

Breastmilk Storage

Women in your care may be expressing for a number of reasons, and if baby is in hospital, or if she is expressing for a milk bank, there will be specific guidance which you should follow.

Once Mums are home some input from you will clarify and help to avoid milk wastage and confusion.

A Living Substance

Expressed breastmilk (EBM) is a living substance with many precious properties specific to one mother and her baby at that time, so ideally the baby who is not fed at the breast will be given the milk as soon as possible after it is expressed in order to benefit from all its nutritional and immunity-boosting qualities. Milk kept in the fridge will maintain more of its anti-infective properties than milk from the freezer.

Because of its anti-bacterial properties, breastmilk remains good to feed for up to 4 hours if left at room temperature (below 25 degrees Celsius) – or even up to 6 or 8 hours may be acceptable¹, assuming hands and containers are clean, and have been washed in hot soapy water and rinsed before use. This knowledge is reassuring to mothers, and can be especially helpful when there are feeding problems in the early days, and parents are struggling to adapt to multiple demands of new parenting in difficult circumstances.

If a baby does not finish the feed in one sitting, she should discard the milk after one hour.

Parents may be advised that milk expressed at different times may have a very different appearance and colour. This is normal. It is also normal for the milk to separate. EBM should be gently rotated to mix it, rather than shaken². It will mix more easily at room temperature than when cold.

Labels and Containers

EBM should be stored in small quantities to avoid waste, and labelled with date and time (and name if it is being used from a shared fridge or freezer). Containers made using Bisphenol A or S (BPA/BPS) should be avoided due to the theoretical leaching of harmful chemicals into the milk³. Glass containers are preferable, but should not be frozen as the expansion of the liquid as it freezes can cause glass to shatter. Breastmilk Storage Bags will store EBM in a safe, easily labelled manner, though care should be taken to layer them with kitchen towel, or stand carefully so that they do not stick together causing potential damage to the bags and leakage.

Warming EBM

While some babies are happy to drink EBM cold, others prefer for it to be warmed at least to a temperature that is similar to what it is when they are feeding at the breast. EBM should not be heated directly, or in the microwave because of the danger of 'hot spots'. Instead can be gently warmed in the breastmilk storage bag or container under hot tap, in a bowl of warm water, or in a bain marie. EBM should be tested on the inside of the wrist before feeding.

Alternatively, EBM can be defrosted in the refrigerator. Thawed breastmilk should not be re-frozen once defrosted. Refrigerated EBM can be warmed gently by holding the container under running warm water, or standing in warm water. It is also acceptable to thaw frozen EBM under running cool and progressively warmer water.

Occasionally, defrosted milk may have a strong smell due to enzyme activity or changes in milk fats and baby may refuse it. If a mother find this to be the case she may be reassured that it is to do with the level of lipase in her milk, and that by bringing the milk to scalding point before freezing rapidly will inactivate the lipase⁴. If the breastmilk has not been scalded before freezing, it cannot be deactivated afterward. Some babies will take this milk while others will refuse it. There is no harm in baby being offered it.

Thrush

EBM should never be heated in a microwave or directly on the hob. The exception to this may be if Mum has expressed during an outbreak of thrush. That EBM may be fed to baby during the outbreak, but once it has cleared, any frozen EBM should be either discarded or boiled before use as freezing does not destroy yeast⁴. Be wary of "hot spots" in heated milk and ensure safe temperature before giving to baby.

References

1. *US Centres for Disease Control and Prevention (Accessed April 2015)* http://www.cdc.gov/breastfeeding/recommendations/handling_breastmilk.htm
2. *Smith L, "Don't shake the Milk" accessed (April 2015) at <http://www.bftrc.com/ljs/breastfeeding/shakenot.htm>*
3. *Liao et al. 2011 "Bisphenol S in Urine from the US and seven Asian Countries", J of Environ. Sc and Tech.*
4. *Mohrbacher and Stock (2008), "The Breastfeeding Answer book", LLLI US.*

Milk Storage Guidelines: EBM defrosted outside the fridge should be used immediately, or within 24 hours from the fridge.

WHERE	Temperature	Length of Time	Additional info.
Room temp. (fresh milk)	Up to 25°C	Ideally up to 4 hours. Up to 6 or 8 hours may be acceptable	Less in warm weather. Keep cool by standing container in cool water or covering with a clean, cool, damp cloth.
Insulated cool bag	Below 4°C	Up to 24 hours	Keep ice packs in contact with EBM container. Only open if necessary.
In the fridge.	Below 4°C	Advice varies from 3-8 days. 72 hours recommended. 24 hours only if previously frozen.	Collect EBM as clean and hygienically as possible and store towards the back of the unit.
Freezer compartment of fridge (same door)	-15°C	2 weeks. (Beware of temperature variations)	Store towards the back, where temperature is most constant.
Freezer (separate door)	-18°C	3-6 months	
Deep freeze (chest freezer)	-20°C	6-12 months	

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