What Should I Watch for When I am Pumping for my NICU Baby?

In the early days after birth, most mothers of NICU babies are completely dependent on the breast pump to establish a full milk supply.

Pumping should be **effective** (removing as much milk as possible), **efficient** (removing the milk as quickly as possible) and **comfortable** (not painful). Here are important points to check during early pumping sessions.

Watch your breasts while you are pumping.

Many NICU mothers must use the breast pump in places that lack privacy, so they cover their breasts while pumping. However, the key to pumping effectively, efficiently, and comfortably in the early days after birth is to look at the breasts and nipples before, during and after pumping.

Use the right size breast shield.

The breast shield is the circular part of the pump kit that is placed against the breast, and the *tunnel* of the breast shield is where the nipple is stretched during suction with the pump. (Picture 1).

- Breast shields are available in different sizes, so that the nipple can move comfortably and effectively in the tunnel. If the breast shield is too large or too small, it can hurt and cause problems with milk removal.
- Some mothers need different breast shield sizes for the right and left breasts.
- Many mothers need to increase or decrease the breast shield size during the first weeks after birth due to normal changes in the nipple and areola.

Center the nipple in the tunnel before turning on the breast pump.

Take time to correctly apply the breast shield so that the nipple is in the center. Once pumping starts, you may need to stop and re-center the nipple. A common reason for nipple soreness, breakdown or unremoved milk is that a part of the nipple rubs against the side of the tunnel during pumping. (Picture 2)

Choose a comfortable and effective suction pressure.

Mothers often think that "more pressure is better" for removing milk, but this is not true. A good rule is to gradually increase the suction pressure until it becomes uncomfortable, and then turn the pressure down to the level just before this. This is called the *maximum comfort vacuum*, and it can change over time as you become used to pumping.

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Use the pump until as much of the milk as possible is removed.

Mothers' breasts empty at different speeds, so there is not one right pumping time for everyone. Once your milk starts to flow regularly (usually between days 4-8 after birth), use the pump for *2 straight minutes* after the drops slow down, and your breasts feel empty all over. For most mothers, a pumping session takes between 15 and 30 minutes. Do not pump longer than 30 minutes each session, even if drops still flow.

Check the breasts to make sure there are no lumpy areas.

Small lumpy areas in the breast may mean that milk has not been removed and/or that one of the tiny milk ducts is clogged with milk. You can gently massage this area and put the pump back on that breast for a few minutes to break up the lump.

Use a nipple moisturizer that is compatible with breastfeeding.

Breast pump dependency can lead to dryness in the nipple and areola that is not common when mothers feed directly from the breast. You can apply a thin coat of ointment to the nipple and areola just before you pump.

Meier et al. (2016). J Perinatol 36: 493-499.

Meier et al. (2017). Clin Perinatol 44: 1-22.

Meier et al. (2018). Human milk in the neonatal intensive care unit, in *Breastfeeding* and *Breastmilk-From Biochemistry to Impact*, pp. 244-281. Family Larsson Rosenquist Foundation









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