



# Breastmilk MANAGEMENT

## Breastmilk Collection and Storage Guidelines for Healthy Newborns

Many mothers find it convenient or even necessary to collect their breastmilk and store it to be used at a later time. Such is the case for mothers who are returning to work or school or for mothers who may need to be separated from their infants. The guidelines offered below may answer the many questions mothers have about safely storing their breastmilk.

### Collecting Breastmilk

- Wash hands well with soap and water.
- Wash all the collecting bottles and breastpump parts that touch your breasts or the milk. Use hot, soapy water or a dishwasher. Rinse carefully. Air dry on a clean towel. When soap and water are not available use Medela Quick Clean™ products. If your baby is premature or ill, the hospital may ask you to sterilize your pump parts.
- Read the instruction book that comes with your pump and follow the suggestions. Sterilize your pump parts once a day as described.
- Practice pumping when you are rested, relaxed and your breasts feel full. Once a day try to nurse your baby only on one side and pump the other breast. Or pump for a few minutes if your baby skips a feeding or nurses for only a short while. Read the *Breastmilk Storage* chart to learn how to store breastmilk. Be sure to use the right size breastshield so that your nipple fits comfortably. Medela makes different sizes of PersonalFit™ breastshields to fit all nipple sizes, from small to extra large.
- Employed moms can help their baby learn to take a bottle once breastfeeding is going well. It is best to wait for three (3) to four (4) weeks to introduce bottles. If you are having problems breastfeeding, ask for help from a lactation consultant or healthcare provider.
- Begin to pump to store milk one (1) to two (2) weeks before returning to work. Many employed moms use the fresh milk they pump at work for feedings the next day. They refrigerate Friday's milk for use on Monday. Save your frozen milk for emergencies.
- Pump three (3) times during an eight (8) hour work shift, or every three (3) hours you are away from your baby. Ten minutes of pumping during breaks and 15 minutes of pumping during lunch with a good pump will help protect your milk supply. If you can't pump three (3) times, pump as much as you can during each day.



Breastfeeding in the evening and on days off helps maintain your milk supply and protects your special bond with your baby.

### Storing Breastmilk

- It is normal for pumped milk to vary in color, consistency and scent depending on your diet. Stored milk separates into layers. Cream will rise to the top. Gently swirl the warmed bottle to mix the milk layers.
- You can continue to add small amounts of cooled breastmilk to the same refrigerated container throughout the day. Avoid adding warm milk to already cooled milk.
- Pumped milk may be added to frozen milk provided it is first chilled and the quantity is less than what is frozen.
- Store your milk in Medela's BPA-free breastmilk collection bottles or in disposable bags specifically designed for breastmilk, such as BPA-free Pump & Save™ Bags, by Medela.
- Freeze milk in two (2) to five (5) oz portions. Small amounts will thaw more quickly. You will waste less milk this way and will avoid over-feeding. Liquids expand when frozen. Be sure to leave some extra room at the top of the container so the bottle or bag won't burst.
- Seal containers tightly. Write the date on a piece of tape on the bag or bottle. Use the oldest milk first.
- Some mothers report their defrosted breastmilk has a soapy taste or odor. This is due to a normally occurring enzyme, lipase, which helps to digest the fat content of the breastmilk. To avoid this from occurring, scald the breastmilk (do not bring to a boil) on a stove until tiny bubbles appear along the sides of the pan; do this before it is frozen. The scalding process will neutralize the enzyme preventing the soapy taste or smell.
- If you do not plan to use the milk within a few days, freeze it right away in the coldest section of your freezer. Do not place the bottle or bag up against the wall of the freezer.



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Breastmilk Storage (For Healthy Term Babies)					
	Room Temperature	Cooler with 3 Frozen Ice Packs	Refrigerator	Self-contained Refrigerator Freezer Unit	Deep Freezer
Freshly expressed breastmilk	4 hours at 66-72°F (19-22 °C) <sup>1</sup>	24 hours at 59 °F (15 °C) <sup>1</sup>	5-7 days at 32-39 °F (0-4 °C) <sup>2</sup>	3-4 months <sup>3</sup>	6-12 months at 0 °F (-19 °C) <sup>3</sup>
Thawed breastmilk (previously frozen)	Do not store	Do not store	24 hours <sup>4</sup>	Never refreeze thawed milk	Never refreeze thawed milk

## Defrosting

- Thaw milk overnight in the refrigerator, or hold the bottle under warm running water to quickly thaw. You can also place the sealed container in a bowl of warm water for 20 minutes to bring it to body temperature.
- Thawed milk is safe in the refrigerator for 24 hours. **Do not refreeze.**

## CAUTION

*Never microwave breastmilk. Microwaving can cause severe burns to baby's mouth from hot spots that develop in the milk during microwaving. Microwaving can also change the composition of breastmilk.*

## Your Milk Supply and Your Baby's Needs

- We used to think that mothers needed to make more and more milk as their babies grew. Scientists now know that a healthy milk supply remains fairly constant over the six (6) months of exclusive breastfeeding.
- During the early weeks, babies eat very frequently and grow very quickly. By Day 10, babies should recover any lost birth weight. For the next few months, little girls should gain about an ounce a day, and little boys slightly more than an ounce.

- Around three (3) to four (4) months, a breastfed baby's rate of growth begins to slow down. Continuing to gain weight rapidly after this time may contribute to obesity later on. This means that the milk supply established in the early days will continue to satisfy the baby until it is time to introduce solids at 6 months.
- By the end of the first week of life, women who are breastfeeding one baby normally make between 19 to 30 oz of milk each day. Infants between one (1) and six (6) months of age normally drink an average of 19 to 30 oz a day<sup>3</sup>. An average size "meal" for a baby is between three (3) to five (5) oz of breastmilk. Formula is harder to digest and less well absorbed. Formula fed babies may need larger feeds. Consult your doctor for advice.

## Resources and References

**Got to [www.medela.com](http://www.medela.com) to educate yourself on products and information available for you and your baby.**

**To locate Medela products or a breastfeeding specialist in your area, go to [www.medela.com](http://www.medela.com) or call 1-800-TELL YOU, 24 hours a day, 7 days a week.**

### Some other excellent resources include:

- International Lactation Consultant Association [www.ilca.org](http://www.ilca.org)
- La Leche League International [www.llli.org](http://www.llli.org)
- United States Lactation Consultant Association [www.uslcaonline.org](http://www.uslcaonline.org)

### References:

- <sup>1</sup>Arnold L; Recommendations for Collection, Storage and Handling of a Mother's Milk for Her Own Infant in the Hospital Setting, 3rd Edition. The Human Milk Banking Association of North America, Inc. 1999, p.18.
- <sup>2</sup>Butte N, Garza C, Smith E, Nichols B: Human milk intake and growth in exclusively breast-fed infants, J Pediatrics 1984; 104:187-194.
- <sup>3</sup>Daly S, Owens R, Hartmann P: The Short-Term Synthesis and Infant-Regulated Removal of Milk in Lactating Women, Experimental Physiol 1993; 78:209-220.
- <sup>4</sup>Dewey K, Heinig M, Nommsen L, Pearson J, Lonnerdal B: Growth of breast-fed and formula-fed infants from 0-18 months. The DARLING study, Pediatrics 1992; 89(6):1035-1040.
- <sup>5</sup>Dewey K: Is breastfeeding protective against child obesity? J Human Lactation 2003; 19(1):9-18.
- <sup>6</sup>Hamosh M, Ellis L, Pollock D, et al: Breastfeeding and the Working Mother: Effect of Time and Temperature of Short-term Storage on Proteolysis, Lipolysis, and Bacterial Growth in Milk, Pediatrics 1996; 97(4):492-498.
- <sup>7</sup>Lawrence R and Lawrence R: Breastfeeding: A Guide for the Medical Profession, 1999.
- <sup>8</sup>Quan R, Yang C, Rubinstein S, et al: Effects of Microwave Radiation on Anti-infective Factors in Human Milk, Pediatrics 1992; 88:667-679.
- <sup>9</sup>Sosa R, Barness L: Bacterial growth in refrigerated human milk, Am J Dis Child 1987; 141:111-115.