



# Breastfeeding Questions Answered: A Guide for Providers

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*This guide answers questions that women often ask about breastfeeding.*

## Practicing Breastfeeding

### Is it important to start breastfeeding right after the infant's birth?

Yes. Breastfeeding immediately (within one hour) after the infant's birth can help expel the placenta and reduce blood loss. Breastfeeding soon after the infant's birth also keeps the infant warmer and sets the stage for healthy breastfeeding in the coming weeks and months. Colostrum, the yellowish fluid produced by the mother's breasts during the first days after childbirth, provides the infant with essential immunities and acts as a natural laxative to help the infant with the first bowel movements. Early breastfeeding helps milk come in more rapidly, too.

### How often should a woman breastfeed her baby?

A woman should breastfeed her baby on demand, day and night. Normally, healthy babies breastfeed about 8 to 12 times in 24 hours. An infant's stomach is small and needs to be refilled often—sometimes more often than every two hours in the early days and weeks of life.

A woman should watch for signs that her baby is hungry. When hungry, the baby will turn towards the mother with an open mouth as if to start nursing. Other signs are that the baby is more alert or chews and sucks on hands or fingers.

It is normal for baby's breastfeeding patterns to vary. Feedings can be closer together at certain times of the day and further apart at other





times. When the baby has a growth spurt, demand for feeding will increase. Growth spurts usually occur when the baby is about three weeks, six weeks, three months, and six months old.

## How long should each breastfeeding session last?

During the first month or two of an infant's life, as the baby develops feeding skills, most breastfeeding sessions take from 20 to 45 minutes. A woman should feed on one breast until the baby stops suckling, the baby's hands are no longer in fists, and the woman does not hear any swallowing. When these signs occur, the woman should burp the baby and offer the baby her other breast. Generally, a woman should feed from both breasts during each session, allowing the baby to finish one breast first, and then switching to the other (unless the baby does not want to feed from the second breast).

## How can a woman know if her baby is latching on correctly?

A baby is latching on correctly when the baby's mouth is wide open, the nose is nearly touching the mother's breast, more of the dark skin around the mother's nipple can be seen above the baby's mouth than below, and the baby takes long, deep sucks. The woman will also hear her baby swallowing, quickly at first and then more slowly as appetite is satisfied. If the latch is uncomfortable or painful, the woman should gently place her finger in the baby's mouth, between the gums, to detach the baby and try again. Her nipple should be directed towards the upper back of the baby's mouth. Using pillows to raise the baby to breast height makes proper latching on easier. A woman also can help her baby latch on correctly by positioning the baby so that:

- She holds the baby's body close to her body;
- The baby's whole body is supported, not just the neck and shoulders;
- The baby's head and body are in a straight line;
- The baby faces the breast and the baby's nose is opposite the nipple.



## How To Use This Guide

This guide offers health care providers a quick reference and easy-to-understand answers to some of the most common breastfeeding questions that pregnant women and mothers, their families, and community members have. It is a companion tool to the "Better Breastfeeding, Healthier Lives" *Population Report*. The answers in the guide are based on the latest evidence and international recommendations presented in the *Population Report*. We hope this tool will make counseling on breastfeeding easier. It is meant to complement existing reference guides and training materials on breastfeeding. We welcome your comments on this guide and its usefulness to you in your work. Please send an e-mail message to [infoforhealth@infopforhealth.org](mailto:infoforhealth@infopforhealth.org).

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## When should a baby be given water, cereal, or other liquids and foods?

When a baby is six months old, breastmilk alone no longer satisfies all of the baby's nutritional needs. At this time parents should begin complementary feeding by gradually giving their baby other foods in addition to breastmilk—starting with such foods as ground meat or milk products and then adding a variety of foods from the basic food groups, including fruits and vegetables, poultry, fish, and eggs. Complementary feeding—giving breastmilk and other foods—should be practiced from the time the baby is six months old through two years or beyond. As a child grows, the types of nonbreastmilk foods can change from semi-solid to solid foods, and the variety can increase. A mother should continue frequent, on-demand breastfeeding and give her baby additional foods in increasing amounts after a breastfeeding session.



## Breastmilk Value

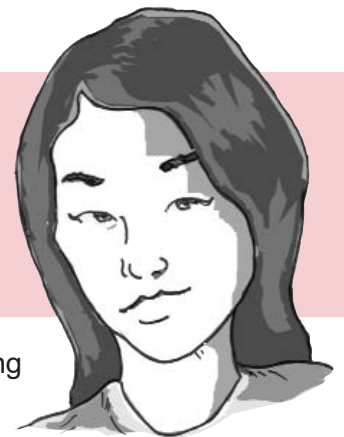
### Is breastmilk alone enough to feed a baby?

Human milk alone can fully satisfy the nutritional needs of a baby for the first six months of life. Infants do not need any other foods or liquids in addition to breastmilk, not even water, during their first six months. Human milk contains all the nutrients and immunities that a baby needs. It also is the easiest food for a baby to digest and promotes growth better than any substitute.

## How can a woman know if she has enough milk and if her baby is getting enough milk?

A woman has enough milk and her baby is getting enough if the baby is gaining weight steadily. A baby should gain about 140 to 245 grams (about five to nine ounces) per week after the fourth day of life. To help keep track of growth, the mother should enroll the baby in a growth monitoring program in the community, if available, or at a local health facility.

Another way a mother can determine if her baby is getting enough milk is to note her baby's daily urination and bowel movements. By the second day after childbirth, the baby should begin to have at least three bowel movements each day. Once breastmilk comes in fully, usually by the fourth day after childbirth, the baby should begin to have at least six urinations each day.



## What if a woman does not produce enough milk for her baby?

Nearly all women can produce enough milk for their babies. The more breastmilk a baby suckles, the more milk a woman will produce. Frequent feedings increase milk supply. To support milk production, breastfeeding mothers should avoid dehydration by drinking adequate amounts of water and other fluids. If a woman is not producing enough breastmilk, the problem may be that she is not nursing often and exclusively (that is, breastfeeding without providing any other foods, not even water). If she is not already doing so, a woman can offer her baby the second breast once the baby seems satisfied

with feeding from the first breast. The mother can also try switching sides more times throughout each feeding session, or switching every time the baby falls asleep or loses interest.

Expressing milk by pump or hand either immediately after or between nursing sessions will remove more milk from the breasts, which speeds milk production and helps to increase a woman's milk supply. This milk can be stored for use when the mother is away from her baby and cannot breastfeed. Expressed breastmilk can be stored up to 8 hours without refrigeration in a cool place and as long as 24 hours when refrigerated.

## Are there certain foods a woman should or should not eat during breastfeeding?

A woman does not have to avoid any particular foods during breastfeeding. Eating a variety of fresh and healthy foods and drinking enough liquids help provide the nutrients a woman needs while breast-

feeding. Well-nourished mothers have enough iron, calcium, vitamin A and vitamin B6 in their milk to meet their infant's nutritional requirements during the first six months of life. To avoid malnutrition, breastfeeding women need an extra meal each day to support the increase in their nutritional needs and should take micronutrient supplements, if possible.

## Maintaining Breast Health

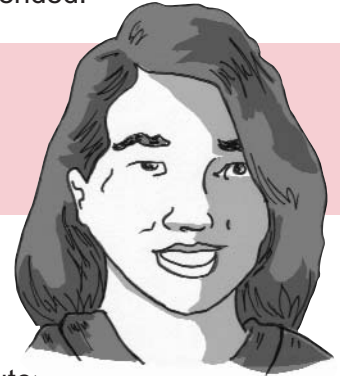


### Is it normal for breastfeeding to hurt?

Breastfeeding is not supposed to hurt. A woman may experience some soreness at first, but it should gradually go away. Correcting a poor latch-on is the first step to ensuring comfortable breastfeeding. Also, breasts can become tender and painful when a milk duct is plugged and milk is blocked from flowing. Breasts may or may not turn red. If a woman has these symptoms of a plugged milk duct, advise her to continue breastfeeding often, vary her position when breastfeeding, get more rest, apply heat or warm compresses to the breast, and massage the breasts. Once the milk is flowing, the soreness will decrease.

A sore breast can also be due to mastitis. Mastitis is inflammation of a breast that may or may not be infected. If a woman has mastitis, her breast is sore, red, swollen, and hard and she feels achy, tired, and feverish. Mastitis develops where milk is not effectively removed from the breast and accumulates over time. The first step in treating mastitis is removing the milk by expressing breastmilk and continuing to breastfeed. Continuing breastfeeding is important for a woman's own recovery and for her baby. If the symptoms of mastitis are severe, if the woman has visible cracks in her nipple, or if the symptoms do not improve after 24 hours of effective milk removal, antibiotic treatment is recommended.

## Can breast engorgement be prevented?



Breast engorgement can occur when mature breastmilk comes in and breasts become full, hard, and tender. Engorgement is less likely to occur if a woman feeds her baby often and lets the baby nurse as long as possible. If a woman suffers from engorged breasts, she can try using warm compresses for a few minutes before a feeding session and expressing some milk by hand or pump, or applying ice or cold compresses between feedings. Green cabbage leaves (washed) can be used as a compress, instead of ice. A woman should see a health care professional if engorgement prevents good latch-on, the pain is severe or does not go away in 48 hours, or if the woman develops any of the following symptoms indicating a breast infection: fever, chills, body aches, localized pain, or other flu-like symptoms.

## How can a woman prevent cracked nipples?

Positioning the baby properly and helping the baby to latch on correctly can help to prevent sore and cracked nipples. If the latch is uncomfortable, the mother should gently release the baby's mouth and start again. Avoiding the cleaning of nipples with alcohol-based products and harsh soaps can also help prevent cracked nipples. Cleaning the nipples with plain water is best, and since breastmilk contains antibodies, allowing the nipples to air dry with breastmilk on them may help treat the problem and prevent further cracking.

## Family Planning

### When does a breastfeeding woman need family planning?

A breastfeeding woman can begin practicing family planning immediately with the lactational amenorrhea method (LAM). LAM is an effective and temporary method of family planning that can be used if all of the following three criteria are met:

- The mother's menstrual periods have not returned, and
- The baby is fully or nearly fully breastfed, and frequently, day and night, and
- The baby is less than six months old.





Once any of these conditions changes, or if the woman decides she no longer wants to use LAM, she should use another family planning method to avoid pregnancy.

A breastfeeding woman can also use other nonhormonal and hormonal methods of contraception. Condoms can be used immediately after childbirth, and the copper IUD inserted within 48 hours of childbirth (otherwise insertion should be delayed for four weeks). Tubal ligation can be performed within one week after childbirth, otherwise delayed for six weeks. Breastfeeding women should delay the use of fertility awareness-based methods of contraception until menses resume. The use of the diaphragm and contraceptive methods containing progestin should be delayed for six weeks after childbirth, and the use of contraceptive methods containing estrogen should be delayed for six months after childbirth.

To help decide which contraceptive method is best for her, a breastfeeding woman should seek advice from a family planning provider. If she chooses to use LAM, a follow-on contraceptive method to LAM can be given in advance. For example, a woman can be given a supply of condoms or, if she has no medical condition that would prevent using progestin-only oral contraceptives, she can be given these pills, with instructions for taking them, to use when LAM no longer applies or when she no longer wants to rely on LAM.

## Illness or Infection

### Q Can a woman breastfeed when she is sick?

During any minor illness such as a cold, sore throat, mild flu, stomach problem, or minimal fever a woman can and should continue to breastfeed. A woman with any of these conditions does not pass the germs to her infant through her milk. In fact, the antibodies a woman creates to combat her own illness will be passed to her baby through her breastmilk, helping to prevent the baby from becoming sick.

In most cases, women who are malnourished can and should breastfeed their babies following the same recommendations as breastfeeding women who are adequately nourished—that is, breastfeed exclusively for six months followed by complementary feeding through two years of age and beyond. Almost all malnourished women will produce enough breastmilk for their babies. Malnutrition may, however, reduce the nutritional quality of milk or affect the mother's own health by reducing her energy and nutrient reserves.

In rare cases, such as cancer treatment or infectious sores on the breast, a woman may have to stop breastfeeding briefly. She may be able to continue breastfeeding if she can obtain treatment that is compatible with breastfeeding.

### Should a woman breastfeed when her baby is sick?

When a baby is sick, the mother should breastfeed more often. Breastmilk replaces fluids and nutrients lost through frequent loose stools. For most babies, nursing is comforting when they are sick. If a baby refuses to nurse when sick, a woman can try different nursing positions—particularly positions that allow the baby to be upright—and continue to offer the baby her breast every hour or so. A woman can also try expressing her milk by hand or by pump to feed the baby breastmilk from a cup, dropper, or spoon.

### Can a woman breastfeed if she is taking medications?

Nearly all (but not all) prescription drugs and over-the-counter (nonprescription) medications are considered safe to use when breastfeeding. A few are risky, including mood-altering drugs, reserpine, ergotamine, anti-metabolites, cyclosporine, high doses of corticosteroids, bromocriptine, radioactive drugs, lithium, and certain anticoagulants (for a



complete list see the Breastfeeding and Maternal Medication Recommendations for Drugs in the Eleventh WHO Model List of Essential Drugs <[http://www.who.int/child-adolescent-health/New\\_Publications/NUTRITION/BF\\_Maternal\\_Medication.pdf](http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/BF_Maternal_Medication.pdf)>). For women who take these drugs, breastfeeding is not recommended.

## Can a woman with viral hepatitis breastfeed her baby?

Yes. A woman with viral hepatitis can breastfeed, because breastfeeding does not increase the risk of passing hepatitis to a child. The hepatitis B virus (HBV) and hepatitis C virus (HCV) are passed through blood. A breastfeeding woman with HBV or HCV should take good care of her nipples, ensuring proper latch-on and allowing the nipples to dry before covering to avoid cracking or bleeding. These healthy practices will help prevent the woman's baby from being exposed to the virus through breastfeeding. A woman with HBV or HCV can pass the virus to her baby during childbirth, however.

If a woman is diagnosed with HBV, her infant should receive the first dose of hepatitis B vaccine within 48 hours of birth, when feasible, or as soon as possible thereafter. Subsequent doses of the vaccine should be given with routine childhood immunization at one month and six months of age. There is no vaccine for the prevention of HCV infection.

## Can a woman breastfeed if she is infected with HIV?

If a woman is infected with HIV, there is a chance that her baby also will become infected with HIV during pregnancy, delivery, or breastfeeding. In general, about 16% of babies breastfed by untreated HIV-positive mothers over a two-year period acquire HIV through breastfeeding. The risk is less if the woman's nipples are not cracked and if she breastfeeds exclusively for the first few months of her baby's life and then makes an abrupt transition to full replacement feeding—that is, feeds the baby exclusively with commercial formula or modified animal milk, not breastmilk. HIV transmission through breastmilk is more likely among mothers with advanced disease, reflected in low CD4+ cell counts.

Avoiding breastfeeding altogether will prevent HIV from passing from mother to baby through breastmilk. If replacement foods cannot be adequately and safely prepared, however, avoiding breastfeeding may expose a baby to greater risk of other serious infectious diseases, such as diarrheal and respiratory diseases.

The relative risks and benefits of breastfeeding and replacement feeding vary considerably according to an HIV-positive woman's circumstance. If an HIV-positive woman wishes to breastfeed, she should discuss her options with a health care provider. The options that may be appropriate to consider include expressing and heat-treating her breastmilk or using safe replacement foods. If a mother wants to use replacement foods to feed her baby, she can use commercial formula or fresh or powdered modified animal milk.

If you are HIV-positive

**What is the best infant feeding option for your baby?**

 <b>Breastfeeding</b>	 <b>Infant Formula</b>
 <b>Heat Treated Breast Milk</b>	 <b>Fresh Cow's Milk</b>



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# Sources

1. BONYATA, K. Increasing low milk supply. <<http://www.kellymom.com/bf/supply/low-supply.html>> Kellymom.com, May 13, 1998. Accessed Oct. 11, 2005.
2. BONYATA, K. My baby is sick - should I continue to breastfeed? <<http://www.kellymom.com/health/illness/baby-illness.html>> Kellymom.com, Feb. 23, 2002. Accessed Oct. 11, 2005.
3. BREASTFEEDING AND HIV INTERNATIONAL TRANSMISSION STUDY GROUP. Late postnatal transmission of HIV-1 in breastfed children: An individual patient data meta-analysis. *Journal of Infectious Diseases* 189(12): 2154–2166. Jun. 15, 2004.
4. BUTTE, N.F., LOPEZ-ALARCON, M., and GARZA, C. Nutrient adequacy of exclusive breastfeeding for the term infant during the first six months of life. Geneva, World Health Organization, 2002. 57 p. (Available: [http://www.who.int/child-adolescent-health/New\\_Publications/NUTRITION/nutrient.pdf](http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/nutrient.pdf))
5. CALIFORNIA PACIFIC MEDICAL CENTER. Breastfeeding frequency. <<http://www.cpmc.org/services/pregnancy/information/breastfeeding-frequency.html>> California Pacific Medical Center, Accessed Oct. 11, 2005.
6. CENTER FOR DISEASE CONTROL AND PREVENTION (CDC). Frequently asked questions about hepatitis C. <<http://www.cdc.gov/ncidod/diseases/hepatitis/c/faq.htm>> CDC, Accessed Oct. 11, 2005.
7. CENTER FOR DISEASE CONTROL AND PREVENTION (CDC). Hepatitis B frequently asked questions. <<http://www.cdc.gov/ncidod/diseases/hepatitis/b/faq.htm>> CDC, Accessed Oct. 11, 2005.
8. KRAMER, M.S. and KAKUMA, R. The optimal duration of exclusive breastfeeding: A systematic review. Geneva, World Health Organization, 2002. 47 p.
9. LA LECHE LEAGUE. Frequently asked questions: How do I know if my baby is getting enough milk? <<http://www.lalecheleague.org/FAQ/enough.html>> La Leche League, Dec. 11, 2004. Accessed Oct. 11, 2005.
10. LA LECHE LEAGUE. Frequently asked questions: Can I get pregnant while I am breastfeeding? <<http://www.lalecheleague.org/FAQ/fertility.html>> La Leche League, Sept. 29, 2002. Accessed Oct. 11, 2005.
11. LA LECHE LEAGUE. Frequently asked questions: What foods should I avoid eating while breastfeeding? <<http://www.lalecheleague.org/FAQ/avoid.html>> La Leche League, Apr. 8, 2002. Accessed Oct. 11, 2005.
12. LA LECHE LEAGUE. Frequently asked questions: How often should I nurse my baby? <<http://www.lalecheleague.org/FAQ/frequency.html>> La Leche League, Oct. 14, 2003. Accessed Oct. 11, 2005.
13. LA LECHE LEAGUE. Frequently asked questions: My breast hurts. What can I do? <<http://www.lalecheleague.org/FAQ/mastitis.html>> La Leche League, Jun. 21, 2004. Accessed Oct. 11, 2005.
14. LA LECHE LEAGUE. Frequently asked questions: Why does my baby suddenly want to nurse constantly? <<http://www.lalecheleague.org/FAQ/spurt.html>> La Leche League, Aug. 31, 2004. Accessed Oct. 11, 2005.
15. LA LECHE LEAGUE. Frequently asked questions: How do I prevent sore nipples? <<http://www.lalecheleague.org/FAQ/sore.html>> La Leche League, May 2, 2005. Accessed Oct. 11, 2005.
16. LAWRENCE, R.M. and LAWRENCE, R.A. Given the benefits of breastfeeding, what contraindications exist? *Pediatric Clinics of North America* 48(1): 235–251. Feb. 2001.
17. LINKAGES PROJECT. Breastfeeding and maternal nutrition: Frequently asked questions (FAQ). FAQ Sheet, No. 4, Washington, D.C. The LINKAGES Project, Academy for Educational Development, Jul. 2004. p. 6.
18. LINKAGES PROJECT. Facts for feeding: Recommended practices to improve infant nutrition during the first six months. Washington, D.C. Academy for Educational Development, Jul. 2004. p. 4.
19. LINKAGES PROJECT. Breastfeeding and infant feeding: Counseling cards. <<http://www.linkagesproject.org/tools/ccards.php>> The LINKAGES Project, Academy for Educational Development, Accessed Oct. 11, 2005.
20. LINKAGES PROJECT. Infant feeding options in the context of HIV. FAQ Sheet, Washington, D.C. The LINKAGES Project, Academy for Educational Development, May 2005. p. 33.
21. LUSKEY, K. Simple tips for weaning. <<http://www.naturalfamilyonline.com/BF/20048-weaning-baby-tips.htm>> Natural Family Online, Accessed Oct. 11, 2005.
22. MARCH OF DIMES. The facts: Breastfeeding. <[http://www.marchofdimes.com/aboutus/681\\_9148.asp](http://www.marchofdimes.com/aboutus/681_9148.asp)> March of Dimes, Jun. 2003. Accessed Oct. 11, 2005.
23. OVERFIELD, M.L., RYAN, C.A., SPANGLER, A., and TULLY, M.R. Clinical guidelines for the establishment of exclusive breastfeeding. 2nd ed. Raleigh, N.C., International Lactation Consultant Association, 2005. 28 p.
24. SMITH, M.K. New perspectives on engorgement. *LEAVEN* 35(6): 134–136. Dec. 1999/Jan. 2000.
25. UNITED NATIONS CHILDREN'S FUND (UNICEF). Facts for life. 3rd ed. New York, UNICEF, 2002. 153 p.
26. WALKER, M. Breastfeeding and engorgement. *Breastfeeding Abstracts* 20: 11–12. Nov. 2000.
27. WORLD HEALTH ORGANIZATION. Mastitis: Causes and management. Geneva, WHO, 2000. 44 p.
28. WORLD HEALTH ORGANIZATION. Pregnancy, childbirth, postpartum and newborn care: A guide for essential practice. Geneva, WHO, 2003. 178 p.
29. WORLD HEALTH ORGANIZATION (WHO). Hepatitis B and breastfeeding. <[http://www.who.int/child-adolescent-health/New\\_Publications/NUTRITION/updt-22.htm](http://www.who.int/child-adolescent-health/New_Publications/NUTRITION/updt-22.htm)> WHO, Nov. 1996. Accessed Oct. 11, 2005.
30. WORLD HEALTH ORGANIZATION (WHO). Complementary feeding of young children in developing countries: A review of current scientific knowledge. Geneva, WHO, 1998. 212 p.
31. WORLD HEALTH ORGANIZATION (WHO). Complementary feeding: Report of the global consultation and summary of guiding principles. Geneva, WHO, Dec. 2001. 25 p.
32. WORLD HEALTH ORGANIZATION (WHO) and UNITED NATIONS CHILDREN FUND (UNICEF). Breastfeeding and maternal medication: Recommendations for drugs in the eleventh WHO model list of essential drugs. Geneva, WHO and UNICEF, 2002. 35 p.

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