

Unusual Odors in Pumped Breastmilk

Some women find that their expressed (pumped) milk has a **sour, soapy or rancid smell**. The odor may become apparent after your milk has been in the refrigerator a few days, or when you defrost your frozen milk. This may happen for several reasons.

If your milk smells soapy, the cause is probably **lipase**, an enzyme in the milk that helps break down the fat so it is more digestible. Once the milk is expressed, lipase may cause a rapid break down of fats in the expressed milk, causing a soapy smell and taste. This break down may occur shortly after the milk is expressed, or it may occur after the expressed milk is frozen and then defrosted. Some babies will reject the milk, however the milk is not harmful and it is fine for your baby.

Before stockpiling large amounts of frozen milk, freeze and defrost some of your pumped milk to test for a soapy smell. This will keep you from wasting large amounts of frozen milk as there is nothing you can do to reverse the breakdown once it occurs. **If you notice a soapy smell and your baby rejects the milk**, you can heat your freshly pumped milk in a saucepan on the stove just to the scalding point* before you store it. This deactivates the lipase enzyme. Quickly cool the milk and store it in the refrigerator or freezer. **Scalding point is when small bubbles form around the outside of the pan (180 F or 82 C). Avoid a full, rolling boil of the milk, as this may decrease beneficial components of your milk.*

Make sure that you are following proper **milk storage guidelines**. See our information on **Collecting and Storing Pumped Milk** for more details.

If you follow current milk storage guidelines and notice that your milk **smells rancid or sour** when you remove it from the refrigerator or freezer, **the cause may be oxidation of fatty acids**, rather than lipase. It's also possible that your intake of polyunsaturated fats, or free copper or iron ions in your water, may be involved. Here are a few suggestions:

- Drink bottled water, rather than tap water, when possible.
- Avoid fish-oil, flaxseed supplements, and foods that contain rancid fats (e.g. anchovies).
- Strive for a diet rich in antioxidants, including berries, nuts, dark green vegetables, sweet potatoes, beans, whole grains, and fish.

If you have frozen milk that your child refuses:

- Try mixing the “rejected” frozen milk with fresh milk. Start with half frozen, half fresh and adjust the amount of frozen milk up or down depending on your child's preferences.
- Consider donating your frozen milk to a milk bank. Lipase and other taste issues are not usually a problem for milk banks. See our information on **Milk Collection and Outreach Centers** for additional guidance.

It is normal for expressed milk to separate when it is stored in the refrigerator. This is not a problem. Swirling the milk gently will disperse the fat globules. Separated milk does not smell bad.

MilkWorks
LINCOLN & OMAHA



**Community
Breastfeeding
Center**

5930 S. 58th Street
(in the Trade Center)
Lincoln, NE 68516
(402) 423-6402

10818 Elm Street
Rockbrook Village
Omaha, NE 68144
(402) 502-0617

For additional
information:

www.milkworks.org