
Breastfeeding vs. Formula Feeding

A Personal Decision

Choosing whether to breastfeed or formula feed your baby is one of the first decisions expectant parents will make. The American Academy of Pediatrics (AAP) joins other organizations such as the American Medical Association (AMA), the American Dietetic Association (ADA), and the World Health Organization (WHO) in recommending breastfeeding as the best for babies. Breastfeeding helps defend against infections, prevent allergies, and protect against a number of chronic conditions.

The AAP says babies should be breastfed exclusively for the first 6 months. Beyond that, the AAP encourages breastfeeding until at least 12 months, and longer if both the mother and baby are willing.

Although experts believe breast milk is the best nutritional choice for infants, breastfeeding may not be possible for all women. For many women, the decision to breastfeed or formula feed is based on their comfort level, lifestyle, and specific medical considerations that they might have.

For mothers who are unable to breastfeed or who decide not to, infant formula is a good alternative. Some women feel guilty if they don't breastfeed. But if you feed your baby with a commercially prepared formula, be assured that your baby's nutritional needs will be met. And you'll still bond with your baby just fine. After all, whether with breast milk or formula, feeding is an important time of connection between mother and baby.

The decision to breastfeed or formula feed your baby is a very personal one. But here are some points you may want to consider as you decide which is best for you and your new addition.

Breastfeeding: The Advantages

Nursing can be a wonderful experience for both mother and baby. It provides ideal nourishment and a special bonding experience that many nursing mothers cherish.

Here are some of the many benefits of breastfeeding:

Infection-fighting. Antibodies passed from a nursing mother to her baby can help lower the occurrence of many conditions, including:

- ear infections
- diarrhea
- respiratory infections
- meningitis

Other factors help to protect a breastfed baby from infection by contributing to the infant's immune system by increasing the barriers to infection and decreasing the growth of organisms like bacteria and viruses.

Breastfeeding is particularly beneficial for premature babies and also may protect children against:

- allergies
- asthma
- diabetes
- obesity
- sudden infant death syndrome (SIDS)

As a group, breastfed babies have fewer infections and hospitalizations than formula-fed infants.

Nutrition and ease of digestion. Often called the "perfect food" for a human baby's digestive system, breast milk's components — lactose, protein (whey and casein), and fat — are easily digested by a newborn's immature system.

As a group, breastfed infants have less difficulty with digestion than do formula-fed infants. Breast milk tends to be more easily digested so that breastfed babies have fewer incidences of diarrhea or constipation.

Breast milk also naturally contains many of the vitamins and minerals that a newborn requires. A healthy mother does not need any additional vitamins or nutritional supplements, with the exception of vitamin D. Breast milk does contain some vitamin D, and vitamin D is produced by the body when the skin is exposed to sunlight. However, sun exposure increases the risk of skin damage, so parents are advised to minimize exposure. As a result, the AAP recommends that all breastfed babies begin receiving vitamin D supplements during the first 2 months and continuing until the infant consumes enough vitamin D-fortified formula or milk (after 1 year of age).

The U.S. Food and Drug Administration (FDA) regulates formula companies to ensure that they provide all the known necessary nutrients (including vitamin D) in their formulas. Commercial formulas do a pretty good job of trying to duplicate the ingredients in breast milk — and are coming closer — but haven't matched their exact combination and composition. Why? Because some of breast milk's more complex substances are too difficult to manufacture and some have not yet been identified.

Free. Breast milk doesn't cost a cent, while the cost of formula quickly adds up. And because of the immunities and antibodies passed onto them through their mothers' breast milk, breastfed infants are sick less often than infants who receive formula. For example, researchers have determined that infants who are breastfed exclusively have fewer episodes of ear infections. That may mean they make fewer trips to the doctor's office, which equates to fewer co-pays and less money doled out for prescriptions and over-the-counter medications.

Likewise, women who breastfeed are less likely to have to take time off from work to care for their sick babies.

Different tastes. A nursing mother will usually need 500 extra calories per day, which means that she should eat a wide variety of well-balanced foods. This introduces breastfed babies to different tastes through their mothers' breast milk, which has different flavors depending on what their mothers have eaten.

Convenience. With no last-minute runs to the store for more formula, breast milk is always fresh and available. And when women breastfeed, there's no need to warm up bottles in the middle of the night. It's also easy for breastfeeding mothers to be active — and go out and about — with their babies and know that they'll have food available for whenever their little one is hungry.

Obesity prevention. Some studies have found that breastfeeding may help prevent obesity.

Smarter babies. Some studies suggest that children who were exclusively breastfed have slightly higher IQs than children who were formula fed.

"Skin-to-skin" contact. Many nursing mothers really enjoy the experience of bonding so closely with their babies. And the skin-to-skin contact can enhance the emotional connection between mother and infant.

Beneficial for mom, too. The ability to nourish a baby totally can also help a new mother feel confident in her ability to care for her baby. Breastfeeding also burns calories and helps shrink the uterus, so nursing moms may be able to return to their pre-pregnancy shape and weight quicker. In addition, studies show that breastfeeding helps lower the risk of breast cancer, high blood pressure, diabetes, and cardiovascular disease, and also may help decrease the risk of uterine and ovarian cancer. In one long-term study of the National Institutes of Health Women's Health Initiative, women who breastfed for at least 7 to 12 months after giving birth had a lower risk of cardiovascular disease.

Breastfeeding: The Challenges

Although it is the best nutritional source for babies, breastfeeding does come with some concerns that many new mothers share. Whereas it's easy from the get-go for some, it can be challenging. Sometimes, both mother and baby need plenty of patience and persistence to get used to the routine of breastfeeding. But all the effort is often worth it in the long run — for both the mother and her baby.

Common concerns of new moms, especially during the first few weeks and months, may include:

Personal comfort. Initially, as with any new skill, many moms feel uncomfortable with breastfeeding. But with adequate education, support, and practice, most moms overcome this. The bottom line is that breastfeeding shouldn't hurt.

Latch-on pain is normal for the first week to 10 days, and should last less than a minute with each feeding. But if breastfeeding hurts throughout feedings, or if the nipples and/or breasts are sore, it's a good idea for breastfeeding mothers to seek the help of a lactation consultant or their doctor. Many times, it's just a matter of using the proper technique, but sometimes pain can mean that something else is going on, like an infection.

Time and frequency of feedings. There's no question that breastfeeding does require a substantial time commitment from mothers. Then again, many things in parenting do. Some women may be concerned that nursing will make it hard for them to work, run errands, or travel because of a breastfeeding schedule or a need to pump breast milk during the day.

And breastfed babies do need to eat more often than babies who are fed formula, because breast milk digests faster than formula. This means Mom may find herself in demand every 2 or 3 hours (maybe more, maybe less) in the first few weeks.

This can be tiring, but once breastfeeding has been established (usually in about a month), other family members may be able to help out by giving the baby pumped breast milk if Mom needs a break or is going back to work outside the home. And it's not long before babies feed less frequently and sleep through the night (usually around 3 months). Also, with a little organization and time management, it becomes easier to work out a schedule to breastfeed and/or pump.

Diet. Women who are breastfeeding need to be careful about what they eat and drink, since things can be passed to the baby through the breast milk. Just like during pregnancy, breastfeeding women should avoid fish that are high in mercury, and limit lower mercury fish intake. If a woman has alcohol, a small amount can be passed to the baby through breast milk. She should wait to breastfeed at least 2 hours after a single alcoholic drink in order to avoid passing any alcohol to the baby. Caffeine intake should be kept to no more than 300 milligrams (about one to three cups of regular coffee) per day for breastfeeding women because it may cause problems such as restlessness and irritability in some babies. Some infants are sensitive enough to caffeine to have problems even with smaller amounts of caffeine.

Maternal medical conditions, medicines, and breast surgery. Medical conditions such as HIV or AIDS or those that involve chemotherapy or treatment with certain medications may make breastfeeding unsafe. A woman should check with her doctor or a lactation consultant if she's unsure if she should breastfeed with a specific condition. Women should always check with the doctor about the safety of taking medications while breastfeeding, including over-the-counter and herbal medicines.

Mothers who've had breast surgery, such as a reduction, may have difficulty with supply if their milk ducts have been severed. In this situation, a woman should talk to her doctor about her concerns and work with a lactation specialist.

Formula Feeding: The Advantages

Breastfeeding is considered the best nutritional option for babies by the major medical organizations, but it's not right for every mother. Commercially prepared infant formulas are a nutritious alternative to breast milk, and even contain some vitamins and nutrients that breastfed babies need to get from supplements.

Manufactured under sterile conditions, commercial formulas attempt to duplicate mother's milk using a complex combination of proteins, sugars, fats, and vitamins that would be virtually impossible to create at home. So, if you don't breastfeed your baby, it's important that you use only a commercially prepared formula and that you do not try to create your own.

In addition to medical concerns that may prevent breastfeeding, for some women, breastfeeding may be too difficult or stressful.

Here are a few other reasons women may choose to formula feed:

Convenience. Either parent (or another caregiver) can feed the baby a bottle at any time (although this is also true for women who pump their breast milk). This allows the mother to share the feeding duties and helps her partner to feel more involved in the crucial feeding process and the bonding that often comes with it.

Flexibility. Once the bottles are made, a formula-feeding mother can leave her baby with a partner or caregiver and know that her little one's feedings are taken care of. There's no need to pump or to schedule work or other obligations and activities around the baby's feeding schedule. And formula-feeding moms don't need to find a private place to nurse in public. However, if Mom is out and about with baby, she will need to bring supplies for making bottles.

Time and frequency of feedings. Because formula digests slower than breast milk, formula-fed babies usually need to eat less often than do breastfed babies.

Diet. Women who opt to formula feed don't have to worry about the things they eat or drink that could affect their babies.

Formula Feeding: The Challenges

As with breastfeeding, there are some challenges to consider when deciding whether to formula feed.

Organization and preparation. Enough formula must be on hand at all times and bottles must be prepared. The powdered and condensed formulas must be prepared with sterile water (which needs to be boiled until the baby is at least 6 months old). Ready-to-feed formulas that can be poured directly into a bottle without any mixing or water tend to be expensive.

Bottles and nipples need to be sterilized before the first use and then washed after every use after that (this is also true for breastfeeding women who give their babies bottles of pumped breast milk). Bottles and nipples can transmit bacteria if they aren't cleaned properly, as can formula if it isn't stored in sterile containers.

Bottles left out of the refrigerator longer than 1 hour and any formula that a baby doesn't finish must be thrown out. And prepared bottles of formula should be stored in the refrigerator for no longer than 24 to 48 hours (check the formula's label for complete information).

Some parents warm bottles up before feeding the baby, although this often isn't necessary. The microwave should never be used to warm a baby's bottle because it can create dangerous "hot spots."

Instead, run refrigerated bottles under warm water for a few minutes if the baby prefers a warm bottle to a cold one. Or the baby's bottles can be put in a pan of hot water (away from the heat of the stove) with the temperature tested by squirting a drop or two of formula on the inside of the wrist.

Lack of antibodies. None of the important antibodies found in breast milk are found in manufactured formula, which means that formula doesn't provide the baby with the added protection against infection and illness that breast milk does.

Expense. Formula can be costly. Powdered formula is the least expensive, followed by concentrated, with ready-to-feed being the most expensive. And specialty formulas (i.e., soy and hypoallergenic) cost more — sometimes far more — than the basic formulas. During the first year of life, the cost of basic formula can run about \$1,500.

Possibility of producing gas and constipation. Formula-fed babies may have more gas and firmer bowel movements than breastfed babies.

Can't match the complexity of breast milk. Manufactured formulas have yet to duplicate the complexity of breast milk, which changes as the baby's needs change.

Whatever nutritional option you choose, be sure to talk to your doctor about the choices available to help you make the decision that's best for both you and your baby.

Reviewed by: Larissa Hirsch, MD
Date reviewed: November 2008



Note: All information on KidsHealth® is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.

© 1995- 2011 The Nemours Foundation. All rights reserved.