Health Organization recommendations and aims to ensure that the potential microbiological risks associated with these products are kept to a minimum. Using water at this temperature will kill harmful pathogens if they are present in the non-sterile powdered formula as well as helping reduce the risk of contamination which may occur in the home (e.g. due to poor hygiene practices or feeding equipment which has not been sterilised adequately)

### For more information:

[www.who.int/foodsafety/publications/micro/PIF\\_Bottle\\_en.pdf](http://www.who.int/foodsafety/publications/micro/PIF_Bottle_en.pdf)



### GOOD TO KNOW:

- Feedings should not be prepared near where parents change the baby's nappy. Parents should wash their hands before and after preparing milk or formula
- The AAP recommends that once formula has been prepared and mixed, it must be consumed or stored in the refrigerator within one hour to prevent the growth of bacteria
- Formula that has not been given to an infant can be stored in the refrigerator for up to 24 hours

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