# STORING HUMAN MILK

**UPDATED FEBRUARY 2022**

LA LECHE LEAGUE CANADA

There may be times when you wish to express and store your own milk for later use. Human milk is remarkably resilient and stores well, due to its antibacterial properties. However it is always preferable to store milk for as short a time as possible. In other words, the fresher the milk, the better. Storing your milk safely will help to maintain its quality and minimize the loss of antibodies and nutrients while in storage. The first step is to always wash your hands in hot soapy water before expressing milk.

## Types of Storage Containers

It is important to label every container of milk with the date it was expressed. Put your baby's name on the label if the milk will be given to your baby in a day care setting.

**Reusable Hard Containers**

- Glass or hard plastic containers with well-fitting lids (for example, small mason jars or bottles) are excellent choices.
- If using plastic containers, avoid the chemical bisphenol A (BPA) and bisphenol S (BPS).
- Wash containers in hot, soapy water, rinse well, and allow them to air-dry before filling with expressed milk, or wash and dry in a dishwasher.
- If freezing your milk, leave an inch of space to allow the milk to expand as it freezes. (You don't want your containers to break or the lid to come off in the freezer!)


**Milk Storage Bags**

- Choose bags that are specifically designed for storing human milk. (Bottle liner bags and plastic food bags are not considered safe storage options because they may leak and the type of plastic may destroy some nutrients in human milk). Double-bagging can help prevent leakage accidents.
- Squeeze out the air at the top before sealing and allow about an inch for the milk to expand if it is going to be frozen.
- Stand the bags in a rigid container in the refrigerator or freezer.

**How much milk to put in each container**

- In order to avoid wasting milk, store in a variety of amounts, perhaps 15ml, 30ml, 60ml and 120ml, depending on the age of your baby.
- Note: any milk that touches your baby's mouth during a feeding will need to be thrown out within 1-2 hours if it isn't consumed. Storing in a variety of volumes allows you to choose the amount your baby is likely to want to eat at a single feeding and avoid wasting valuable milk.
- Smaller quantities are easier to thaw.
- Any milk expressed in the same 24-hour period can be added to the same container in the refrigerator. First, cool the newly expressed milk in a separate container in the refrigerator for 30 to 60 minutes and then add it to the container of milk already in the refrigerator.

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## MILK STORAGE GUIDELINES

| Where | Temperature | Maximum Storage Time |
|---|---|---|
| At room temperature (fresh milk) | 16° to 26°C | **4 hours optimal; 6 -8 hours** under very clean conditions and at lower room temperatures. (It is optimal to refrigerate or chill milk right after it is expressed.) |
| Insulated cooler bag | -15°C to 4°C | **24 hours** (This number is based on limited research. The less time the better. The ice packs should be touching the milk storage containers and opening of the bag should be minimized.) |
| Refrigerator | <4°C | **4 days optimal; 5-8** under very clean conditions |
| Freezer compartment inside a refrigerator (inside an bar-style fridge, for example) | -15°C | **2 weeks** |
| Freezer compartment of a refrigerator with a separate door (standard home freezer) | -18° to -20°C | **3 months optimal; 6 months acceptable** |
| Deep freezer | -18° to -20°C | **6 months optimal; 12 months acceptable** |

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### Warming Milk

- Milk does not need to be warmed to a particular temperature. Babies can drink milk straight from the refrigerator or at room temperature but many do often prefer it to be warmed to body temperature.
- Be careful not to place glass straight from the freezer under very warm water because the glass can break.
- Frozen milk can be thawed by:
  - being placed in the refrigerator overnight,
  - using an electric milk warmer,
  - being held under warm running water,
  - placed in a cup of warm water (no more than 40°C).
- Slow thawing in the refrigerator results in less fat loss than thawing using warm water.
- Thawed milk or milk that has been refrigerated can be warmed slowly under lukewarm water, placed in a cup of warm water or warmed using an electric warming device.
- Avoid boiling human milk as this causes the loss of valuable nutrients.
- Avoid microwaving human milk as this heats the milk unevenly, creating hot spots that may burn the baby's mouth when the baby drinks it. Microwaving also causes the loss of important nutrients. (ABM, 2017).

### Using Stored Milk

- Cold milk that is warmed but untouched can be returned to the fridge for a later feeding.
- Milk that is left over in the container after the baby drinks from it can be given to the baby within the next 1-2 hours. After that time it should be discarded.
- Frozen milk which has been thawed can be kept in the refrigerator for up to 24 hours. After that it should be discarded, not refrozen.
- Remember that refrigerated milk will stay fresher than milk that was once frozen. It is helpful to plan ahead before deciding whether to refrigerate or freeze your milk.
- Avoid mixing human milk with formula to make a full feeding. When cow's milk formula is mixed with expressed human milk, there is a decrease in the number of lysozymes in human milk and a potential increase in E-coli (Jones, 2019).

### Some Other Thoughts

- Human milk may separate into a milk layer and a cream layer when it is stored. This is normal. Swirl it gently to mix it up before giving it to your baby.
- If you have thrush (overgrowth of yeast in the body), you can continue to breastfeed your baby during treatment. Milk expressed during treatment for thrush is safe to give your baby but it should be labelled to indicate that you had thrush at the time. It is important to note that refrigeration and freezing does not kill yeast. There is no evidence that feeding your baby milk that was expressed during a yeast outbreak leads to a recurrence of the yeast infection.
- Occasionally, breastmilk that has been frozen and thawed may smell soapy or metallic, or just different than fresh milk. This is due to the breakdown of milk fats over time. This milk is safe and most babies will still drink it.
- Milk that is stringy, smells foul should be thrown out and not fed to your baby.



References

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