



STRONGER WITH BREASTMILK ONLY

No water until 6 months for a healthier baby



Breastmilk Expression, Storage and Feeding

Breastfeeding is one of the most effective interventions for child survival, growth and overall healthy development. Evidence on the power of breastfeeding for saving lives, saving national spending, and benefitting both children and mother's health and development have been demonstrated in extensive research and documentation of practice.

Yet, although breastfeeding is common in West and Central Africa region, only 3 out of 10 babies aged under six months in the region are exclusively breastfed¹. Giving babies water, other liquids and foods during these critical first six months of life can have a negative impact, exposing them to illness and malnutrition and threatening their lives. Since milk supply is dependent on time spent suckling the breast, giving water, other liquids and foods, decreases the amount of milk produced. This initiates a perilous cycle that challenges the growth, health and survival of infants.

There is evidence that feeding expressed breastmilk contributes to higher exclusive breastfeeding rates². Expressing breastmilk enables mothers of infants younger than six months to sustain exclusive breastfeeding on returning to work, school or other responsibilities, as their babies can be fed with the expressed milk in their absence by another person.

This fact sheet shares information on:

- When should a mother express breastmilk?
- What are the benefits of expressing breastmilk?
- How to express breastmilk?
- How to store expressed breastmilk
- How to feed a baby expressed milk?

When should a mother express breastmilk?

While breastfeeding is the most efficient way of stimulating the mother's milk supply, all breastfeeding mothers should be encouraged to learn how to express breastmilk when needed. Expressing breastmilk is a practical way that mothers and their families can ensure the baby receives only breastmilk in the first six months of life.

There are situations in which expressing breastmilk can be useful:

- The mother is separated from her baby, due to particular prematurity, sickness, surgery, returning to work or school, or other responsibilities when the mother is outside or unavailable.
- A low-birth-weight baby who is unable to breastfeed.
- There are breastfeeding difficulties due to inability to latch, blocked ducts, mastitis or engorged breasts.
- A medication is incompatible to feed the baby directly at breast and for which there is no safe alternative prescribed to enable the baby to suckle.

What are the benefits of expressing breastmilk?

Expressing breastmilk is useful:

For the mother

- Prevent the nipple and areola from becoming dry and sore
- Prevent leaking when she is away from her baby
- Sustain breastfeeding
- Maintain or increase milk supply

For the baby

- To be fed with her mother's milk
- Feed a sick baby, who cannot suckle enough
- Maintain or increase milk supply
- Feed a baby while he learns to suckle from an inverted nipple

Does feeding a baby expressed breastmilk deplete the mother's breastmilk supply?

The quantity of milk extracted from hand expression or pumping is not an indication of the mother's milk supply. Milk production is a demand and supply process. As milk is removed from the mother's breasts, her body is signaled to make more milk. The more thoroughly and frequently she removes milk from her breasts, especially in the early days and weeks, the more milk she will make and the greater the benefit for her long-term supply. Although a well-attached baby is far more effective than any expressing breastmilk method, expressing milk by hand or with a pump helps to establish, increase and maintain breastmilk production if the mother is separated from her baby or if the baby isn't breastfeeding well.

How to express breastmilk?

The reason a mother is expressing her breastmilk will determine the method she uses, whether and how she stores the breastmilk, and whether it is long-term or occasional.

Expressing breastmilk, both by hand and mechanically, is a learned skill. It will become easier and faster as the mother gains experience. Mothers should be encouraged to persevere even if it may be challenging at first.

Nevertheless, the easiest way for a mother to express milk is by hand. It needs no appliance, so the mother can do it anywhere and at any time. Hand expressing is readily available, convenient, costs nothing and effective. It can be also less time-consuming than using a breast pump, as there are no parts to be put

together or washed. If hand expression is difficult, then a mother can use a breast pump (manual or electric).

We strongly recommend health workers to encourage the mother in understanding information to support her choice of the appropriate method of expression based on her personal situation.

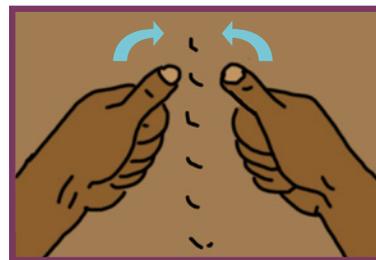
A mother may need to stimulate the oxytocin reflex before expressing breastmilk

Before the mother expresses her milk, she should stimulate her oxytocin reflex, to help the milk flow.

She may do this herself by lightly massaging her breasts, or stimulating her nipples, and at the same time thinking about the baby, watching him or her if nearby, or looking at a photograph of him or her.

She can also ask a helper to massage up and down her back on either side of her spine between her shoulder blades.

The oxytocin reflex may not work as well when a mother expresses as it does when a baby suckles. A mother needs to know how to help her oxytocin reflex, or she may find it difficult to express her milk.



How to express breastmilk by hand (WHO, Infant and young child feeding: model chapter for textbooks for medical students and allied health professionals, 2009)

The mother should:

- ☑ Have a clean, dry, wide-necked container for the expressed breastmilk;
- ☑ Wash her hands thoroughly;
- ☑ Sit or stand comfortably and hold the container under her nipple and areola;
- ☑ Put her thumb on top of her breast and her first finger on the underside of her breast so that they are opposite each other about 4 cms from the tip of the nipple;
- ☑ Compress and release her breast between her finger and thumb a few times. If milk does not appear, re-position her thumb and finger a little closer or further away from the nipple and compress and release a number of times as before. This should not hurt - if it hurts, the technique is wrong. At first no milk may come, but after compressing a few times, milk starts to drip out. It may flow in streams if the oxytocin reflex is active; Compress and release all the way around her breast, with her finger and thumb at the same distance from the nipple;
- ☑ Express each breast until the milk drips slowly;
- ☑ Repeat expressing from each breast 5 to 6 times;
- ☑ Stop expressing when milk drips slowly from the start of compression, and does not flow;
- ☑ Avoid rubbing or sliding her fingers along the skin;
- ☑ Avoid squeezing or pinching the nipple itself.

What is the recommended moment to express her breastmilk?

If a baby is not able to breastfeed, the mother should begin as soon as possible after birth.

A mother who is constrained to be separated from her baby due to various reasons, should begin to express her breastmilk about two weeks before she plans to return to work, school or other responsibilities.

The best timing to start expressing is right before anticipated feeding times while the baby is still sleeping. Early mornings are also usually a good time because the breasts will feel heavy with breastmilk.

What is the recommended duration and frequency of expressing her breastmilk?

To express breastmilk adequately takes 20 - 30 minutes, especially in the first few days when only a little milk may be produced. It is important not to try to express in a shorter time. To maintain milk production, a mother should express as much as she can as often as her baby would feed, at least every 3 hours during daytime, and once at night, with a total of about 6-8 times per 24 hours.

Breastmilk may look different when expressed

It's perfectly normal for expressed milk to look thin, bluish, yellowish or even brownish in colour and for it to separate into a milk layer and a cream layer when stored.

How to store expressed breastmilk?

In which containers expressed breastmilk can be stored?

Hard-sided containers, either glass or plastic (cup, glass, jug or jar) are best placed to protect expressed breastmilk. Containers should also have well-fitting tops.



Before use, it is important to wash containers in hot, soapy water, rinse them well, and allow them to air-dry, but away from wind, dust, insects, etc. to reduce the risk of contamination. Avoid bags that are not designed for freezing as they may burst or tear.

Mothers should date the containers and add their baby's name if she/he will receive the milk at a childminder's or nursery.

How much milk should be stored in a container?

Unless the mother knows how much milk her baby takes at a feed, it is recommended to store milk in 60 to 120ml quantities to avoid waste. Small quantities thaw quickly and can be combined if needed.

Storage conditions and hygiene

Breastmilk’s antibacterial properties help it stay fresh. The live cells and antibodies that discourage the growth of bacteria in the baby’s intestines also guard against bacterial growth when breastmilk is expressed and stored in a clean container.

Although a mother’s breasts and nipples do not need to be washed or cleaned, good hygiene is important when storing her milk. To avoid contaminating of her milk, it is essential to:

- Wash hands before expressing or handling milk;
- When using a breastmilk pump, keep it clean; using hot soapy water for all parts which come into contact with the milk. It can be sterilized as well;
- Keep fridge, freezer, cool bag and icepacks clean;
- Place containers of the milk in a clean bag or lidded box before storing;
- Keep the milk away from meat, eggs, etc.



At what temperature should expressed breastmilk be stored?

Breastmilk is remarkably resilient - it stores well due to its antibacterial properties. Breastmilk’s antibacterial properties help it stay fresh, so it can be safely stored in a closed container or covered with a cloth or plate at room temperature for up to 8 hours. If stored in a sterile container, expressed breastmilk can be kept for 24 hours at 18o-20oC in a shady place, for about 72 hours in a refrigerator (at 4o-5oC) and for about four months in a freezer (at -18o to -20oC).

If away from home or in the context of high temperatures, the mother could use a cool bag with ice packs. The fresher your milk, the better. Store milk in the coldest part of fridge and freezer.

Should a mother store her milk in a fridge or a freezer?

Breastmilk stored in the fridge will be of higher quality than frozen milk. Some of the anti-infective properties are lost when milk is frozen—but it still helps protect babies from disease and allergies and is far superior to any formula.

Expressed breastmilk can be kept in a common fridge at work or at the childcare centre and labeled clearly. If a fridge isn’t available, it can be placed in an insulated container with deep frozen ice packs. With enough icepacks, expressed breastmilk will stay at fridge temperatures for up to 24 hours. Icepacks are also useful when carrying milk home from work or to childcare, especially on warm days. But breastmilk can



be safely refrigerated or frozen after short periods of storage at higher temperatures.

There isn't yet complete agreement about storage times. But it's always preferable to store milk for as short a time as possible to ensure minimal growth of bacteria and minimal loss of antibodies and nutrients.

Mothers should be advised on more specific storage guidelines to ensure that their baby gets as much benefit from their milk as possible.

How to feed a baby expressed milk?

To feed the baby, the frozen breastmilk needs to be thawed by placing the container in the refrigerator for at least 4 hours. Thawed breastmilk should be used immediately or stored in the refrigerator for no longer than 24 hours. Breastmilk that has been frozen and thawed will separate into layers, with the fat rising to the top. The breastmilk can be gently shaken or mixed before it is fed to the baby. Thawed breastmilk may have a different smell and taste than freshly expressed breast milk. It is still safe for use if the date of the thawed breast milk has not expired, with respect to storage times mentioned above.

Thawed or refrigerated breastmilk can be warmed by placing it in a bowl of warm water. The warmed breastmilk should be used within an hour.

USEFUL RESOURCES

How to express your first milk: <https://globalhealthmedia.org/portfolio-items/how-to-express-your-first-milk/?portfolioCats=191%2C94%2C13%2C23%2C65>

Breastfeeding When You Go Back to Work - Nutrition Series: <https://www.youtube.com/watch?v=Qn1J-vrOmZ8&feature=youtu.be>

Breastfeeding for working mothers: https://www.youtube.com/watch?v=tT103Ns_fx4&feature=youtu.be

How to express breastmilk: <https://globalhealthmedia.org/portfolio-items/how-to-express-breastmilk/?portfolioCats=191%2C94%2C13%2C23%2C65>

Making enough milk: <https://globalhealthmedia.org/portfolio-items/not-enough-milk/?portfolioCats=191%2C94%2C13%2C23%2C65>

Providing the right volume of milk: <https://globalhealthmedia.org/portfolio-items/is-your-baby-getting-enough-milk/?portfolioCats=191%2C94%2C13%2C23%2C65>

Storing breastmilk safely: <https://globalhealthmedia.org/portfolio-items/storing-breastmilk-safely/?portfolioCats=191%2C94%2C13%2C23%2C65>

Expressing and storing breastmilk: <https://globalhealthmedia.org/portfolio-items/expressing-and-storing-breastmilk/?portfolioCats=191%2C94%2C13%2C23%2C65>

Increasing your milk supply: <https://globalhealthmedia.org/portfolio-items/increasing-your-milk-supply/?portfolioCats=191%2C94%2C13%2C23%2C65>

Other references

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- Silvestre, D *et al.* Bactericidal activity of human milk: Stability during storage. *Br J Biomed Sci* 2006; 63: 59-62.

Endnotes

- 1 UNICEF Global databases, 2019. <https://data.unicef.org/topic/nutrition/infant-and-young-child-feeding/>; accessed 10 July 2010
- 2 Labiner-Wolfe J, Fein SB, Shealy KR, Wang C. Prevalence of breast milk expression and associated factors. *Pediatrics* 2008; 122: S63-S68
Hornbeak DM, Dirani M, Sham WK, Li J, Young TI, Wang TY *et al.* Emerging trends in breastfeeding practices in Singaporean Chinese women: findings from a population-based study. *Ann Acad Med Singapore* 2010; 39: 88-94s



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No water until 6 months
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Protecting, promoting and supporting giving babies
breastmilk only, no water for the first six months of
life in West And Central Africa.

Consult the *Stronger With Breastmilk Only Reference List* for more information