



IABLE

Institute for the Advancement
of Breastfeeding & Lactation Education



Low Milk Production

The most common reason for weaning earlier than intended is low milk production.

What determines how much milk I will make?

Before pregnancy, the breast tissue has terminal buds. These are similar to buds on the tips of tree branches that are waiting for 'spring time'. Pregnancy is 'spring time' for these terminal buds, stimulating growth of the buds into the millions of tiny milk-producing cells called lactocytes.

Lactocytes make up the milk-making glandular tissue in the breasts. Think of the glandular tissue as a machine that has a rate of milk production, like machines in a factory that make droplets. Some breasts may produce 1 ounce (30ml) of milk droplets per hour, while some may produce 2 ounces (60ml) of milk droplets per hour. What determines the rate of milk droplets?

1. Prolactin, for one, is the big hormone boss that controls the glandular tissue, signaling the lactocytes to keep manufacturing milk. If there is no breastfeeding or pumping, the prolactin level drops, and the glandular tissue does not receive the message to keep milk production going, leading to less milk.

How does prolactin drop? Prolactin only rises with direct nipple stimulation. If the nipples don't feel the baby (think nipple shield!!) or stimulation from a pump, prolactin will drop. Prolactin is a short acting hormone, so it needs to be stimulated often, such as every 3 hours, to keep it elevated.

2. Removal of the drops from the glandular tissue. It makes no sense for the cells to keep making milk if the milk is not being removed regularly. If the milk is not removed, the milk droplets build up, causing feedback messages to the glandular tissue to slow down production.

3. The number of lactocytes in the glandular tissue will also determine the rate of milk production. The more lactocytes there are, the greater the milk volume. Some people have low volumes of lactocytes. This can be due to a birth defect or a history of breast reduction. It can also be due to some medical conditions.

How much milk will I make?

Breastmilk volumes change quickly in the first several weeks to months after delivery.

- During the first few days, lactating parents produce small volumes of milk called colostrum- a thick yellow substance. This is often called "liquid gold" because it is full of important substances that works to immediately protect the newborn from infection and mature the intestines and other organs. Although colostrum volumes seem low, babies who feed frequently will receive adequate nourishment by just breastfeeding.
- Sometime between days 2 to 5 postpartum, the breastmilk feels like it is 'coming in'. The breasts feel warmer, heavier, and sometimes they feel tender. You will start to hear frequent swallows while the baby is nursing, and the breasts may start leaking. The milk appears yellowish until approximately 3 weeks postpartum.
- By about 3-4 weeks postpartum, mature milk is being made, which looks white, and many parents are up to full milk production, 24-30 oz (720-900ml) per baby per day.
- By 4-8 weeks, many parents notice their breasts no longer feel as full and leaking often slows down. This is normal as milk production regulates to meet the baby's needs.

How much milk does my baby need?

Newborn babies typically breastfeed 8-12 times a day during their early weeks. It is best to feed your baby when they are showing signs of hunger (see the [Feeding Cues](#) Handout) as this helps ensure they get enough milk and that your milk production increases.

During the first 4-6 weeks, the volume of milk that your baby needs rises rapidly. While a newborn may only need ½ oz (15ml) on day 2, a full term healthy infant often requires 1.5-2 oz (45-60ml) by day 5.

By the time they are one month old, babies will take about 3-4 oz (90-120ml) per feed. Typically, infants who feed at the breast do not ingest much more than this for each feeding, even as they get older.

How can I tell if my baby is getting enough milk?

Your baby's weight is the best way to know if they are getting enough milk. Typically, babies will lose weight during the first 3 days of life and then will start gaining weight, with a return to birth weight by about 10-14 days of life. After that, most babies will gain an average of 5 to 7 oz per week during the first 4 months. The rate of weight gain slows from there. Your doctor will check on infant growth at well-child exams, but whenever you are concerned about your baby's intake or weight gain, it is important to contact the baby's doctor for a weight check. Proper growth can never be fully assessed on the phone. Weighing the baby on an infant scale is critical to ensure proper growth.

Ways to help establish your milk production

The best way to make sure you are making enough milk is to remove milk effectively and frequently by nursing, and pumping if you are not nursing.

- Ensure that you and baby are [positioned well during feeds](#), and that your baby is held close to the breast with a wide-open latch.
- Spend time skin-to-skin with your baby.
- Feed your baby when they ask to be [fed](#), which is often 8-10 times or more times per 24 hours.
 - Until your baby is back at birth weight, try to feed your baby at least every 3 hours throughout the day and night.
 - Avoid putting your baby on a feeding schedule, as babies will eat at different rates at different times of day. For example your baby may want to nurse every 2.5-3 hours in the morning, and every 1-1.5 hours in the evening.
 - Do not try to stretch out times between feedings. Always feed the baby when they show feeding cues. It may seem like your baby wants to eat all the time. In the first 4 months of life babies experience their fastest rate of growth, so healthy babies should act like 'eating machines'.
- Ensure your baby is getting milk out during feeds. If you are concerned your baby is not removing milk well, have a lactation specialist evaluate your baby.
 - You can gently compress your breast while your baby is feeding to help get more milk out.
 - Nurse your baby on both sides for each feeding.
 - If your baby falls asleep easily during breastfeeding, nurse on both sides twice for each feeding. As soon as the baby falls asleep on one side, switch to the other side. Do this twice on each side (L side, R side, then L side again, then R side again).
- Take a break from other activities if you feel that your milk production has gone down. Spend a few days focusing on nourishing yourself and baby – stay close to baby, spend lots of time skin-to-skin, ensure you are eating and resting during this time. Let others take care of household chores and other activities.

- Avoid nipple shields.
- Avoid giving formula supplementation unless your physician advised this for the baby, or if you know that your production is low enough that the baby needs extra calories.
- There are herbs and prescription medications that can help increase milk production. It is recommended to use these under the guidance of Breastfeeding and Lactation Medicine Specialist.