

Storage and Use of Breastmilk

Containers for Storing Breastmilk:

- Store breastmilk in clean *glass or polypropylene containers with a tight fitting lid. These types of containers are best to keep the quality of your breastmilk.
***Clean:** The collection container can be washed in hot soapy water and rinsed in a dishwasher.
- Breastmilk can be stored in plastic bags specifically made for storing breastmilk. Always follow the instructions on the package.
- Bottle liner bags should **not be used** for breastmilk storage as they are made of thinner plastic that may break down when frozen.
- Always label each container with the date and time you expressed/pumped your milk.

Storage of Human Milk for Term Infants:

Human Milk	Room Temperature	Time in Refrigerator (Temp $\leq 4\text{C}$)	Time in Freezer (Temp $< -4\text{C}$ to -20C)
Freshly expressed	≤ 6 hours	≤ 5 days	Ideal: 3 months Optimal: ≤ 6 months Acceptable: ≤ 12 months in a deep freezer
Previously frozen, thawed in the refrigerator but not warmed	≤ 4 hours	≤ 24 hours	Do not refreeze
Previously frozen & brought to room temperature	For completion of feeding-up to an hour at room temperature and then throw away	≤ 4 hours	Do not refreeze
Infant has started feeding	Once infant begins drinking expressed human milk, throw away the remaining milk within 1-2 hours after the infant is finished feeding	≤ 4 hours	Do not refreeze
Thawed previously frozen pasteurized human donor milk	≤ 4 hours	≤ 48 hours	Do not refreeze
Frozen pasteurized human donor milk in a deep freeze	Not applicable	Not applicable	9-12 months from pumping date

Storage of Human Milk for NICU & High Risk Infants:

Human Milk	Room Temperature	Time in Refrigerator (Temp $\leq 4\text{C}$)	Time in Freezer (Temp $\leq -20\text{C}$)
Freshly expressed <i>Oral immune therapy (OIT): breastmilk used for OIT should be fresh or refrigerated and not frozen</i>	Ideal: Refrigerate immediately Acceptable: ≤ 4 hours if refrigeration not available	Ideal: ≤ 2 days Acceptable: ≤ 4 days	Ideal: 4 weeks (1 month) Optimal: 3 months Acceptable: $\leq 6-12$ months in a deep freezer (-18C or lower)
Previously frozen, thawed in the refrigerator but not warmed	Ideal: Refrigerate immediately if not using ≤ 4 hours at room temperature	≤ 24 hours	Do not refreeze
Previously frozen & brought to room temperature	Ideal: refrigerate immediately if not using For completion of current feed & throw away	4 hours	Do not refreeze
Infant has started feeding	Throw away once feeding completed	Throw away once feeding has started	Do not refreeze – throw away
Thawed previously frozen pasteurized human donor milk	Completion of current feeding then throw away	≤ 48 hours	Do not refreeze
Frozen pasteurized human donor milk in a deep freeze	Not applicable	Not applicable	Ideal: 3 months Acceptable: 6-12 months from date of pumping

Using Refrigerated for Frozen Breastmilk:

- Use the oldest milk first. Make sure that the milk has not passed the recommended storage time. If the milk has passed the recommended storage time, it should be thrown out.
- Do not heat or defrost breastmilk in a microwave. Microwaving breastmilk will destroy its vitamins and protective properties. Microwave ovens heat unevenly. Hot spots can burn your baby's mouth.
- If warming thawed or refrigerated breastmilk, place the container/milk bag upright into a clean bowl of warm water. Make sure that the water does not reach the container

lid/milk bag seal. This will help prevent bacteria/water from mixing with the breastmilk.

- If using frozen breastmilk:
 - Thaw in the refrigerator and **use within 24 hours**
Warm by placing the container/milk bag upright into a clean bowl of warm water for 5 minutes.
Once warmed for the feeding, **use within 1 hour** or throw it away.

OR

- Thaw **frozen** breastmilk by placing the container into a clean resealable food storage bag before placing it under cool running water.
Once the milk has started to thaw, place the container in a bowl of warm water for about 5 minutes, to complete thawing and warm the milk.
- When thawing frozen milk, label as thawed when completely thawed (i.e. no ice crystals present). Use the time when completely thawed to base acceptable time limits for use rather than when it is taken from the freezer.
- Gently mix warmed milk before use to blend any fat that has risen to the top.
- Do not refreeze thawed breastmilk.
- If you own a bottle warmer, always follow the manufacturer's instructions.

Tips for Storing Breastmilk

For the Healthy Term Infant:

- If you need to combine breastmilk from multiple expressed/pumping sessions, chill the breastmilk to the same temperature before adding it together. Label the container with the earliest date and time expressed/pumped.
- Avoid wasting breastmilk by storing small amounts, and feed according to your baby's early feeding cues.
- Fill the container $\frac{3}{4}$ full. Space is required to allow room for expansion when the breastmilk freezes.
- Store the breastmilk container at the back of the refrigerator or freezer where it is coldest but away from the fan.

For the NICU or High-Risk Infant:

For Oral Immune Therapy (OIT):

- Talk to baby's bedside nurse about how to give oral immune therapy
- See the handout titled: What is Colostrum?

- Volumes less than 1 mL should be stored in a 1 mL syringe and capped with a syringe tip cap and labelled with name, date and time.
- Once you are expressing/pumping more than 2 mL of breastmilk at a time, ask your baby's bedside nurse for the appropriate storage containers.
- Talk to your baby's health care provider and follow hospital instructions for labelling.
- As soon as you arrive at your baby's bedside, tell your baby's nurse that you have brought breastmilk with you.

Transporting Breastmilk:

Times referenced below are refrigerator to refrigerator or freezer to freezer

Short trips of less than 4 hours in temperate climate (refrigerator to refrigerator or freezer to freezer)	Trips of 4 to 20 hours
Pack chilled or frozen milk in a clean plastic bag and put in thermal lunch kit with frozen gel packs.	Line a hard-sided picnic cooler with a clean plastic bag and place frozen gel packs on the bottom and sides. Pack the frozen milk containers solidly together in the middle of the cooler.
Gel packs must be frozen solid and any extra space in the thermal lunch kit needs to be filled in with clean towels or paper.	Place frozen gel packs on top of the containers of milk. Tie the plastic bag shut to remove all extra air.
	Fill in any extra space in the cooler with clean towels or paper.
Large amounts of breastmilk that cannot fit in the thermal lunch kit can be packed into a hard-sided picnic cooler. Follow guidelines in the next section.	Seal the lid of the cooler using tape if needed.
	Always pack the milk for transport just prior to leaving and place the milk in the freezer immediately upon arrival at your destination. Check that the milk is still frozen.

- **Do not use ice** to pack your breastmilk as ice freezes at a higher temperature so it will actually thaw frozen breastmilk.
- Carry breastmilk in the trunk of your vehicle during the winter and in the passenger area during the summer.
- Once you arrive at your destination, place your stored breastmilk in the refrigerator or freezer **right away**. If your destination is the hospital, give your breastmilk to your baby's bedside nurse, and let the nurse know if it is frozen or refrigerated.

References:

- 1) Academy of Breastfeeding Medicine (2017). *ABM Clinical Protocol #8: Human milk storage information for home use of full-term infants*. Vol 12, Num 7. Retrieved from www.bfmed.org.
- 2) Spencer, B., Hetzel-Campbell, S., & Chamberlain, K. (2024). *Core Curriculum for Interdisciplinary Lactation Care*, 2nd Ed. Burlington, MA: Jones & Bartlett Learning.
- 3) Jones, F. (2019). *Best Practice for Expressing, Storing and Handling Human Milk*, 4th Ed. Human Milk Banking Association of North America.

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