



PUMPING GUIDELINES

Lincolnpedsgroup.com 402-489-3835

To optimize milk production, breasts should be nursed well or pumped to empty about 8 times per day (every 3 hours or so).

Common reasons to pump breastmilk

- Pump if baby doesn't latch in the first 12-24 hours.
- Pump if you supplement with expressed milk or formula for any reason, to keep supply and demand in check.
- Pump if you are separated from baby for more than 3-4 hours (work, illness, emergency)
- Pump after the first nursing in the morning to stock the freezer for return to work and to have milk for practice bottles.
- Pump to empty after a nursing attempt to assess how much milk was left behind and to stimulate more milk production (triple feeding).
- Pump after 5 hours during the night if baby sleeps through and you're concerned about milk supply.
- Pump to empty after nursing 2-3 times per day if you regularly use a nipple shield, to help maintain supply.
- Pump, or hand express milk, to soften the breast if it is too firm for baby to latch.
- Pump to pull out flat or inverted nipples.

The option of exclusive pumping

Pump all the milk and feed it to baby from a bottle.

Why do this?

- Baby won't latch on.
- Baby removes milk poorly (slow, ineffective).
- Baby's latch causes intolerable nipple pain
- Mom finds this plan fits her lifestyle better.
- NOTE: Exclusive pumping does not maintain milk supply as well as a baby *who removes milk well*. However, some babies do NOT remove milk well, so exclusive pumping is a valid option so baby can still get breastmilk.
- Even if not nursing, place baby skin-to-skin to help milk let-down.
- Optimize supply by pumping every 3 hours, except for one 5 hour stretch of sleep over night.

How much and how often to pump

BEFORE MILK COMES IN AND AS IT'S COMING IN, PUMP 10-15 MINUTES if baby doesn't latch/suckle well, to stimulate milk production hormones.

ONCE MILK IS IN, PUMP TO EMPTY, as emptiness prompts the cells to make more for each feeding.

How to pump most efficiently:

- MASSAGE breasts towards the nipple, with milk or oil on your fingers.
- 15 minutes or less should get you empty.
- Most milk comes out in the first 8 minutes (whether pumping or nursing).
- The automatic LET DOWN feature on high-end machines pump quickly for 2 minutes and then switch to a slower cycle to mimic how babies nurse for the let-down. When milk flow slows, push the let-down button again for quicker pumping to see if milk lets down again.
- Suction strength should be strong but comfortable.
- Don't use a hands-free pumping bra until breastfeeding is established. It must fit loosely to avoid constricting milk ducts and to allow gravity to help milk flow.

Use a FLANGE SIZE that fits your nipples and breasts!

- Too small and your nipples will rub on the inside of the tunnel when pulled in during suction.
- Too big and excess breast tissue gets sucked into the tunnel and may cause friction sores.
- 24mm is standard, but options are 19mm, 21mm, 24mm, 27mm, 30mm and 36mm.

Pumping when your milk supply is low

- Pumping frequently stimulates over-all supply better than waiting longer between pumping just to pump more each time.
- If baby starts sleeping for more than 6-7 hour stretches overnight, you may need to get up and pump at 5 hours. If breasts remain full for long periods night after night, the breasts may interpret this as not needing milk, so supply decreases.

Pumping when you have an abundant milk supply

- Pumping more than 15 minutes generally isn't necessary.
 - If you produce a lot and pump to empty too often, you may ramp up your supply excessively.
 - Pump less often or limit the amount pumped each time according to how much your baby needs or how much you wish to store.
 - Keep it simple!
- IF PUMPING FOR COMFORT** or to soften the breast, pump just enough to get comfortable (about 1 ounce). If you pump to empty, you might further increase the supply.

Choosing a pump (hospital grade pump, personal use pump or manual pump)

- Insurance usually covers the cost of a double electric **personal use pump** (~\$400) or rents a **hospital grade pump** (~\$85 per month).
- Pumping both breasts at the same time is more efficient and effective.
- It's wise to have quick access to a **double electric pump** by the time you leave the hospital, just in case.
- If there are breastfeeding struggles, a **single or manual pump** probably won't serve you well.
- **Hospital grade pumps (Symphony is common)** are the most comfortable, quiet, and best at removing milk and thus stimulating milk supply. If supply is a problem and you wish to optimize your production, this is the best option.
- **Personal Use Pumps (double electric – Medela PumpNStyle or Freestyle, Spectra, Ameda, Lansinoh, etc)**
These remove milk well and are typically used to pump while at work. If supply decreases over time, especially if you exclusively pump, consider a trial with a hospital grade pump.



STORING PUMPED BREASTMILK

Guidelines for pumping cleanliness

- Wash hands with soap and water. A waterless hand cleanser is OK if your hands don't appear dirty.
 - Bacterial contamination during pumping results in milk with lower protein levels and more bacterial growth during storage.
- To clean the pump, completely dismantle pump parts.
 - Wash in hot soapy water and rinse, or wash in a dishwasher.
If soap is not available, clean with boiling water.
 - Sterilization is not necessary.
 - Thoroughly air dry or dry with paper towels.
- Discard foul, stringy or purulent milk.
- If you have a yeast or bacterial infection of the nipples, DON'T throw pumped milk away. Probiotics in breastmilk protects baby from those germs.

Recommended storage containers

- Glass and polypropylene are preferred over other containers
 - less adherence of lipid-soluble nutrients to the container surface
 - immunoglobulin A levels and viable WBCs levels are better maintained
 - Polypropylene freezer bags should be sturdy, sealed well and stored in an area where damage to the bag is minimized.
- Avoid plastic with BPA (bisphenol A) chemical
- Do not use hospital specimen storage containers which are not meant for food storage.
- Leave space for freezing expansion.
- Seal well to prevent contamination.
- Store in 2-4 ounce servings to prevent waste.
- Label and date the container.

Where and how long to store the milk

Freshly Pumped Milk can be stored in a CLEAN container ---

- at **ROOM TEMPERATURE** (60-85°F) for **4 hours** (optimal), but **6-8 hours is acceptable** if pumped under very clean conditions and in cooler room temperatures.
- cool fresh milk before adding it to a container of refrigerated or frozen milk (to prevent rewarming of cool milk)
- in the **REFRIGERATOR** (39.2°F) for **4 days** (optimal), but **5-8 days is acceptable** under very clean and cooler conditions.
- in an **ICE PACK in a SMALL COOLER** (59°F) for **24 hrs** is OK. It's not a biohazard to store breastmilk in the work place fridge where others store food.
- in the **FREEZER** (24.8 to -4°F) for **6 months** (optimal) and **12 months is acceptable**.
 - Store in the back of freezer to prevent intermittent rewarming due to freezer door opening.
 - Keep away from the walls of a self-defrosting freezer.

Preparing the milk for bottle feedings

— cooler is better!

- Use fresh milk when available.
- Use oldest milk in refrigerator or freezer first.
- **Thawing frozen milk:** Slow thawing in the refrigerator causes less fat loss than thawing in warm water. If no time for that, run it under warm water, set it in a container of warm water, or use a waterless warmer.
- **Warming milk:**
 - Do not microwave or overheat breastmilk, as this denatures and inactivates bioactive proteins and decreases the fat content.
 - A baby may prefer their milk **cool** (refrigerated / 40°F), **room temp** (72°F), or **luke warm** (body temp / 98.6°F).
 - **COOLER IS BETTER** - A LESSON ON MILK FAT: At 40°F (refrigerator temp), milk fat is in solid form. Warming to 98.6°F (body temp) melts the fat from solid to oil form. Oil adheres to the side of the container, therefore lowering the fat content of the milk that is consumed.
 - If luke warm / body temp (98.6°F) is the goal, place the container in lukewarm water (less than 104°F) for 20 minutes or use a waterless warmer.

What about left over breastmilk?

If baby doesn't finish the bottle, discard remaining milk within 1-2 hours.

Refreezing thawed milk? Recommendations cannot be made due to inadequate research.

Stored milk loses some quality compared to fresh milk

- Fresh milk contains current antibodies relevant to recent infectious exposures.
- Freshly expressed milk is highest in immunologic activity, antioxidants, vitamins, protein, fat, and probiotic bacteria compared to refrigerated or frozen milk.
 - After 4 days in the refrigerator, fat composition and some immunity may be compromised.
 - After 90 days in the freezer, there is less fat, protein and calories *compared to fresh milk*.
 - After 1-5 months of storage, Vitamin C levels decrease significantly.
 - Basic principles of freezing dictate that frozen foods at 0°F are indefinitely safe from bacterial contamination, but remaining active enzymes could change the quality.
 - More research is needed.

SOAPY SMELLING MILK

- Refrigerated and frozen milk might develop an odor due to lipase-mediated triglyceride breakdown, releasing fatty acids, which are oxidized. This lipolysis prevents growth of microorganisms in thawed refrigerated milk.
- Soapy smelling milk is NOT harmful, although some babies may not drink it.
- Heating milk to above 104°F before freezing deactivates lipase to prevent the smell, but this is not advised, as it destroys immunologically active factors in the milk.