



Breastfeeding—What You Need to Know Before Your Baby Arrives

For nine months during pregnancy, your body prepares a special blend of nutrients in the exact proportions your baby needs. Human milk is a unique combination of fats, sugars, minerals, proteins, vitamins and enzymes, custom-made to promote the health, growth and development of your baby. The nutrients found in breast milk and the special benefits these nutrients provide can never be duplicated. Plus, breast milk is always fresh, clean, the right temperature and instantly available. Better yet, breast milk offers the most nutritious feeding system for the lowest cost.

The decision to breastfeed your baby is a personal one and one that only you can make. To make an educated decision, however, it is important that you fully understand the benefits for both babies and mothers. This guide contains basic facts about breastfeeding as well as some of the benefits for both babies and mothers that have been documented by medical experts worldwide.

Breastfeeding Benefits

Medical experts, including the AAP, the American Surgeon General and La Leche League® International continue to document the extraordinary benefits of breastfeeding.

“I’m three months pregnant with my first child and plan to breastfeed,” explains Sarah, “but I have so many questions. What are the benefits? Will I be able to breastfeed immediately? Is there anything I should do to prepare for the experience?”

Benefits for Baby

- ◆ *Colostrum*—the creamy-yellow substance found in breasts during pregnancy and for a few days after the baby’s birth—is the perfect starter food for babies. Colostrum provides a baby with an unmatched immunity against bacteria and viruses, and acts as a natural laxative for clearing the baby’s intestine, thus decreasing chances of jaundice.¹
- ◆ Skin-to-skin contact between mother and baby during breastfeeding increases a sense of well-being in babies, and provides them with emotional security.²
- ◆ Sucking while breastfeeding encourages full development of a baby’s oral muscles and facial bones.³
- ◆ Breastfeeding reduces a baby’s chance of dying during the first year of life by twenty percent.⁴

Breastfeeding promotes bonding between mother and baby. Since newborns can only see about eight to 12 inches, breastfeeding helps them to recognize their mother's face and features. Also, the baby's physical contact with his or her mother provides a sense of warmth and comfort to the child.

- ◆ Breastfed infants are healthier. When illnesses do occur, breastfed babies recover faster and the effects tend to be milder than for babies who are not fed human milk.¹
- ◆ Breastfed babies receive immunities that provide protection from ear and respiratory infections.³
- ◆ Unique substances in breast milk inhibit the growth of harmful bacteria and viruses in babies' digestive system, thus reducing colic and diarrheal infections.⁵
- ◆ Breastfed babies have increased protection from contracting infections that cause meningitis.⁶
- ◆ Babies who are breastfed exclusively for six months have greater protection against infection and allergies.¹
- ◆ Exclusive breastfeeding for four months helps protect a baby from asthma.⁷
- ◆ Breastfed babies are one-third less likely to die of Sudden Infant Death Syndrome (SIDS).⁸
- ◆ Breastfeeding for one year or longer reduces a baby's risk of diabetes by 30 percent.⁹
- ◆ Babies who are exclusively breastfed for at least six months have a reduced risk of cancer before the age of 15.¹⁰
- ◆ Breastfeeding encourages normal weight gain in babies, which is good insurance against future tendency toward obesity. And, the lower salt content in breast milk may reduce a baby's chance of developing hypertension in later years.¹¹
- ◆ Breastfed daughters may be less likely to develop breast cancer later in life.¹²

Benefits for Mother

- ◆ When a baby is put to the breast immediately after birth, the resulting release of the hormone *oxytocin* into the mother's system speeds the delivery of the placenta and constricts uterine blood vessels to minimize blood loss. Repeated release of oxytocin through nursing causes the uterus to return to its pre-pregnancy size more quickly.
- ◆ Although nursing mothers need to increase their caloric intake by approximately 500 calories per day over their pre-pregnancy caloric intake, the ongoing production of milk in the mother also burns extra calories, helping with weight loss after pregnancy.
- ◆ The milk-producing hormone *prolactin*, called the "mothering hormone," has a relaxing effect on the mother.
- ◆ Women who breastfeed have increased protection from premenopausal breast cancer, cervical cancer and osteoporosis later in life.

How Breasts Produce Milk

Milk is produced and stored in the alveoli (glandular tissue) of your breasts. It collects in the lactiferous ducts until it is released by your baby's sucking.

Stimulation of the nipples causes your pituitary gland, located in the brain, to secrete prolactin, the hormone that initiates and maintains milk production. As your baby continues to breastfeed, the hormone oxytocin is secreted, which causes the small muscles around the alveoli to contract. These muscle contractions move the milk from the alveoli into the ductal system, and out through openings in the nipple.

Milk Composition

A mother's breast milk changes composition during the first several days after giving birth. Colostrum is the first milk that breasts produce. This thick, yellow fluid contains three times the protein of later milk (though it is less in volume) and is already present in the breasts during the second trimester. Colostrum is also low in fat and contains antibodies that help protect your baby from infection. Over the next two weeks, breast milk transitions from colostrum to mature milk. During this transition, sugar, fat and calories increase, while protein and antibodies adjust to the changing needs of the infant.

Mature milk is actually made of two parts called foremilk and hindmilk. Foremilk, low in fat and high in protein, is the first milk your baby receives at each feeding. Foremilk collects in the breasts between feedings and satisfies your baby's initial hunger and thirst. As the feeding continues, the hormone oxytocin is secreted,

which causes the tissue around the alveoli to contract, thus squeezing the higher-fat hindmilk (which provides your baby with more calories) down the ducts and out through the nipple pores. The fat and calories of hindmilk provide your baby with the nutrition necessary for the rapid growth he or she will experience as a baby.

When Will My Milk Come In?

The production of mature milk signals that your milk has "come in." This typically begins about two to five days after delivery. Timing varies depending on your baby's ability to latch on properly, how frequently and effectively your baby feeds and what kind of childbirth you had (vaginal or Cesarean). If you have had a Cesarean birth, it may take two to three days longer for your milk to come in. Keep in mind that, until mature milk is present, your baby is receiving rich colostrum "starter milk," which has three times the protein of mature milk and meets all your baby's needs during the first few days.

Will I Be Able to Breastfeed?

If you're wondering if you'll be able to breastfeed, you're not alone. While there are some special circumstances that may make breastfeeding difficult (or, in rare cases, impossible), with guidance, support and instruction almost all mothers are able to breastfeed. Speak to your doctor and lactation consultant about any concerns you may have, especially if you have had any previous breast surgeries (e.g., biopsies, implants, etc.) that may make it difficult to breastfeed, or if you have had difficulty breastfeeding in the past. They can usually help you make special arrangements that will allow you to successfully breastfeed.

Flat or Inverted Nipples

Flat or inverted nipples may initially make it difficult for your baby to latch on correctly. When the nipple touches the roof of the baby's mouth, it signals him or her to suck, but in the case of flat or inverted nipples, the baby may not get this signal.

To determine if your nipples are flat or inverted, have your doctor do a breast exam (usually in your late second to early third trimester) or check the response of your nipple using the following do-it-yourself test:

A Simple Nipple Test

- ◆ Place your thumb and index finger on the areola (the dark area surrounding the nipple).
- ◆ Behind the base of the nipple, compress gently but firmly.
- ◆ Your nipple should remain erect or protrude forward.
- ◆ If your nipple flattens or retracts (inverts) into the breast, you have a flat or inverted nipple.

It is important to do this “pinch test” because, although your nipples may appear erect, they may invert or flatten when the areola is compressed.

If you have flat or inverted nipples, the condition may improve automatically during pregnancy. If the condition has not improved by the third trimester of your pregnancy, try using breast shells (plastic shells that are worn inside the bra) that are designed to draw out the nipple with counter pressure. Some women, though not all, have found this to be effective.

Note—If you have a history of premature labor and/or delivery, consult your doctor before using breast shells. After birth, if your baby has difficulty attaching to your breast, work with your doctor and lactation consultant on positioning and latch-on techniques. They may also advise you on other techniques such as using a breastpump before feeding your baby to soften the areola and draw out the nipple, or using breast shells for a half hour before nursing, which may also help draw out the nipples.



A normal nipple remains erect



An inverted nipple



A flat nipple

Myths and Facts About Breastfeeding

Misconceptions and myths about breastfeeding often confuse expectant mothers. Here are some common myths—and corresponding facts—which should clear up any confusion:

MYTH	FACT
You can't breastfeed if your breasts are too small or too large.	Breast size is irrelevant to successful breastfeeding.
You must follow a restrictive food plan while breastfeeding.	A well-balanced, nutritious diet is all that is necessary. Please refer to A LifeCare® Guide: Nutrition During Lactation.
You can't diet while you are breastfeeding.	As long as you meet your nutritional requirements, sensible dieting during breastfeeding is possible. Please refer to A LifeCare® Guide: Nutrition During Lactation.
Breastfeeding causes breasts to stretch or sag.	Stretching of the breast tissue is due to changes associated with pregnancy and/or a genetic tendency toward sagging breasts. It is not the result of breastfeeding.
You can't work and breastfeed at the same time.	Breastfeeding mothers are returning to work every day! Continuing to breastfeed and work takes planning and commitment, but with a bit of preparation you too can make the transition. Please refer to A LifeCare® Guide: Returning to Work While Breastfeeding.
You can't breastfeed if you have flat or inverted nipples.	While these conditions may make breastfeeding more challenging, they will not make it impossible—especially if prenatal interventions, such as breast shells, are used.
The inability to breastfeed runs in families.	Breastfeeding failures are not inherited; any barriers can usually be overcome with instruction, guidance and support.
Breastfeeding takes a lot of time.	Breastfeeding seems to take more time initially, but it gets easier as you and your baby become more experienced, typically around four to six weeks.

Additional Information and Resources

While you are pregnant, learn as much as you can about breastfeeding so you are well-informed by the time your baby arrives. By educating yourself, you can identify and avoid possible problems, and prepare yourself for an enjoyable and successful breastfeeding experience. Speak to your doctor, a lactation consultant or other breastfeeding mothers, and read as much as you can on the subject. For more information on breastfeeding, please refer to other publications in the LifeCare® education series.

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