



Increasing fat in mothers' milk

The amount of fat in breast milk can vary during a pumping session and at different times of the day. If the baby doesn't get enough fat, he or she may have trouble gaining weight. Fat in mothers' milk can be increased to help babies grow.

Foremilk and hindmilk

The first milk that comes out of the breast during a pumping or feeding session is called "foremilk." Foremilk mostly water. It contains protein and other nutrients, but it is low in calories and fat.

As the breast is emptied, the amount of fat in the milk gets higher and the milk has more calories. The milk at the very end of a pumping or breastfeeding session is called "hindmilk."

The milk can be separated to collect milk that is higher in fat and calories. If a mother makes lots of milk (more than 900 ml per day), or if she gets a lot at one pumping (more than 200 ml), the milk might be watery. It may need to be separated to increase the fat.

It is helpful to know how much milk is obtained from each breast at each pumping session. The mother can be instructed to remove the first one-third that is pumped. For example, if the mother normally pumps 60 ml on each breast, the first 20 ml (foremilk) can be removed and frozen for later use. The remaining 40 ml can be fed to the baby.

Testing the fat

The Creamatocrit Plus can be used to measure the amount of fat and calories in the breast milk, letting the baby's care team know exactly how many calories the baby is getting. Generally, human milk contains about 20 calories per ounce, but the fat content can vary greatly throughout the day and during a single pumping session. To better understand the fat and calories of a mother's breast milk, mothers can save milk that has been pumped at different times of the day so it can be tested.

Fractionation of human milk

Because the fat content of human milk varies from mother to mother and during individual pumping sessions, the Creamatocrit Plus centrifuge is used to evaluate the fat and calorie content of the milk. Mothers can be assisted in separating their milk to provide the best nutrition to their infant.

Directions for separating milk:

- Have extra breast milk storage containers ready.
- Begin pumping breasts with the breast pump. About two minutes after the milk starts flowing steadily, turn the pump off, pour this milk into a separate container and label it "foremilk." This should equal about one-third of the usual amount the mother pumps.
- Continue pumping until the milk flow stops, then for two more minutes. Label these bottles "hindmilk."
- The mother's milk may need to be separated a few times before the baby's care team determines which is the best milk to feed to the baby.
- Hindmilk can be fed to the baby to help him or her grow.

Skim milk

Some infants — such as those with chylothorax — may require fat free milk. The breast milk can be spun in a cold centrifuge to create skim milk. The milk can be tested on the Creamatocrit Plus to ensure it is under a certain number of calories. This allows the infant to get the immuno-biological and nutritional benefits of human milk.