

Estimating a mother's breastmilk supply

Lactation Consultants often need to estimate a mother's breastmilk supply to determine what course of action would be best and what recommendations to give the mother. This can be done using test weights or by having the mother use a breast pump for several consecutive hours.

- *Mothers can have a breastmilk supply that is:*
 - *excessive (more than her baby needs)*
 - *adequate (supports normal weight gain)*
 - *borderline (supports slow weight gain)*
 - *inadequate (does not support normal weight gain)*

Estimating the mother's breastmilk supply using test weights



Using a digital scale that is accurate to a 1-2 ml, determine the scale is level by assuring the leveling bubble is centered. Do not allow blankets or clothing to hang over the edge of the scale touching any surface. Weigh the baby before and after feedings. Subtract the before feeding weight from the after feeding weight to determine the amount of the feeding (some scales do this for you automatically). He must be in the same clothes and diaper at both weights. A one-time feeding with a test weight can give you an indication of the mother's

milk supply. However a one-time test may be subject to sluggish let-down due or distraction or sleepiness of the infant. If test weights can be done at several feedings, you can get an average of the mother's output. This will give you a clearer picture of her supply. The mother may need to rent a good quality digital scale to do test weights at home.

Estimating the mother's breast milk supply using serial pumping

Instruct the mother to use a hospital grade breast pump every hour for three consecutive hours. The milk obtained will diminish each hour. The amount pumped at fourth sessions d will be her milk production per hour. Multiply the amount obtained in the 4th pumping X 24 to obtain daily production.

	Time	Volume Right	Volume Left
First Hour			
Second Hour			
Third Hour			
Fourth Hour			



Estimating the infants recommended intake

A good rule of thumb for determining the infant's intake per day is to multiply the infant's weight by 2.5. Then, divide the total intake by the number of feedings per day to determine the feeding size.

Infant's weight X 2.5 = Total intake per day

Total intake per day / number of feeds per day = Ounces per feeding

Baby Timmy weighs 8#. So, Timmy needs 20 ounces per day to maintain normal growth. He feeds an average of 8 times each 24 hours. So his intake per feeding should be about 2.5 ounces. If the weight gain in his AC/PC test breastfeeding is about 2.5 ounces, then his mother's breastmilk supply is adequate. But he actually got about 1.5 ounces in his test weighing. So he will need a supplement of one ounce per feeding until his mother's milk supply is increased to meet his needs.

Baby Monica weighs 6 ½#. Her test weight showed she gained 3 ounces during the feeding and the mother states she does not feel her breasts are "emptied". She is able to pump 1.5 ounces after the feeding. Monica needs 16 ¾ oz per day. She feeds an average of 10 times each 24 hours. So, she needs 1.6 oz per feeding. Her mother is over-producing 2.9 oz each feeding. She would undoubtedly also have some other symptoms of over-supply such as uncomfortably full breasts, perhaps plugged ducts. The baby may experience colicky symptoms, loose, frequent, greenish stools and gas from an imbalance of foremilk and hindmilk.

This method of calculating an infant's intake may not be accurate for premature infants or those who are severely under weight and need extra calories for catch-up growth. Consult with the infant's physician for guidance.

Temporarily supplementing the feedings until the mother's milk supply increases

Visit <http://www.LERon-line.com/AltFdgDevices.htm> and http://www.LERon-line.com/Bottle_Feeding.htm for details about techniques to supplement a baby without jeopardizing breastfeeding.

Recommendations to increase a mother's breastmilk supply

Get the best latch-on possible. Teach the mother how to check for a good latch-on and make sure that the baby achieves and maintains that through each feeding.

Completely empty the breasts at each feeding. The baby can do this by feeding on both breasts, then returning to each one for another short feeding to completely empty them, if necessary. The mother can use a breast pump at the end of most feedings to make sure they are completely empty. Milk contains a protein, the FIL factor (Feedback Inhibitor of Lactation) that tells the milk producing cells to cut down milk production. So any milk remaining in the breasts at the end of the feeding should be removed.

Eat and drink adequately. A good well-rounded diet gives the mother the nutrients she needs to meet her daily activities as well as produce breastmilk. Mothers should drink to thirst and they are usually



thirstier. A good rule of thumb is to drink enough fluids to make the urine a **pale yellow** color. If it is yellow or brownish she needs to drink more.

Feed the baby through the night. Prolactin levels are highest at night and breastfeeding or pumping can be most effective in increasing supply at this time.

Beer has been recommended for decades as a galactagogue (agent to increase breastmilk supply). It is thought that the B vitamins in beer are good for breastmilk supply, others think that the alcohol content helps mothers relax and achieve more let-down reflexes. Studies have shown that babies consume less milk at a feeding where alcohol is present. Mother's should use their discretion on this topic.

A variety of herbs including Fenugreek, Goat's Rue and Blessed Thistle are known to increase supply. They are available as tinctures (the strongest preparation), tablets (next strongest preparation) and teas (mildest preparation). Mother's Milk tea, a blend of several herbs is widely available at grocery and health food stores. Discuss these recommendations with the mother's physician.

Discontinue the use of a nipple shield. Using a nipple shield decreases the amount of stimulation to the breast and the amount of milk transferred. Both can adversely affect supply. If a nipple shield is required, and you feel the shield is affecting milk transfer, the infant will need supplementation while using the nipple shield.

Oats are widely recognized to increase milk supply. Mothers can eat a big bowl of oatmeal daily or oatmeal cookies until their supply seems to increase.

Metaclopramide (Reglan) is a prescription drug that can help some mothers increase supply. It is usually taken 10 mg three times per day for 10 days. It can be repeated if necessary. Consult with the mother's obstetrician. Depression is the most common side effect.

Massage and breast compression. Instruct mothers how to massage their breasts throughout feedings from the outer area towards the nipple. This can significantly increase the amount of milk that is transferred to the baby. Periodically the mother should compress the whole breast. For detailed instructions of how to do this, [click here](#).

Stop taking any medications that are known to decrease supply. All of the following have been associated with lowering milk supply: birth control pills, antihistamines and some decongestants, some weight loss medications or appetite suppressants, very high doses of vitamin B-6, diuretics, etc.

Check for thyroid function and anemia (refer to mother's MD). If increasing supply does not respond to the usual methods, low thyroid or anemia may be suspected. Other symptoms of low thyroid include excessive hair loss, dry skin, increased sensitivity to cold, loss of appetite, extreme fatigue, depression, and a swelling in the neck area. Symptoms of anemia are paleness of the inside of the lower eyelid, fatigue, lethargy, and dizziness.

Stop smoking. Mothers who smoke more than 20 cigarettes a day often experience a lower milk supply. Their babies also tend to gain weight more slowly than the babies of mothers who smoke fewer cigarettes each day or those who do not smoke at all.



Retained placenta can reduce supply or delay the milk coming-in. Excessive or prolonged post-partum bleeding is the most common symptom. Instruct the mother to check with her health care provider to see if treatment is needed.

Insufficient glandular development. Very rarely, the milk ducts and alveoli have not developed well enough to produce normal volumes of breastmilk. Mothers with this condition typically report that their breasts did not change in size or shape during pregnancy and there may be a marked difference in the size or shape of the breasts. Commonly there is an unusually large space between the breasts. The milk does not come-in as expected and the breasts never feel full or engorged. These mothers should still be encouraged to breastfeed if there is some milk present. While their babies will need to be supplemented in order to receive enough calories, the amount of mother's milk received will still be invaluable.

Discontinue the use of a pacifier. Along with compromising milk supply, pacifiers have also been linked to greater incidence of ear infections, thrush and premature weaning. If one is used, use it only after a feeding for a few minutes and watch for signs that the baby is becoming attached to it.

Avoid early introduction of solids. Solids displace the breastmilk in the baby's diet. The baby, in turn nurses less frequently; thus reducing the amount of stimulation his mother receives. Delay introducing any solids (cereal included) until after the 6th month and breastfeed BEFORE offering the solids for the first several months.

Recommendations to reduce a mother's breastmilk supply

Have the baby feed on only one breast at each feeding to allow the Feedback Inhibitor of Lactation to signal the body to reduce production. In persistent cases, you may recommend the mother feeds for a block of time, perhaps 4 or 8 hours, on one breast. Then 4 or 8 hours on the other breast. The mother may use ice packs if she becomes uncomfortable on the opposite breast. She may hand express just enough to relieve discomfort, but not enough to stimulate more milk production.

Drink sage or jasmine tea. Both have been known to reduce supply. Start with ½ cup daily and increase slowly until the supply begins to decrease, then discontinue.

Use the cabbage treatment at the end of the feeding. Apply cabbage to both breasts for 10-15 minutes several times per day until the supply begins to decrease, then discontinue. For more details about how to do this, see http://www.LERon-line.com/handouts/Breast_Engorgement.htm.

Use a nipple shield. It will slow the flow of milk, which may make it easier for the baby to feed. In addition it will reduce the stimulation to the breast, thereby reducing supply.

A few doses (or a few days) of a decongestant or antihistamine may reduce supply.

In extremely difficult cases, mothers have used birth control pills to reduce supply.

Instruct mothers to be alert for signs of plugged ducts and mastitis while reducing breastmilk supply. See <http://www.LERon-line.com/handouts/mastitis.htm> for more details.



Be judicious with recommendations to decrease supply and follow-up closely. We don't want a mother with over-supply to become a mother with an inadequate supply.

References and Resources:

Hall WA, et al. Weighing Preterm Infant Before and After Breastfeeding. MCN 2002; 27(6): 318-327.

Hurst NM, Meier P, Angstrom JL, Myatt A. Mothers Performing In-Home Measurements of Milk Intake During Breastfeeding of Their Preterm Infants: Maternal Reactions and Feeding Outcomes. JHL 2004.

Spatz, D. Ten Steps for Promoting and Protecting Breastfeeding for Vulnerable Infants. J Perinatal Neonatal Nursing 2004; 18(4), 385-396.

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