

Breastfeeding

From Wikipedia, the free encyclopedia

Breastfeeding, also known as **nursing**, is the feeding of babies and young children with milk from a woman's breast.^[1] Health professionals recommend that breastfeeding begin within the first hour of a baby's life and continue as often and as much as the baby wants.^{[2][3]} During the first few weeks of life babies may nurse roughly every two to three hours. The duration of a feeding is usually ten to fifteen minutes on each breast.^[4] Older children feed less often.^[5] Mothers may pump milk so that it can be used later when breastfeeding is not possible.^[1] Breastfeeding has a number of benefits to both mother and baby, which infant formula lacks.^{[3][6]}

Deaths of an estimated 820,000 children under the age of five could be prevented globally every year with increased breastfeeding.^[7] Breastfeeding decreases the risk of respiratory tract infections and diarrhea, both in developing and developed countries.^{[2][3]} Other benefits include lower risks of asthma, food allergies, celiac disease, type 1 diabetes, and leukemia.^[3] Breastfeeding may also improve cognitive development and decrease the risk of obesity in adulthood.^[2] Mothers may feel pressure to breastfeed; however in the developed world children generally grow up normally when bottle feed.^[8]

Benefits for the mother include less blood loss following delivery, better uterus shrinkage, weight loss, and less postpartum depression. Breastfeeding delays the return of menstruation and fertility, a phenomenon known as lactational amenorrhea. Long term benefits for the mother include decreased risk of breast cancer, cardiovascular disease, and rheumatoid arthritis.^{[3][7]} Breastfeeding is often less expensive than infant formula.^{[9][10]}

Health organizations, including the World Health Organization (WHO), recommend breastfeeding exclusively for six months.^{[2][11]} This means that no other foods or drinks other than possibly vitamin D are typically given.^[12] After the introduction of foods at six months of age, recommendations include continued breastfeeding until at least one to two years of age.^{[2][3]} Globally about 38% of infants are only breastfed during their first six months of life.^[2] In the United States, about 75% of women begin breastfeeding and about 13% only breastfeed until the age of six months.^[3] Medical conditions that do



A baby breastfeeding

not allow breastfeeding are rare.^[3] Mothers who take certain recreational drugs and medications should not breastfeed.^[13] Smoking, limited intake of alcohol, and coffee are not reasons to avoid breastfeeding.^{[14][15][16]}

Contents

- 1 Lactation
- 2 Breast milk
- 3 Process
 - 3.1 Commencement
 - 3.2 Timing
 - 3.3 Location
 - 3.4 Position
 - 3.5 Latching on
 - 3.6 Weaning
- 4 Methods
 - 4.1 Exclusive
 - 4.2 Mixed feeding
 - 4.3 Expressed milk
 - 4.4 Shared nursing
 - 4.5 Tandem nursing
 - 4.6 Induced lactation
 - 4.7 Re-lactation
 - 4.8 Extended
- 5 Health effects
 - 5.1 Baby
 - 5.2 Mother
- 6 Decision factors
 - 6.1 Social support
 - 6.2 Healthcare
 - 6.3 Socioeconomic status
 - 6.4 Social acceptance
- 7 Prevalence
- 8 History
- 9 Society and culture
 - 9.1 Financial considerations
 - 9.2 Recommendations
 - 9.3 Advocacy
- 10 LGBTQ
 - 10.1 Chestfeeding
 - 10.2 Induced lactation
- 11 Research
- 12 See also

- 13 References
- 14 Further reading
- 15 External links

Lactation

The endocrine system drives milk production during pregnancy and the first few days after the birth. From the twenty-fourth week of pregnancy (the second and third trimesters), a woman's body produces hormones that stimulate the growth of the breast's milk duct system. Progesterone influences the growth in size of alveoli and lobes; high levels of progesterone, estrogen, prolactin and other hormones inhibit lactation before birth; hormone levels drop after birth, triggering milk production.^[17] After birth, the hormone oxytocin contracts the smooth muscle layer of cells surrounding the alveoli to squeeze milk into the duct system. Oxytocin is also necessary for the milk ejection reflex, or *let-down* to occur. Let-down occurs in response to the baby's suckling, though it also may be a conditioned response, e.g. to the cry of the baby. Lactation can also be induced by a combination of physical and psychological stimulation, by drugs or by a combination of these methods.^{[18][19]}

Breast milk

Not all of breast milk's properties are understood, but its nutrient content is relatively consistent. Breast milk is made from nutrients in the mother's bloodstream and bodily stores. Breast milk has an optimal balance of fat, sugar, water, and protein that is needed for a baby's growth and development.^[21] Breastfeeding triggers biochemical reactions which allows for the enzymes, hormones, growth factors and immunologic substances to effectively defend against infectious diseases for the infant. The breastmilk also has long-chain polyunsaturated fatty acids which help with normal retinal and neural development.^[22] Because breastfeeding requires an average of 500 calories a day, it helps the mother lose weight after giving birth.^[23]



Two 25ml samples of human breast milk. The sample on the left is foremilk, the watery milk coming from a full breast. To the right is hindmilk, the creamy milk coming from a nearly empty breast.^[20]

The composition of breast milk changes depending on how long the baby nurses at each session, as well as on the child's age.^[24] The first type, produced during the first days after childbirth, is called *colostrum*. Colostrum is easy to digest although it is more concentrated than mature milk. It has a laxative effect that helps the infant to pass early stools, aiding in the excretion of excess bilirubin, which helps to prevent jaundice. It also helps to seal the infants gastrointestinal tract from foreign substances, which may sensitize the baby to foods that the mother has eaten. Although the baby has received some

antibodies through the placenta, colostrum contains a substance which is new to the newborn, secretory immunoglobulin A (IgA). IgA works to attack germs in the mucous membranes of the throat, lungs, and intestines, which are most likely to come under attack from germs.^[25]

Breasts begin producing mature milk around the third or fourth day after birth. Early in a nursing session, the breasts produce *foremilk*, a thinner milk containing many proteins and vitamins. If the baby keeps nursing, then *hindmilk* is produced. Hindmilk has a creamier color and texture because it contains more fat.^[26] The American Academy of Pediatrics (AAP) states that "tobacco smoking by mothers is not a contraindication to

breastfeeding."^[27] In addition, AAP states that while breastfeeding mothers "should avoid the use of alcoholic beverages", an "occasional celebratory single, small alcoholic drink is acceptable, but breastfeeding should be avoided for 2 hours after the drink."^[27] A 2014 review found that "even in a theoretical case of binge drinking, the children would not be subjected to clinically relevant amounts of alcohol [through breastmilk]", and would have no adverse effects on children as long as drinking is "occasional".^[28]



Himba woman and child

Process

Commencement

Breastfeeding can begin immediately after birth. The baby is placed on the mother and feeding starts as soon as the baby shows interest.

According to some authorities, increasing evidence suggests that early skin-to-skin contact (also called kangaroo care) between mother and baby stimulates breastfeeding behavior in the baby.^[29] Newborns who are immediately placed on their mother's skin have a natural instinct to latch on to the breast and start nursing, typically within one hour of birth. Immediate skin-to-skin contact may provide a form of imprinting that makes subsequent feeding significantly easier. In addition to more successful breastfeeding and bonding, immediate skin-to-skin contact reduces crying and warms the baby.

According to studies cited by UNICEF, babies naturally follow a process which leads to a first breastfeed. Initially after birth the baby cries with its first breaths. Shortly after, it relaxes and makes small movements of the arms, shoulders and head. The baby crawls towards the breast and begins to feed. After feeding, it is normal for a baby to remain latched to the breast while



Newborn rests as caregiver checks breath sounds

resting. This is sometimes mistaken for lack of appetite. Absent interruptions, all babies follow this process. Rushing or interrupting the process, such as removing the baby to weigh him/her, may complicate subsequent feeding.^[30] Activities such as weighing, measuring, bathing, needle-sticks, and eye prophylaxis wait until after the first feeding."^[27]

Children who are born preterm have difficulty in initiating breast feeds immediately after birth. By convention, such children are often fed on expressed breast milk or other supplementary feeds through tubes or bottles until they develop satisfactory ability to suck breast milk. Tube feeding, though commonly used, is not supported by scientific evidence as of October 2016.^[31] It has also been reported in the same systematic review that by avoiding bottles and using cups instead to provide supplementary feeds to preterm children, a greater extent of breast feeding for a longer duration can subsequently be achieved.^[31]

Timing

Newborn babies typically express demand for feeding every 1 to 3 hours (8-12 times in 24 hours) for the first two to four weeks.^[32] A newborn has a very small stomach capacity. At one-day old it is 5 to 7 ml, about the size of a marble; at day three it is 0.75-1 oz, about the size of a "shooter" marble; and at day seven it is 1.5-2 oz, or about the size of a ping-pong ball. The amount of breast milk that is produced is timed to meet the infant's needs in that the first milk, colostrum, is concentrated but produced in only very small amounts, gradually increasing in volume to meet the expanding size of the infant's stomach capacity.^[25]

According to La Leche League International, "Experienced breastfeeding mothers learn that the sucking patterns and needs of babies vary. While some infants' sucking needs are met primarily during feedings, other babies may need additional sucking at the breast soon after a feeding even though they are not really hungry. Babies may also nurse when they are lonely, frightened or in pain....Comforting and meeting sucking needs at the breast is nature's original design. Pacifiers (dummies, soothers) are a substitute for the mother when she cannot be available. Other reasons to pacify a baby primarily at the breast include superior oral-facial development, prolonged lactational amenorrhea, avoidance of nipple confusion, and stimulation of an adequate milk supply to ensure higher rates of breastfeeding success."^[33]

During the newborn period, most breastfeeding sessions take from 20 to 45 minutes.^[32] After one breast is empty, the mother may offer the other breast.

Location

Most US states now have laws that allow a mother to breastfeed her baby anywhere. In hospitals, rooming-in care permits the baby to stay with the mother and simplifies the process. Some commercial establishments provide breastfeeding rooms, although laws generally specify that mothers may breastfeed anywhere, without requiring a special area. Breastfeeding in public remains controversial in many developed countries.

In 2014, newly elected Pope Francis drew world-wide commentary when he encouraged mothers to breastfeed babies in church. During a papal baptism, he said that mothers "should not stand on ceremony" if their children were hungry. "If they are hungry, mothers, feed them, without thinking twice," he said, smiling. "Because they are the most important people here."^[34]

Position

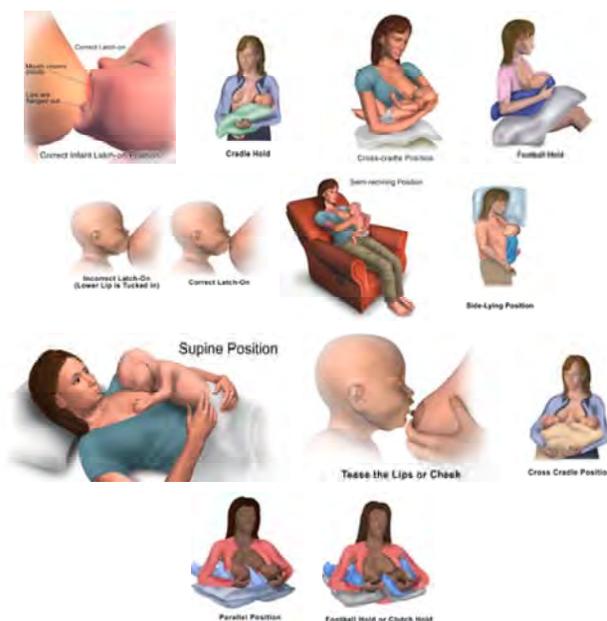
Correct positioning and technique for latching on are necessary to prevent nipple soreness and allow the baby to obtain enough milk.^[35]



Babies can successfully latch on to the breast from multiple positions. Each baby may prefer a particular position. The "football" hold places the baby's legs next to the mother's side with the baby facing the mother. Using the "cradle" or "cross-body" hold, the mother supports the baby's head in the crook of her arm. The "cross-over" hold is similar to the cradle hold, except that the mother supports the baby's head with the opposite hand. The mother may choose a reclining position on her back or side with the baby laying next to her.^[36]

Latching on

The "rooting reflex" is the baby's natural tendency to turn towards the breast with the mouth open wide; mothers sometimes make use of this by gently stroking the baby's cheek or lips with their nipple to induce the baby to move into position for a breastfeeding session, then quickly moving the baby onto the breast while its mouth is wide open.^[37] To prevent nipple soreness and allow the baby to get enough milk, a large part of the breast and areola need to enter the baby's mouth.^{[38][39]} Failure to latch on is one of the main reasons for ineffective feeding and can lead to infant health concerns.



Weaning

Weaning is the process of replacing breast milk with other foods; the infant is fully weaned after the replacement is complete. Psychological factors affect the weaning process for both mother and infant, as issues of closeness and separation are very prominent.^[40] If the baby is less than a year old substitute bottles are necessary; an older baby may accept milk from a cup. Unless a medical emergency necessitates abruptly stopping breastfeeding, it is best to gradually cut back on feedings to allow the breasts to adjust to the decreased demands without becoming engorged. La Leche League advises: "The nighttime feeding is usually the last to go. Make a bedtime routine not centered around breastfeeding. A good book or two will eventually become more important than a long session at the breast."^[41]

If breastfeeding is suddenly stopped a woman's breasts are likely to become engorged with milk. Pumping small amounts to relieve discomfort helps to gradually train the breasts to produce less milk. There is presently no safe medication to prevent engorgement, but cold compresses and ibuprofen may help to relieve pain and swelling. Pain should go away in one to five days. If symptoms continue and comfort measures are not helpful a woman should consider the possibility that a blocked milk duct or infection may be present and seek medical intervention.^[42]

When weaning is complete the mother's breasts return to their previous size after several menstrual cycles. If the mother was experiencing lactational amenorrhea her periods will return along with the return of her fertility. When no longer breastfeeding she will need to adjust her diet to avoid weight gain.^[43]

Methods

Exclusive

Exclusive breastfeeding is defined as "an infant's consumption of human milk with no supplementation of any type (no water, no juice, no nonhuman milk and no foods) except for vitamins, minerals and medications."^[27] Exclusive breastfeeding till six months of age helps to protect an infant from gastrointestinal infections in both developing and industrialized countries. The risk of death due to diarrhea and other infections increases when babies are either partially breastfed or not breastfed at all.^[2]

Measuring how many calories a breastfed baby consumes is complex, although babies normally attempt to meet their own requirements.^[44] Babies that fail to eat enough may exhibit symptoms of failure to thrive.^[45]

La Leche League says that mothers' most often asked question is, "How can I tell if my baby is getting enough milk?" They advise that for the first few days, while the baby is receiving mostly colostrum, one or two wet diapers per day is normal. Once the mother starts producing milk, usually on the third or fourth day, the baby should have 6-8 wet cloth diapers (5-6 wet disposable diapers) per day. In addition, most young babies have at least two to five bowel movements every 24 hours for the first several months.^[46]

La Leche League offers the following additional signs that indicate a baby is receiving enough milk:

- Averages at least 8-12 feedings per 24-hour period.
- Determines the duration of feeding, which may be 10 to 20 minutes per breast or longer.
- Swallowing sounds are audible.
- Gains at least 4-7 ounces per week after the fourth day.
- Is alert and active, appears healthy, has good color, firm skin and is growing in length and head circumference.^[46]

Mixed feeding

Predominant or mixed breastfeeding means feeding breast milk along with infant formula, baby food

and even water, depending on the child's age.^[47]

Expressed milk

A mother can "express" (produce) her milk for storage and later use. Expression occurs with massage or a breast pump. It can be stored in freezer storage bags, containers made specifically for breastmilk, a supplemental nursing system, or a bottle ready for use. Using someone other than the mother/wet nurse to deliver the bottle maintains the baby's association of nursing with the mother/wet nurse and bottle feeding with other people.

Breast milk may be kept at room temperature for up to six hours, refrigerated for up to eight days or frozen for six to twelve months.^[48] Research suggests that the antioxidant activity in expressed breast milk decreases over time, but remains at higher levels than in infant formula.^[49]

Mothers express milk for multiple reasons. Expressing breast milk can maintain a mother's milk supply when she and her child are apart. A sick baby who is unable to nurse can take expressed milk through a nasogastric tube. Some babies are unable or unwilling to nurse. Expressed milk is the feeding method of choice for premature babies.^[50] Viral disease transmission can be prevented by expressing breast milk and subjecting it to Holder pasteurisation.^[51] Some women donate expressed breast milk (EBM) to others, either directly or through a milk bank. This allows mothers who cannot breastfeed to give their baby the benefits of breast milk.

Babies feed differently with artificial nipples than from a breast. With the breast, the infant's tongue massages the milk out rather than sucking, and the nipple does not go as far into the mouth. Drinking from a bottle takes less effort and the milk may come more rapidly, potentially causing the baby to lose desire for the breast. This is called *nursing strike*, *nipple strike* or *nipple confusion*. To avoid this, expressed milk can be given by means such as spoons or cups.^[47]

"Exclusively expressing", "exclusively pumping", and "EPing" are terms for a mother who exclusively feeds her baby expressed milk. With good pumping habits, particularly in the first 12 weeks while establishing the milk supply, it is possible to express enough milk to feed the baby indefinitely. With the improvements in breast pumps, many women exclusively feed expressed milk, expressing milk at work. Women can leave their infants in the care of others while traveling, while maintaining a supply of breast milk.^[52]



Formula and pumped breastmilk, side-by-side. Note that the formula is of uniform consistency and color, while the milk exhibits properties of an organic solution, separating into the creamline layer of fat at the top, milk and a watery blue layer at the bottom.



Manual breast pump

Shared nursing

Wet nursing was common throughout history. It remains popular in some developing nations, including those in Africa, for more than one woman to breastfeed a child. Shared breastfeeding is a risk factor for HIV infection in infants.^[53] A woman who is engaged to breastfeed another's baby is known as a wet nurse. Shared nursing can sometimes provoke negative reactions in the Anglosphere.^{[54][55]}



Expressed breast milk or infant formula can be fed by bottle

Tandem nursing

Feeding two children at the same time who are not twins or multiples is called *tandem nursing*. Appetite and feeding habits of each baby may differ, so they may feed at the same or different times, which may involve feeding them simultaneously, one on each breast.

Breastfeeding triplets or larger broods is a challenge given babies' varying appetites. Breasts can respond to the demand and produce larger milk quantities; mothers have breastfed triplets successfully.^{[56][57][58]}

Tandem nursing occurs when a woman gives birth while breastfeeding an older child. During the late stages of pregnancy, the milk changes to colostrum. While some children continue to breastfeed even with this change, others may wean. Breastfeeding a child while pregnant with another may be considered a form of tandem feeding for the nursing mother, as she provides nutrition for two.^[59]

Induced lactation

Induced lactation, also called *adoptive lactation*, is the process of starting breastfeeding in a woman who did not give birth.^[60] This usually requires the adoptive mother to take hormones and other drugs to stimulate breast development and promote milk production. In some cultures, breastfeeding an adoptive child creates milk kinship that built community bonds across class and other hierarchal bonds.^[60]

Re-lactation

Re-lactation is the process of restarting breastfeeding.^[60] In developing countries, mothers may restart breastfeeding after a weaning as part of an oral rehydration treatment for diarrhea. In developed countries, re-lactation is common after early medical problems are resolved, or because a mother changes her mind about breastfeeding.

Re-lactation is most easily accomplished with a newborn or with a baby that was previously breastfeeding; if the baby was initially bottle-fed, the baby may refuse to suckle. If the mother has recently stopped breastfeeding, she is more likely to be able to re-establish her milk supply, and more likely to have an adequate supply. Although some women successfully re-lactate after months-long interruptions, success is higher for shorter interruptions.^[60]

Techniques to promote lactation use frequent attempts to breastfeed, extensive skin-to-skin contact with the baby, and frequent, long pumping sessions.^[60] Suckling may be encouraged with a tube filled with infant formula, so that the baby associates suckling at the breast with food. A dropper or syringe without the needle may be used to place milk onto the breast while the baby suckles. The mother should allow the infant to suckle at least ten times during 24 hours, and more times if he or she is interested. These times can include every two hours, whenever the baby seems interested, longer at each breast, and when the baby is sleepy when he or she might suckle more readily. In keeping with increasing contact between mother and child, including increasing skin-to-skin contact, grandmothers should pull back and help in other ways. Later on, grandmothers can again provide more direct care for the infant.^[61]

These techniques require the mother's commitment over a period of weeks or months. However, even when lactation is established, the supply may not be large enough to breastfeed exclusively. A supportive social environment improves the likelihood of success.^[60] As the mother's milk production increases, other feeding can decrease. Parents and other family members should watch the baby's weight gain and urine output to assess nutritional adequacy.^[61]

A WHO manual for physicians and senior health workers citing a 1992 source states: "If a baby has been breastfeeding sometimes, the breastmilk supply increases in a few days. If a baby has stopped breastfeeding, it may take 1-2 weeks or more before much breastmilk comes."^[61]

Extended

Extended breastfeeding means breastfeeding after the age of 12 or 24 months, depending on the source. Worldwide, infants are weaned on average between ages two and four. Breast-feeding continues until children are six or seven years old in some cultures but in other countries extended breast-feeding is less common. In Western countries such as the United States, Canada, and Great Britain, extended breastfeeding is relatively uncommon and can provoke criticism.^{[62][63]}

In the United States, 22.4% of babies are breastfed for 12 months, the minimum amount of time advised by the American Academy of Pediatrics. In India, mothers commonly breastfeed for 2 to 3 years.^[64]

Health effects

Breastfeeding decreases the risk of a number of diseases in both mothers and babies.^[65] The US Preventive Services Task Force recommends efforts to promote breastfeeding.^[66]

Baby

Early breastfeeding is associated with fewer nighttime feeding problems.^[67] Early skin-to-skin contact between mother and baby improves breastfeeding outcomes, increases cardio-respiratory stability and decreases infant crying.^[68] Reviews from 2007 found numerous benefits. Breastfeeding aids general health, growth and development in the infant. Infants who are not breastfed are at mildly increased risk of developing acute and chronic diseases, including lower respiratory infection, ear infections,

bacteremia, bacterial meningitis, botulism, urinary tract infection and necrotizing enterocolitis.^{[69][70]}

Breastfeeding may protect against sudden infant death syndrome,^[71] insulin-dependent diabetes mellitus, Crohn's disease, ulcerative colitis, lymphoma, allergic diseases, digestive diseases and may enhance cognitive development.^[27]

Growth

The average breastfed baby doubles its birth weight in 5 to 6 months. By one year, a typical breastfed baby weighs about 2½ times its birth weight. At one year, breastfed babies tend to be leaner than formula-fed babies, which improves long-run health.^[72]

The Davis Area Research on Lactation, Infant Nutrition and Growth (DARLING) study reported that breastfed and formula-fed groups had similar weight gain during the first 3 months, but the breastfed babies began to drop below the median beginning at 6 to 8 months and were significantly lower weight than the formula-fed group between 6 and 18 months. Length gain and head circumference values were similar between groups, suggesting that the breastfed babies were leaner.^[73]

Infections

Breast milk contains several anti-infective factors such as bile salt stimulated lipase (protecting against amoebic infections) and lactoferrin (which binds to iron and inhibits the growth of intestinal bacteria).^{[74][75]}

Infants who are exclusively breastfed for the first six months are less likely to die of gastrointestinal infections than infants who switched from exclusive to partial breastfeeding at three to four months.^[76]

During breastfeeding, approximately 0.25–0.5 grams per day of secretory IgA antibodies pass to the baby via milk.^{[77][78]} This is one of the important features of colostrum.^[79] The main target for these antibodies are probably microorganisms in the baby's intestine. The rest of the body displays some uptake of IgA,^[80] but this amount is relatively small.^[81]

Maternal vaccinations while breastfeeding is safe for almost all vaccines. Additionally, the mother's immunity obtained by vaccination against tetanus, diphtheria, whooping cough and influenza can protect the baby from these diseases, and breastfeeding can reduce fever rate after infant immunization. However, smallpox and yellow fever vaccines increase the risk of infants developing vaccinia and encephalitis.^{[82][83]}

Mortality

Babies who are not breastfed are almost six times more likely to die by the age of one month than those who receive at least some breastmilk.^[84]

Diabetes

Infants exclusively breastfed have less chance of developing diabetes mellitus type 1 than those with a shorter duration of breastfeeding.^[70] Breastfed infants appear to have a lower likelihood of developing diabetes mellitus type 2 later in life.^{[69][70][85]} Breastfeeding is also associated with a lower risk of type 2 diabetes among mothers who practice it.^[86]

Childhood obesity

The protective effect of breastfeeding against obesity is consistent, though small, across many studies.^{[69][70][87]} A 2013 longitudinal study reported less obesity at ages two and four years among infants who were breastfed for at least four months.^[88]

Allergic diseases

In children who are at risk for developing allergic diseases (defined as at least one parent or sibling having atopy), atopic syndrome can be prevented or delayed through 4-month exclusive breastfeeding, though these benefits may not persist.^[89]

Other health effects

Breastfeeding may reduce the risk of necrotizing enterocolitis (NEC).^[70]

Breastfeeding or introduction of gluten while breastfeeding don't protect against celiac disease among at-risk children. Breast milk of healthy human mothers who eat gluten-containing foods presents high levels of non-degraded gliadin (the main gluten protein). Early introduction of traces of gluten in babies to potentially induce tolerance doesn't reduce the risk of developing celiac disease. Delaying the introduction of gluten does not prevent, but is associated with a delayed onset of the disease.^{[90][91]}

About 19% of leukemia cases may be prevented by breastfeeding for six months or longer.^[92]

Breastfeeding may decrease the risk of cardiovascular disease in later life, as indicated by lower cholesterol and C-reactive protein levels in breastfed adult women.^[69] Breastfed infants have somewhat lower blood pressure later in life, but it is unclear how much practical benefit this provides.^{[69][70]}

A 1998 study suggested that breastfed babies have a better chance of good dental health than formula-fed infants because of the developmental effects of breastfeeding on the oral cavity and airway. It was thought that with fewer malocclusions, breastfed children may have a reduced need for orthodontic intervention. The report suggested that children with a well rounded, "U-shaped" dental arch, which is found more commonly in breastfed children, may have fewer problems with snoring and sleep apnea in later life.^[93] A 2016 review found that breastfeeding protected against malocclusions.^[94]

Intelligence

It is unclear whether breastfeeding improves intelligence later in life. Several studies found no relationship after controlling for confounding factors like maternal intelligence (smarter mothers were more likely to breastfeed their babies).^{[70][95]} However, other studies concluded that breastfeeding was associated with increased cognitive development in childhood, although the cause may be increased mother–child interaction rather than nutrition.^[69]

Mother

Breastfeeding aids maternal physical and emotional health. Breastfeeding and depression in the mother are associated.^[96] Mothers who successfully breastfeed are less likely to develop postpartum depression.^[97]

Maternal bond

Hormones released during breastfeeding help to strengthen the maternal bond.^[21] Teaching partners how to manage common difficulties is associated with higher breastfeeding rates.^[98] Support for a breastfeeding mother can strengthen familial bonds and help build a paternal bond.^{[21][99]}

Fertility

Exclusive breastfeeding usually delays the return of fertility through lactational amenorrhea, although it does not provide reliable birth control. Breastfeeding may delay the return to fertility for some women by suppressing ovulation. Mothers may not ovulate, or have regular periods, during the entire lactation period. The non-ovulating period varies by individual. This has been used as natural contraception, with greater than 98% effectiveness during the first six months after birth if specific nursing behaviors are followed.^[100]

Hormonal

Breastfeeding releases beneficial hormones into the mother's body.^[78] Oxytocin and prolactin hormones relax the mother and increase her nurturing response.^[101] This hormone release can help to enable sleep. Breastfeeding soon after birth increases the mother's oxytocin levels, making her uterus contract more quickly and reducing bleeding. Pitocin, a synthetic hormone used to make the uterus contract during and after labour, is structurally modelled on oxytocin. Syntocinon, another synthetic oxytocic, is commonly used in Australia and the UK rather than Pitocin.^[102]

Weight loss

It is unclear whether breastfeeding causes mothers to lose weight after giving birth.^[70]

Reduced cancer risk

For breastfeeding women, long-term health benefits include reduced risk of breast cancer, ovarian

cancer, and endometrial cancer.^{[27][70][103]}

Decision factors

The majority of mothers intend to breastfeed at birth. Many factors can disrupt this intent. Research done in the U.S. shows that information about breastfeeding is rarely provided by a women's obstetricians during their prenatal visits and some health professionals incorrectly believe that due to recent improvements commercially prepared formula is equal to breast milk in terms of its health benefits.^[104] Many hospitals have instituted practices that encourage breastfeeding, however a 2012 survey in the U.S. found that 24% of maternity services were still providing supplements of commercial infant formula as a general practice in the first 48 hours after birth.^[3] *The Surgeon General's Call to Action to Support Breastfeeding* attempts to educate practitioners.^[105]

Social support

Work is the most commonly cited reason for not breastfeeding.^[106] In 2012 Save the Children examined maternity leave laws, ranking 36 industrialized countries according to their support for breastfeeding. Norway ranked first, while the United States came in last.^[107] Maternity leave in the US varies widely, including by state, despite the Family Medical Leave Act (FMLA), which guarantees most mothers up to 12 weeks unpaid leave. The majority of US mothers resume work earlier.

- Mother – Adolescence is a risk factor for low breastfeeding rates, although classes, books and personal counseling (professional or lay) can help compensate.^[108] Some women fear that breastfeeding will negatively impact the look of their breasts. However, a 2008 study found that breastfeeding had no effect on a woman's breasts, other factors did contribute to "drooping" of the breasts, such as advanced age, number of pregnancies and smoking behavior.^[109]
- Partner – Partners may lack knowledge of breastfeeding and their role in the practice.

Healthcare

Infants that are otherwise healthy uniformly benefit from breastfeeding. "No known disadvantages" stem from breastfeeding.^[110] However, extra precautions should be taken or breastfeeding be avoided in circumstances including certain infectious diseases, or use of certain medications.^[111] In some cases it may not be feasible for the mother to continue breastfeeding.^[112]

A number of hospital-employed procedures have been found to interfere with breastfeeding, including routine mother/baby separation, delayed initiation, vigorous routine suctioning, medications and mode of delivery.^[113]



Famille d'un Chef Camacan se préparant pour une Fête ("Family of a Camacan chief preparing for a celebration") by Jean-Baptiste Debret shows a woman breastfeeding a child in the background.

Pain caused from mis-positioning the baby on the breast or a tongue-tie in the infant can cause pain in the mother and discourage her. These problems are generally easy to correct (by re-positioning or clipping the tongue-tie).^[114]

Breast surgery, including breast implants or breast reduction surgery, reduces the chances that a woman will have sufficient milk to breastfeed.^[115] Women whose pregnancies are unintended are less likely to breast feed their babies.^[116]

Maternal infections

The central concern about breastfeeding in the presence of maternal HIV is risks of the child becoming infected. Factors such as the viral load in the mother's milk complicate breastfeeding recommendations for HIV-positive mothers.^[117]

In mothers who are treated with antiretroviral drugs the risk of HIV transmission with breastfeeding is 1 to 2%.^[2] Therefore, of breastfeeding is still recommended in areas of the world with death from infectious diseases is common.^[2] Infant formula should only be given if this can be safely done.^[2]

WHO recommends that national authorities in each country decide which infant feeding practice should be promoted by their maternal and child health services to best avoid HIV transmission from mother to child.^[118] Other maternal infection of concern include active untreated tuberculosis or human T-lymphotropic virus.

Medications

Breastfeeding mothers should inform their healthcare provider about all of the medications they are taking, including herbal products. Nursing mothers can safely take many over-the-counter drugs and prescription drugs and receive immunizations, but certain drugs, including painkillers and psychiatric drugs, may pose a risk.

The U.S. National Library of Medicine publishes "LactMed", an up-to-date online database of information on drugs and lactation. Geared to both healthcare practitioners and nursing mothers, LactMed contains over 450 drug records with information such as potential drug effects and alternate drugs to consider.^{[83][119]}

Some pollutants in the mother's food and drink are passed to the baby through breast milk, including mercury (found in some carnivorous fish),^[120] caffeine,^[121] and bisphenol A.^{[122][123]}

Socioeconomic status

Race, ethnicity and socioeconomic status affect choice and duration in the United States. A 2011 study found that on average, US women who breastfed had higher levels of education, were older and were more likely to be white.^[124]

The reasons for the persistently lower rates of breastfeeding among African American mothers are not well understood, but employment may play a role. They tend to return to work sooner than white mothers, and are more likely to work in unsupportive environments.

Although return to work is associated with early discontinuation, a supportive work environment may encourage mothers to continue.

Low-income mothers are more likely to have unintended pregnancies.^[124] Mothers whose pregnancies are unintended are less likely to breastfeed.^[116]

Social acceptance

Negative perception of breastfeeding in social settings has led some women to feel discomfort when breastfeeding in public.^[125] Public breastfeeding is forbidden in some places, not addressed by law in others, and a granted legal right in others. Even given a legal right, some mothers are reluctant to breastfeed,^{[126][127]} while others may object to the practice.^[128] Some public places and workplaces, rooms for mothers to nurse in private have been designated.

The invention of formula was hypothesized as a way for western culture to adapt to negative perceptions of breastfeeding.^[129] The breast pump offered a way for mothers to supply breast milk with most of formula feeding's convenience and without enduring possible disapproval of nursing.^[130]

Western society tends to perceive breasts in sexual terms instead of for their biological purpose.^[131] This view led many to object to breastfeeding because of the implicit association between infant feeding and sex.^[132] Many women feel embarrassed to breast-feed in public.^[126] These negative cultural connotations may reduce breastfeeding duration.^{[126][133][134]} Maternal guilt and shame is often affected by how a mother feeds her infant. These feelings result from her inability to behave according to her definition of a "good mother". These feelings occur in both bottle- and breast-feeding mothers, although for different reasons. Bottle feeding mothers may feel that they should be breastfeeding.^[135] Conversely, breastfeeding mothers may feel forced to feed in uncomfortable circumstances. Some may see breastfeeding as, "indecent, disgusting, animalistic, sexual, and even possibly a perverse act."^[131] Advocates use "nurse-ins" to show support for breastfeeding in public.^[125] Some advocates emphasize providing women with education on breastfeeding's benefits as well as problem-solving skills.^[135]

If someone criticizes breastfeeding in public, the La Leche League offers a few ways to respond:

- Ignore the comment or change the subject.
- Share information on breastfeeding with the other person.



Sign for a private nursing area at a museum using the international breastfeeding symbol

- Make a joke about the situation or yourself to lighten the mood.
- Show that you are recognizing the person's viewpoint by asking further questions without agreeing or responding to the criticism.
- Be empathetic — show that you understand the other person's feeling and meaning.^[136]

Prevalence

Globally about 38% of babies are just breastfed during their first six months of life.^[2] In the United States as of 2012, 75% of women started breastfeeding, 43% breastfed for six months though only 13% exclusively breastfed, and 23% breastfed for twelve months.^{[3][138]}

Breastfeeding rates in different parts of China vary considerably.^[139]

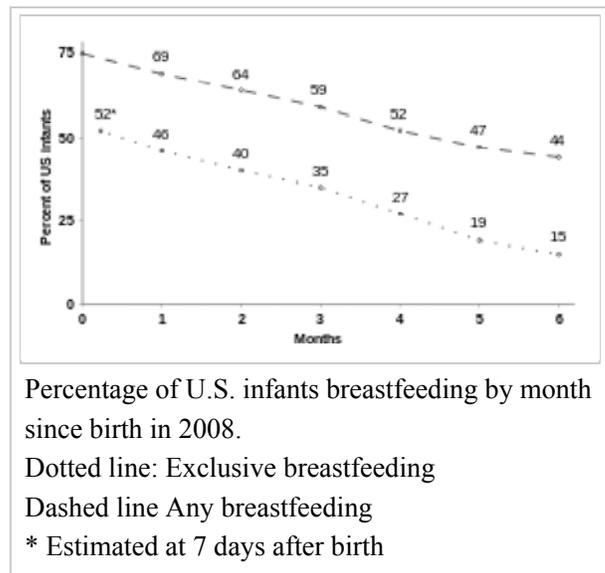
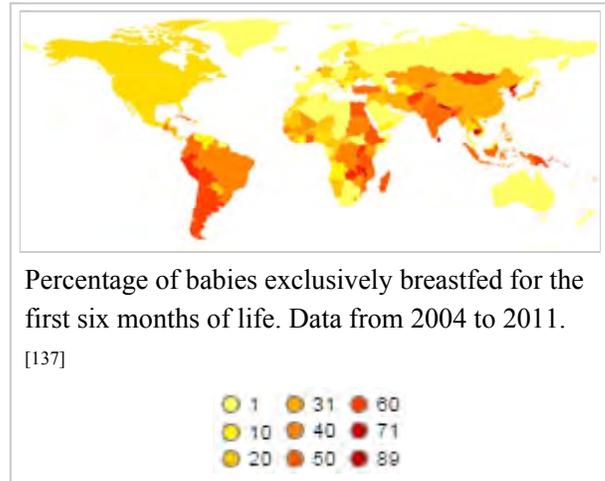
Breastfeeding rates in the United Kingdom were the lowest in the world in 2015 with only 0.5% of mothers still breastfeeding at a year, while in Germany 23% are doing so, 56% in Brazil and 99% in Senegal.^[140]

In Australia for children born in 2004, more than 90% were initially breastfed.^[141] In Canada for children born in 2005-06, more than 50% were only breastfed and more than 15% received both breastmilk and other liquids, by the age of 3 months.^[142]

History

In the Egyptian, Greek and Roman empires, women usually fed only their own children. However, breastfeeding began to be seen as something too common to be done by royalty, and wet nurses were employed to breastfeed the children of the royal families. This extended over time, particularly in western Europe, where noble women often made use of wet nurses. Lower-class women breastfed their infants and used a wet nurse only if they were unable to feed their own infant. Attempts were made in 15th-century Europe to use cow or goat milk, but these attempts were not successful. In the 18th century, flour or cereal mixed with broth were introduced as substitutes for breastfeeding, but this was also unsuccessful.

During the early 1900s, breastfeeding started to be viewed negatively by Western societies, especially Canada and the US. These societies considered it a low class and uncultured practice.^[143] This coincided with the appearance of improved infant formulas in the mid 19th century and its increased use, which



accelerated after World War II. From the 1960s onwards, breastfeeding experienced a revival which continued into the 2000s, though negative attitudes towards the practice were still entrenched up to 1990s.^[143]

Society and culture

Financial considerations

Breastfeeding is cheaper than alternatives, but is not free of cost. The mother generally must eat more food than otherwise. In the US, the extra money spent on food (about US\$13 each week) is usually about half as much money as the cost of infant formula.^[144]

Breastfeeding represents an opportunity cost, as the mother must spend hours each day breastfeeding instead of other activities, such as paid work or home production (such as growing food). In general, the higher the mother's earning power, the less likely she is to save money by breastfeeding.^[145]

Breastfeeding reduces health care costs and the cost of caring for sick babies. Parents of breastfed babies are less likely to miss work and lose income because their babies are sick.^[144] Looking at three of the most common infant illnesses, lower respiratory tract illnesses, otitis media, and gastrointestinal illness, one study compared infants that had been exclusively breastfed for at least three months to those who had not. It found that in the first year of life there were 2033 excess office visits, 212 excess days of hospitalization, and 609 excess prescriptions for these three illnesses per 1000 never-breastfed infants compared with 1000 infants exclusively breastfed for at least 3 months.^[146]

Recommendations

Support for breastfeeding is universal among major health and children's organizations. WHO states, "Breast milk is the ideal food for the healthy growth and development of infants; breastfeeding is also an integral part of the reproductive process with important implications for the health of mothers."^[147] WHO's guidelines recommend "continue[d] frequent, on-demand breastfeeding until two years of age or beyond."^{[148][149]}



Ilkhanate prince Ghazan being breastfed.



Macierzyństwo ("Maternity"), a 1902 painting by Stanisław Wyspiański

The European Commission,^{[150][151]} the US Centers for Disease Control and Prevention^[152] (CDC), UNICEF, AAP,^[3] Save The Children and the UK National Health Service^[153] (NHS), Australian Department of Health,^[154] Health Canada, Canadian Paediatric Society, Dietitians of Canada, and Breastfeeding Committee for Canada,^[155] recommend exclusive breastfeeding for six months following birth and continued nursing for an additional eighteen months or more.^{[2][156]} Save the Children states, "Six months of exclusive breastfeeding increases a child's chance of survival at least six-fold."^[157]

Authorities generally advise avoiding bottle feeding until the baby is 4–6 weeks old and is nursing successfully.^[158]

Advocacy

International board certified lactation consultants (IBCLCs) are health care professionals certified in lactation management. They work with mothers to solve breastfeeding problems and educate families and health professionals. Exclusive and partial breastfeeding are more common among mothers who gave birth in IBCLC-equipped hospitals.^[160]

There are also controversies and ethical considerations surrounding the means used by public campaigns which attempt to increase breastfeeding rates, relating to pressure put on women, and potential feeling of guilt and shame of women who fail to breastfeed; and social condemnation of women who use formula.^{[161][162] [163][164]} In addition to this, there is also the moral question as to what degree the state or medical community can interfere with the self-determination of a woman: for example in the United Arab Emirates the law requires a woman to breastfeed her baby for at least 2 years and allows her husband to sue her if she does not do so.^{[165][166]}



"See It", a project dedicated to promoting the awareness of breastfeeding in the capital city of Iceland in 2011, by Fiann Paul.^[159]

Infant formula

Advocates oppose marketing of infant formula, especially in developing countries. They are concerned that mothers who use formula will stop breastfeeding and become dependent upon substitutes that are unaffordable or less safe.^{[167][168]} Through efforts including the Nestlé boycott, they have advocated for bans on free samples of infant formula and for the adoption of pro-breastfeeding codes such as the International Code of Marketing of Breast-milk Substitutes by the World Health Assembly in 1981 and the Innocenti Declaration by WHO and UNICEF policy-makers in August 1990.^[167]

LGBTQ

Parents who identify as LGBTQ may encounter unique challenges and opportunities with breastfeeding or chestfeeding.

Chestfeeding

Many transmasculine, gender non-binary, and gender nonconforming individuals prefer the gender-neutral term "chestfeeding."^{[169][170]} Even if they have had chest masculinization surgery as part of their transition, some trans men choose to chestfeed their infants,^[171] which may require use of a supplemental nursing system (SNS) if they do not have a full milk supply.^[172] Individuals who have taken or are currently on hormone replacement therapy to develop male secondary sex characteristics may still chestfeed safely and successfully.^[171]

Induced lactation

Trans women who choose to breastfeed their children have successfully induced lactation.^[173] Similarly, lesbian mothers have co-nursed their infants, either by inducing lactation or by using a supplemental nursing system.^[174]

Research

Breastfeeding research currently focuses on diverse aspects such as prevalence, HIV transmission, pharmacology, costs, benefits, immunology, contraindications, and comparisons to synthetic breast milk substitutes.^{[175][176]} Factors related to the mental health of the nursing mother in the perinatal period have been studied. While cognitive behavior therapy may be the treatment of choice, medications are sometimes used. The use of therapy rather than medication reduces the infant's exposure to medication that may be transmitted through the milk.^[177]

See also

- Baby Friendly Hospital Initiative
- Baby-led weaning
- Breastfeeding in public
- Breastfeeding promotion
- Breast shell
- Child development
- Dairy allergy
- Public health
- World Alliance for Breastfeeding Action
- Lactation failure
- Human–animal breastfeeding
- Infant formula
- Kangaroo care
- Lactation room
- Milk line
- Nursing chair
- Lactational amenorrhea
- International Code of Marketing of Breast-milk Substitutes

References

1. "Breastfeeding and Breast Milk: Condition Information". 2013-12-19. Retrieved 27 July 2015.
2. "Infant and young child feeding Fact sheet N°342". WHO. February 2014. Retrieved February 8, 2015.

3. American Academy of Pediatrics Section on Breastfeeding. (March 2012). "Breastfeeding and the use of human milk". *Pediatrics*. **129** (3): 827–841. doi:10.1542/peds.2011-3552. PMID 22371471.
4. "How do I breastfeed? Skip sharing on social media links". 2014-04-14. Retrieved 27 July 2015.
5. "What is weaning and how do I do it?". 2013-12-19. Retrieved 27 July 2015.
6. Ip, S; Chung, M; Raman, G; Trikalinos, TA; Lau, J (October 2009). "A summary of the Agency for Healthcare Research and Quality's evidence report on breastfeeding in developed countries.". *Breastfeeding Medicine*. 4 Suppl 1: S17–30. doi:10.1089/bfm.2009.0050. PMID 19827919.
7. Victora, CG; Bahl, R; Barros, AJ; França, GV; Horton, S; Krasevec, J; Murch, S; Sankar, MJ; Walker, N; Rollins, NC; Lancet Breastfeeding Series, Group (30 January 2016). "Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect.". *Lancet (London, England)*. **387** (10017): 475–90. doi:10.1016/s0140-6736(15)01024-7. PMID 26869575.
8. Lawrence, Ruth A.; Lawrence, Robert Michael (2011-01-01). *Breastfeeding: A Guide for the Medical Profession*. Elsevier Health Sciences. pp. 227–228. ISBN 1437707882.
9. "Breastfeeding and the use of human milk. American Academy of Pediatrics. Work Group on Breastfeeding." (PDF). *Pediatrics*. **100** (6): 1035–9. Dec 1997. doi:10.1542/peds.100.6.1035. PMID 9411381.
10. "What are the benefits of breastfeeding?". 2014-04-14. Retrieved 27 July 2015.
11. Kramer, MS; Kakuma, R (15 August 2012). "Optimal duration of exclusive breastfeeding.". *The Cochrane database of systematic reviews*. **8**: CD003517. doi:10.1002/14651858.CD003517.pub2. PMID 22895934.
12. "What are the recommendations for breastfeeding?". 2014-04-14. Retrieved 27 July 2015.
13. "Are there any special conditions or situations in which I should not breastfeed?". 2013-12-19. Retrieved 27 July 2015.
14. "Breastfeeding and alcohol". *NHS Choices*. NHS.
15. "Breastfeeding and diet". *NHS Choices*. NHS.
16. "Tobacco Use | Breastfeeding | CDC". *www.cdc.gov*. Retrieved 2016-08-04.
17. Mohrbacher, Nancy; Stock, Julie (2003). *The Breastfeeding Answer Book* (3rd ed. (revised) ed.). La Leche League International. ISBN 0-912500-92-1.
18. Sobrinho LG (2003). "Prolactin, psychological stress and environment in humans: adaptation and maladaptation". *Pituitary*. **6** (1): 35–39. doi:10.1023/A:1026229810876. PMID 14674722.
19. Bose CL, D'Ercole AJ, Lester AG, Hunter RS, Barrett JR (1981). "Relactation by mothers of sick and premature infants". *Pediatrics*. **67** (4): 565–569. PMID 6789296.
20. Paul. "Colostrum, Foremilk and Hindmilk".
21. "Mothers and Children Benefit from Breastfeeding". *Womenshealth.gov*. 27 February 2009. Archived from the original on March 16, 2009.
22. Colen, Cynthia G., and Ramey, David M. "Is breast truly best? Estimating the effects of breastfeeding on long-term child health and wellbeing in the United States using sibling comparisons." *Social Science and Medicine*. 109. (2014): 55-65. Print.
23. Dewey KG, Heinig MJ, Nommsen LA (August 1993). "Maternal weight-loss patterns during prolonged lactation". *Am. J. Clin. Nutr.* **58** (2): 162–6. PMID 8338042.
24. Hendrickson RG, McKeown NJ (January 2012). "Is maternal opioid use hazardous to breast-fed infants?". *Clinical toxicology (Philadelphia, PA)*. **50** (1): 1–14. doi:10.3109/15563650.2011.635147. PMID 22148986.
25. "What is colostrum? How does it benefit my baby?". La Leche League. Retrieved 28 November 2015.
26. Northeastern University (2011). "Benefits of Breastfeeding: For Society". Boston, MA: The Educational Technology Center.
27. Gartner LM, Morton J, Lawrence RA, et al. (February 2005). "Breastfeeding and the use of human milk". *Pediatrics*. **115** (2): 496–506. doi:10.1542/peds.2004-2491. PMID 15687461.
28. "Alcohol and breastfeeding.". *Basic Clin Pharmacol Toxicol*. **114** (2): 168–73. Feb 2014. doi:10.1111/bcpt.12149. PMID 24118767.
29. Cornall, D (June 2011). "A review of the breastfeeding literature relevant to osteopathic practice". *International Journal of Osteopathic Medicine*. **14** (2): 61–66. doi:10.1016/j.ijosm.2010.12.003.
30. The Baby Friendly Initiative | Resources | Skin-to-skin contact (<http://www.unicef.org.uk/BabyFriendly/Resources/Guidance-for-Health-Professionals/Learning-about-breastfeeding/Skin-to-skin-contact/>)
31. Collins, CT; Gillis, J; McPhee, AJ; Sukanuma, H; Makrides, M (19 October 2016). "Avoidance of bottles during the establishment of breast feeds in preterm infants.". *The Cochrane database of systematic reviews*. **10**: CD005252. doi:10.1002/14651858.CD005252.pub4. PMID 27756113.

32. Breastfeeding Frequency (<http://www.cpmc.org/services/pregnancy/information/breastfeeding-frequency.html>) from California Pacific Medical Center. Retrieved June 2012.
33. Marasco L (Apr–May 1998). "Common breastfeeding myths". *Leaven*. **34** (2): 21–24. Retrieved 2009-09-21.
34. Davies, Lizzy (12 January 2014). "Pope Francis encourages mothers to breastfeed - even in the Sistine Chapel" – via The Guardian.
35. Staff, Healthwise. "Breast-feeding: Learning how to nurse". Retrieved 2009-06-17.
36. "Positions and Tips for Making Breastfeeding Work". *BabyCenter.com*. Retrieved 27 October 2014.
37. "Great Pregnancy. Natural Birth. Healthy Baby."
38. "Proper positioning and latch-on skills". AskDrSears.com. 2006. Retrieved 2008-09-24.
39. "Breastfeeding Guidelines". Rady Children's Hospital San Diego. Retrieved 2007-03-04.
40. Daws, Dilys (August 1997). "The perils of intimacy: Closeness and distance in feeding and weaning". *Journal of Child Psychotherapy*. **23** (2): 179–199. doi:10.1080/00754179708254541.
41. "How Do I Wean My Baby?". La Leche League International. Retrieved 6 May 2016.
42. "Stopping Breastfeeding Suddenly - Topic Overview". WebMed, LLC. Retrieved 6 May 2016.
43. "Weaning As A Natural Process". La Leche League International. Retrieved 6 May 2016.
44. Iwinski S (2006). "Is Weighing Baby to Measure Milk Intake a Good Idea?". *LEAVEN*. **42** (3): 51–3. Retrieved 2007-04-08.
45. B. F. Habbick; J. W. Gerrard (1984). "Failure to thrive in the contented breast-fed baby". *Can Med Assoc J*. **131** (7): 765–768. PMC 1483563. PMID 6541091.
46. "LLLI - How can I tell if my baby is getting enough milk?"
47. "Breast Milk, Breastmilk, Breastfeeding, Breast Feeding - Rehydration Project"
48. "What are the LLLI guidelines for storing my pumped milk?"
49. Hanna N, Ahmed K, Anwar M, Petrova A, Hiatt M, Hegyi T (November 2004). "Effect of storage on breast milk antioxidant activity". *Arch Dis Child Fetal Neonatal Ed*. BMJ Publishing Group Ltd. **89** (6): F518–20. doi:10.1136/adc.2004.049247. PMC 1721790. PMID 15499145.
50. Spatz DL (2006). "State of the science: use of human milk and breast-feeding for vulnerable infants". *J Perinat Neonatal Nurs*. **20** (1): 51–5. doi:10.1097/00005237-200601000-00017. PMID 16508463.
51. Tully DB, Jones F, Tully MR (2001). "Donor milk: what's in it and what's not". *J Hum Lact*. **17** (2): 152–5. doi:10.1177/089033440101700212. PMID 11847831.
52. Sears, W. "Ask Dr. Sears: Leaving Baby for Vacation".
53. Alcorn K (2004-08-24). "Shared breastfeeding identified as new risk factor for HIV". *aidsmap*. Retrieved 2007-04-10.
54. Groskop, Viv (5 January 2007). "Not your mother's milk" – via The Guardian.
55. Jennifer Baumgardner, *Breast Friends*, Babble (<http://www.babble.com/content/articles/features/personalessays/baumgardner/breastfriends/>), 2007
56. Grunberg R (1992). "Breastfeeding multiples: Breastfeeding triplets". *New Beginnings*. **9** (5): 135–6.
57. Australian Breastfeeding Association: Breastfeeding triplets, quads and higher (<http://www.breastfeeding.asn.au/bfinfo/higher.html>)
58. Association of Radical Midwives: Breastfeeding triplets (<http://www.radmid.demon.co.uk/tripletsbf.htm>)
59. Flower H (2003). *Adventures in Tandem Nursing: Breastfeeding During Pregnancy and Beyond*. La Leche League International. ISBN 978-0-912500-97-3.
60. Morrison, Barbara; Karen Wambach (2014). "Women's Health and Breastfeeding". In Wambach, Karen and Jan Riordan. *Breastfeeding and Human Lactation* (5th ed.). Jones & Bartlett Publishers. pp. 581–588. ISBN 9781449697297.
61. THE TREATMENT OF DIARRHOEA, A manual for physicians and other senior health workers (<http://whqlibdoc.who.int/publications/2005/9241593180.pdf>), World Health Organization, 2005, page 41 (45 in PDF). Reference: *Helping mothers to breastfeed* by F. Savage King. Revised edition 1992. African Medical and Research Foundation (AMREF), Box 30125, Nairobi, Kenya. Indian adaptation by R.K. Anand, ACASH, P.O. Box 2498, Bombay 400002)
62. "Breastfeeding: Data: Report Card" (PDF). Center for Disease Control and Prevention. Retrieved 2015-11-05.
63. "Infant and toddler health". Mayo Clinic. Retrieved 12 May 2016.
64. Stein MT, Boies EG, Snyder D (2004). "Parental concerns about extended breastfeeding in a toddler". *J Dev Behav Pediatr*. **25** (5 Suppl): S107–11. doi:10.1097/00004703-200410001-00022. PMID 15502526.

65. Ip, S; Chung, M; Raman, G; Chew, P; Magula, N; DeVine, D; Trikalinos, T; Lau, J (April 2007). "Breastfeeding and maternal and infant health outcomes in developed countries.". *Evidence report/technology assessment* (153): 1–186. PMID 17764214.
66. US Preventive Services Task, Force.; Bibbins-Domingo, K; Grossman, DC; Curry, SJ; Davidson, KW; Epling JW, Jr; García, FA; Kemper, AR; Krist, AH; Kurth, AE; Landefeld, CS; Mangione, CM; Phillips, WR; Phipps, MG; Pignone, MP (25 October 2016). "Primary Care Interventions to Support Breastfeeding: US Preventive Services Task Force Recommendation Statement.". *JAMA*. **316** (16): 1688–1693. PMID 27784102.
67. Renfrew MJ, Lang S, Woolridge MW (2000). "Early versus delayed initiation of breastfeeding". *Cochrane Database Syst Rev* (2): CD000043. doi:10.1002/14651858.CD000043. PMID 10796101.
68. Moore, ER; Anderson, GC; Bergman, N; Dowswell, T (May 16, 2012). "Early skin-to-skin contact for mothers and their healthy newborn infants.". *The Cochrane database of systematic reviews*. **5**: CD003519. doi:10.1002/14651858.CD003519.pub3. PMC 3979156. PMID 22592691.
69. Horta BL, Bahl R, Martines JC, Victora CG (2007). *Evidence on the long-term effects of breastfeeding: systematic reviews and meta-analyses* (PDF). Geneva, Switzerland: World Health Organization. ISBN 978-92-4-159523-0. Retrieved 2010-04-05.
70. Ip S, Chung M, Raman G, Chew P, Magula N, DeVine D, Trikalinos T, Lau J (April 2007). "Breastfeeding and maternal and infant health outcomes in developed countries". *Evid Rep Technol Assess (Full Rep)* (153): 1–186. ISBN 978-1-58763-242-6. PMID 17764214.
71. Hauck, F. R.; Thompson, J. M. D.; Tanabe, K. O.; Moon, R. Y.; Vennemann, M. M. (13 June 2011). "Breastfeeding and Reduced Risk of Sudden Infant Death Syndrome: A Meta-analysis". *Pediatrics*. **128** (1): 103–110. doi:10.1542/peds.2010-3000. PMID 21669892.
72. Ministry of Health Health Promotion Council. "Guideline for Management of Child Screening in Primary Care Settings and Outpatient Clinics in the Kingdom of Bahrain" (PDF). Kingdom of Bahrain Ministry of Health Health Promotion Council. Retrieved 23 February 2015.
73. Dewey, Kathryn G; Heinig, Jane M; Nommsen, Laurie A.; Peerson, Janet M.; Lönnerdal, Bo (1991). "Growth of Breast-Fed and Formula-Fed Infants From 0 to 18 Months: The DARLING Study". *article*. Retrieved 23 February 2015.
74. Kunz C, Rodriguez-Palmero M, Koletzko B, Jensen R (June 1999). "Nutritional and biochemical properties of human milk, Part I: General aspects, proteins, and carbohydrates". *Clin Perinatol*. **26** (2): 307–33. PMID 10394490.
75. Rodriguez-Palmero M, Koletzko B, Kunz C, Jensen R (June 1999). "Nutritional and biochemical properties of human milk: II. Lipids, micronutrients, and bioactive factors". *Clin Perinatol*. **26** (2): 335–59. PMID 10394491.
76. Kramer, MS; Kakuma, R (15 August 2012). "Optimal duration of exclusive breastfeeding.". *The Cochrane database of systematic reviews*. **8**: CD003517. doi:10.1002/14651858.CD003517.pub2. PMID 22895934.
77. Hanson LA, Söderström T (1981). "Human milk: Defense against infection". *Prog. Clin. Biol. Res*. **61**: 147–59. PMID 6798576.
78. Van de Perre P (July 2003). "Transfer of antibody via mother's milk". *Vaccine*. **21** (24): 3374–6. doi:10.1016/S0264-410X(03)00336-0. PMID 12850343.
79. Jackson KM, Nazar AM (April 2006). "Breastfeeding, the immune response, and long-term health". *J Am Osteopath Assoc*. **106** (4): 203–7. PMID 16627775.
80. Vukavic T (1983). "Intestinal absorption of IgA in the newborn". *Journal of pediatric gastroenterology and nutrition*. **2** (2): 248–251. doi:10.1097/00005176-198305000-00006. PMID 6875749.
81. Weaver LT, Wadd N, Taylor CE, Greenwell J, Toms GL (1991). "The ontogeny of serum IgA in the newborn". *Pediatric Allergy and Immunology*. **2** (2): 72–75. doi:10.1111/j.1399-3038.1991.tb00185.x.
82. Winslow, Ron (26 August 2013). "Many Drugs Found Safe for Breast-Feeding Mothers". *Wall Street Journal*. Retrieved 2 September 2013.
83. Sachs HC (2013). "The Transfer of Drugs and Therapeutics Into Human Breast Milk: An Update on Selected Topics". *Pediatrics*. The American Academy of Pediatrics. **132** (3): e796–e809. doi:10.1542/peds.2013-1985. PMID 23979084.
84. WHO "strategic directions for improving the health and development of children and adolescents", WHO/FCH/CAH/02.21, Geneva: Department of Child and Adolescent Health and Development, World Health Organization.

85. Owen CG, Martin RM, Whincup PH, Smith GD, Cook DG (November 2006). "Does breastfeeding influence risk of type 2 diabetes in later life? A quantitative analysis of published evidence". *Am. J. Clin. Nutr.* **84** (5): 1043–54. PMID 17093156.
86. Aune, D.; Norat, T.; Romundstad, P.; Vatten, L.J. (February 2014). "Breastfeeding and the maternal risk of type 2 diabetes: A systematic review and dose–response meta-analysis of cohort studies". *Nutrition, Metabolism and Cardiovascular Diseases.* **24** (2): 107–115. doi:10.1016/j.numecd.2013.10.028.
87. Arenz S, R ckerl R, Koletzko B, von Kries R (2004). "Breast-feeding and childhood obesity--a systematic review". *Int. J. Obes. Relat. Metab. Disord.* **28** (10): 1247–56. doi:10.1038/sj.ijo.0802758. PMID 15314625.
88. Moss, B.G.; Yeaton, W.H. (2014). "Early childhood healthy and obese weight status: Potentially protective benefits of breastfeeding and delaying solid foods.". *Maternal and Child Health Journal.* **18** (5): 1224–1232. doi:10.1007/s10995-013-1357-z.
89. Greer FR, Sicherer SH, Burks AW (January 2008). "Effects of early nutritional interventions on the development of atopic disease in infants and children: the role of maternal dietary restriction, breastfeeding, timing of introduction of complementary foods, and hydrolyzed formulas". *Pediatrics.* **121** (1): 183–91. doi:10.1542/peds.2007-3022. PMID 18166574.
90. Szajewska H, Shamir R, Chmielewska A, Pieścik-Lech M, Auricchio R, Ivarsson A, Kolacek S, Koletzko S, Korponay-Szabo I, Mearin ML, Ribes-Koninckx C, Troncone R; PREVENTCD Study Group (Jun 2015). "Systematic review with meta-analysis: early infant feeding and coeliac disease--update 2015". *Aliment Pharmacol Ther.* **41** (11): 1038–54. doi:10.1111/apt.13163. PMID 25819114.
91. Bethune MT, Khosla C (Feb 2008). "Parallels between pathogens and gluten peptides in celiac sprue". *PLoS Pathog.* **4** (2): e34. doi:10.1371/journal.ppat.0040034. PMC 2323203 . PMID 18425213.
92. Amitay, EL; Keinan-Boker, L (1 June 2015). "Breastfeeding and Childhood Leukemia Incidence: A Meta-analysis and Systematic Review.". *JAMA pediatrics.* **169** (6): e151025. doi:10.1001/jamapediatrics.2015.1025. PMID 26030516.
93. Palmer, B (June 1998). "The influence of breastfeeding on the development of the oral cavity: a commentary.". *Journal of Human Lactation.* **14** (2): 93–8. doi:10.1177/089033449801400203. PMID 9775838.
94. Victora, Cesar G; Bahl, Rajiv; Barros, Aluísio J D; França, Giovanny V A; Horton, Susan; Krasevec, Julia; Murch, Simon; Sankar, Mari Jeeva; Walker, Neff; Rollins, Nigel C (January 2016). "Breastfeeding in the 21st century: epidemiology, mechanisms, and lifelong effect". *The Lancet.* **387** (10017): 475–490. doi:10.1016/S0140-6736(15)01024-7. PMID 26869575.
95. Der G, Batty GD, Deary IJ (2006). "Effect of breast feeding on intelligence in children: prospective study, sibling pairs analysis, and meta-analysis". *BMJ.* **333** (7575): 945. doi:10.1136/bmj.38978.699583.55. PMC 1633819 . PMID 17020911.
96. Dias, CC; Figueiredo, B (15 January 2015). "Breastfeeding and depression: a systematic review of the literature.". *Journal of Affective Disorders.* **171**: 142–54. doi:10.1016/j.jad.2014.09.022. PMID 25305429.
97. Figueiredo B, Dias CC, Brandão S, Canário C, Nunes-Costa R (2013). "Breastfeeding and postpartum depression: state of the art review". *J Pediatr (Rio J).* **89** (4): 332–8. doi:10.1016/j.jped.2012.12.002. PMID 23791236.
98. Pisacane A, Continisio GI, Aldinucci M, D'Amora S, Continisio P (October 2005). "A controlled trial of the father's role in breastfeeding promotion". *Pediatrics.* **116** (4): e494–8. doi:10.1542/peds.2005-0479. PMID 16199676.
99. van Willigen J (2002). *Applied anthropology: an introduction*. Westport, CT: Bergin & Garvey. ISBN 0-89789-833-8.
100. Price C; Robinson S (2004). *Birth: Conceiving, Nurturing and Giving Birth to Your Baby*. McMillan. p. 489. ISBN 1-4050-3612-5.
101. Stuart-Macadam P, Dettwyler K (1995). *Breastfeeding: biocultural perspectives*. Aldine de Gruyter. p. 131. ISBN 978-0-202-01192-9.
102. Chua S, Arulkumaran S, Lim I, Selamat N, Ratnam SS (1994). "Influence of breastfeeding and nipple stimulation on postpartum uterine activity". *Br J Obstet Gynaecol.* **101** (9): 804–5. doi:10.1111/j.1471-0528.1994.tb11950.x. PMID 7947531.

103. Krishnamurthy Arvind; Soundara Viveka; Ramshankar Vijayalakshmi (2016). "Preventive and Risk Reduction Strategies for Women at High Risk of Developing Breast Cancer: a Review.". *Asian Pacific journal of cancer prevention*. **17** (3): 895–904. doi:10.7314/apjcp.2016.17.3.895. PMID 27039715. Retrieved 4 August 2016. "A review of 47 epidemiologic studies comprising of 50,302 women with invasive breast cancer and 96,973 controls estimated that for every year of breastfeeding, the relative risk of breast cancer decreases by 4.3%."
104. "The Surgeon General's Call to Action to Support Breastfeeding" (PDF). U.S. Department of Health and Human Services. Retrieved 12 December 2015.
105. Benjamin RM (2011). "Public health in action: give mothers support for breastfeeding". *Public Health Rep.* **126** (5): 622–3. PMC 3151176 . PMID 21886320.
106. Galson SK (July 2008). "Mothers and children benefit from breastfeeding" (PDF). *Journal of the American Dietetic Association*. **108** (7): 1106. doi:10.1016/j.jada.2008.04.028. PMID 18589012. Retrieved 25 August 2012.
107. State of the World's Mothers 2012-Final (<http://www.savethechildren.org/atf/cf/%7B9def2ebe-10ae-432c-9bd0-df91d2eba74a%7D/STATE-OF-THE-WORLDS-MOTHERS-REPORT-2012-FINAL.PDF>) Archived (<https://web.archive.org/web/20120523015344/http://www.savethechildren.org/atf/cf/%7B9def2ebe-10ae-432c-9bd0-df91d2eba74a%7D/STATE-OF-THE-WORLDS-MOTHERS-REPORT-2012-FINAL.PDF>) May 23, 2012, at the Wayback Machine.
108. Woods NK, Chesser AK, Wiperman J (2013). "Describing adolescent breastfeeding environments through focus groups in an urban community". *J Prim Care Community Health*. **4** (4): 307–10. doi:10.1177/2150131913487380. PMID 23799673.
109. Ireland, Jae (20 July 2011). "Will My Breasts Be Ruined After Breastfeeding?". LiveStrong.com. Retrieved 27 Jan 2013.
110. Lawrence, Ruth A. Lawrence, Robert M. (2010). *Breastfeeding : a guide for the medical professional*. (7th ed.). Philadelphia, Pa.: Saunders. p. 266. ISBN 9781437707885.
111. Lawrence, Ruth A. Lawrence, Robert M. (2010). *Breastfeeding : a guide for the medical professional*. (7th ed.). Philadelphia, Pa.: Saunders. pp. 223, 227. ISBN 9781437707885.
112. Lawrence, Ruth A. Lawrence, Robert M. (2010). *Breastfeeding : a guide for the medical professional*. (7th ed.). Philadelphia, Pa.: Saunders. p. 227. ISBN 9781437707885.
113. "Breastfeeding-related maternity practices at hospitals and birth centers—United States, 2007". *MMWR Morb. Mortal. Wkly. Rep.* **57** (23): 621–5. June 2008. PMID 18551096.
114. Ballard J, Chantry C, Howard CR. "Guidelines for the evaluation and management of neonatal ankyloglossia and its complications in the breastfeeding dyad". *ABM Clinical Protocol #11*.
115. "Breast Surgery Likely to Cause Breastfeeding Problems". The Implant Information Project of the Nat. Research Center for Women & Families. February 2008.
116. "Family Planning - Healthy People 2020". Retrieved 2011-08-18.
117. Moland, K, Blystad A (2008). "Counting on Mother's Love: The Global Politics of Prevention of Mother-to-Child Transmission of HIV in Eastern Africa". In Hahn R, Inhorn M. *Anthropology and Public Health: Bridging Differences in Culture and Society*. Oxford University Press. p. 449.
118. Mead MN (2008). "Contaminants in human milk: weighing the risks against the benefits of breastfeeding". *Environ Health Perspect.* **116** (10): A426–34. doi:10.1289/ehp.116-a426. PMC 2569122 . PMID 18941560.
119. "AAP Advises Most Medications Are Safe for Breastfeeding Mothers". American Academy of Pediatrics. 26 August 2013. Retrieved 11 July 2015.
120. Myers GJ, Thurston SW, Pearson AT, Davidson PW, Cox C, Shamlaye CF, Cernichiari E, Clarkson TW (2009). "Postnatal exposure to methyl mercury from fish consumption: a review and new data from the Seychelles Child Development Study". *Neurotoxicology*. **30** (3): 338–49. doi:10.1016/j.neuro.2009.01.005. PMC 2743883 . PMID 19442817.
121. Howard CR, Lawrence RA (1998). "Breast-feeding and drug exposure". *Obstet Gynecol Clin North Am.* **25** (1): 195–217. doi:10.1016/S0889-8545(05)70365-X. PMID 9547767.
122. Sun Y, Irie M, Kishikawa N, Wada M, Kuroda N, Nakashima K (2004). "Determination of bisphenol a in human breast milk by HPLC with column-switching and fluorescence detection". *Biomedical Chromatography*. **18** (8): 501–507. doi:10.1002/bmc.345. PMID 15386523.

123. Ye X, Kuklennyik Z, Needham LL, Calafat AM (2006). "Measuring environmental phenols and chlorinated organic chemicals in breast milk using automated on-line column-switching–high performance liquid chromatography–isotope dilution tandem mass spectrometry". *Journal of Chromatography B*. **831** (1–2): 110–115. doi:10.1016/j.jchromb.2005.11.050. PMID 16377264.
124. Office of the Surgeon General (US); Centers for Disease Control and Prevention (US); Office on Women's Health (US) (2011). "Call to Action to Support Breastfeeding" (PDF). *Surgeon General's Call to Action*. PMID 21452448.
125. Boyer, K., & Geographies of Care. (March 01, 2011). *The way to break the taboo is to do the taboo thing* breastfeeding in public and citizen-activism in the UK. *Health and Place*, 17, 2, 430-437.
126. Wolf JH (2008). "Got milk? Not in public!". *International breastfeeding journal*. **3** (1): 11. doi:10.1186/1746-4358-3-11. PMC 2518137. PMID 18680578.
127. "Breastfeeding Legislation in the United States: A General Overview and Implications for Helping Mothers". *LEAVEN*. **41** (3): 51–4. 2005.
128. Jordan, Tim; Pile, Steve, eds. (2002). *Social Change*. Blackwell. p. 233. ISBN 0-631-23311-3.
129. Hausman, B. L. (January 01, 2007). Things (Not) to Do with Breasts in Public: Maternal Embodiment and the Biocultural Politics of Infant Feeding. *New Literary History*, 38, 3, 479-504.
130. Boyer, K. (January 01, 2010). Of care and commodities: breast milk and the new politics of mobile biosubstances. *Progress in Human Geography*, 34, 1, 5-20.
131. Forbes GB, Adams-Curtis LE, Hamm NR, White KB (2003). "Perceptions of the Woman Who Breastfeeds: The Role of Erotophobia, Sexism, and Attitudinal Variables". *Sex Roles*. **49** (7/8): 379–388. doi:10.1023/A:1025116305434.
132. A.R. Al-Awadi (14 May 1981). "Draft International Code of Marketing of Breastmilk substitutes" (PDF). *Thirty-fourth World Health Assembly, Agenda item 23.2*. World Health Organization. World Health Organization(Organisation Mondiale de la Sante).
133. Harmon, A. (2005, June 7). 'Lactivists' Taking Their Cause, and Their Babies, to the Streets (<http://www.nytimes.com/2005/06/07/nyregion/07nurse.html>). The New York Times. Retrieved November 1, 2013
134. Battersby, S. (2010). "Understanding the Social and Cultural Influences on Breast-Feeding Today". *Journal of Family Health Care*. **20** (4): 128–131. PMID 21053661.
135. Taylor EN, Wallace LE (2012). "For Shame: Feminism, Breastfeeding Advocacy, and Maternal Guilt". *Hypatia*. **27** (1): 76–98. doi:10.1111/j.1527-2001.2011.01238.x.
136. "Breastfeeding In Public". *womenshealth.gov*.
137. "Infants exclusively breastfed for the first six months of life (%)". World Health Organization. Retrieved 27 July 2015.
138. Centers for Disease Control and Prevention, (CDC) (8 February 2013). "Progress in increasing breastfeeding and reducing racial/ethnic differences - United States, 2000-2008 births.". *MMWR. Morbidity and mortality weekly report*. **62** (5): 77–80. PMID 23388550.
139. Xu, Fenglian; Qiu, Liqian; Binns, Colin W; Liu, Xiaoxian (2009). "Breastfeeding in China: a review". *International Breastfeeding Journal*. **4** (1): 6. doi:10.1186/1746-4358-4-6. ISSN 1746-4358.
140. "UK 'world's worst' at breastfeeding". BBC. 29 January 2016. Retrieved 30 January 2016.
141. "Australia - Breastfeeding rates for children born in 2004".
142. "A Comparison of Breastfeeding Rates by Country • KellyMom.com". *KellyMom.com*. 2012-05-14. Retrieved 2016-05-04.
143. Nathoo, Tasnim; Ostry, Aleck (2009). *The One Best Way?: Breastfeeding History, Politics, and Policy in Canada*. Wilfrid Laurier Univ. Press. ISBN 978-1-55458-171-9.
144. "Breastfeeding and the use of human milk. American Academy of Pediatrics. Work Group on Breastfeeding." (PDF). *Pediatrics*. **100**: 1035–9. Dec 1997. doi:10.1542/peds.100.6.1035. PMID 9411381.
145. Cohen, Lloyd R.; Wright, Joshua D. (2011). *Research Handbook on the Economics of Family Law*. Edward Elgar Publishing. p. 185. ISBN 9780857930644.
146. Ball, T.M.; Wright, A.L. (April 1999). "Health care costs of formula-feeding in the first year of life". *Pediatrics*. **103**: 870–6. PMID 10103324.
147. "Up to what age can a baby stay well nourished by just being breastfed?". WHO. July 2013. Retrieved 7 February 2015.
148. World Health Organization. (2003). *Global strategy for infant and young child feeding* (PDF). Geneva, Switzerland: World Health Organization and UNICEF. ISBN 92-4-156221-8. Retrieved 2009-09-20.

149. "Breastfeeding".
150. "Protection, promotion and support of breastfeeding in Europe: a blueprint for action" (PDF). Unit for Health Services Research and International Health. 2008. Retrieved 15 February 2015.
151. Cattaneo A; et al. (Jun 2010). "Protection, promotion and support of breast-feeding in Europe: progress from 2002 to 2007". *Public Health Nutr.* **13** (6): 751–9. doi:10.1017/S1368980009991844. PMID 19860992.
152. "Breastfeeding: Promotion & Support". CDC. August 2, 2011.
153. "Why breastfeed? | National Health Service".
154. "Breastfeeding". Australian Government. 27 May 2014. Retrieved 8 February 2015.
155. "Nutrition for Healthy Term Infants: Recommendations from Birth to Six Months". *A joint statement of Health Canada, Canadian Paediatric Society, Dietitians of Canada, and Breastfeeding Committee for Canada*. Health Canada. reviewed 27 May 2014. Retrieved 7 February 2015. Check date values in: |date= (help)
156. "Breastfeeding: Data: Report Card 2012: Outcome Indicators - DNPAO - CDC".
157. "Nutrition in the First 1,000 Days" (PDF). *State of the World's Mothers 2012*. Save the Children. 2012. Retrieved 8 February 2015.
158. Arlene Eisenberg (1989). *What to Expect the First Year*. Workman Publishing Company. ISBN 0-89480-577-0.
159. Baldursdóttir, Ingibjörg. "Pressan.is". *www.pressan.is*. Retrieved 2016-08-26.
160. US Surgeon General Breastfeeding Executive Summary (<http://www.surgeongeneral.gov/library/calls/breastfeeding/executivesummary.pdf>)
161. Dailey, Kate (7 August 2012). "Formula v breastfeeding: Should the state step in?" – via www.bbc.com.
162. Mason, Rowena; correspondent, political (3 January 2014). "Parents 'face too much guilt over breastfeeding and work' " – via The Guardian.
163. "Breastfeeding may be best, but bottles of formula milk aren't the end of the world".
164. noodles, Mirah Curzer Lawyer Feminist Photographer Slurper of; Scotch, Drinker of (4 August 2016). "You Can't Call Yourself A Feminist If You Shame Women Who Don't Breastfeed".
165. Graham-Harrison, Emma (7 February 2014). "UAE law requires mothers to breastfeed for first two years" – via The Guardian.
166. "Forcing Mothers to Breastfeed Is No Way to Help Children - Huffington Post".
167. Milking it (<https://www.theguardian.com/medicine/story/0,,2079757,00.html>) Joanna Moorhead, The Guardian, May 15, 2007
168. Baby health crisis in Indonesia as formula companies push products (<https://www.theguardian.com/world/2013/feb/15/babies-health-formula-indonesia-breastfeeding>), *The Guardian*, Zoe Williams in Jakarta, 15 Feb. 2013.
169. de la Cretaz, Britni. "What It's Like to Chestfeed". *theatlantic.com*. Retrieved 3 September 2016.
170. Hempel, Jessi (1 September 2016). "My Brother's Pregnancy and the Making of a New American Family". *Time*. Retrieved 3 September 2016.
171. MacDonald, Trevor. "Transmasculine individuals' experiences with lactation, chestfeeding, and gender identity: a qualitative study". *BioMed Central Pregnancy and Childbirth*. Retrieved 3 September 2016.
172. MacDonald, Trevor (June 29, 2012). "How I Learned to be a Breastfeeding Dad". *Huffington Post*. Retrieved 3 September 2016.
173. MacDonald, Trevor. "Trans Women and Breastfeeding: A Personal Interview". *milkjunkies.net*. Retrieved 3 September 2016.
174. Higham, Barbara. "When Two Women Share Parenting - Breastfeeding Today". *breastfeedingtoday-llli.org*. Retrieved 2016-09-03.
175. Kramer, Michael S; Kakuma, Ritsuko; Kramer, Michael S (2012). "Optimal duration of exclusive breastfeeding". *Cochrane Database Syst Rev.* **8**: CD003517. doi:10.1002/14651858.CD003517.pub2. PMID 22895934.
176. Saha, Moni R.; Ryan, Kath; Amir, Lisa H. (2015). "Postpartum women's use of medicines and breastfeeding practices: a systematic review". *International Breastfeeding Journal.* **10** (1). doi:10.1186/s13006-015-0053-6. ISSN 1746-4358.
177. Marchesi, C.; Ossola, P.; Amerio, A.; Daniel, B.D.; Tonna, M.; De Panfilis, C. (2016). "Clinical management of perinatal anxiety disorders: A systematic review". *Journal of Affective Disorders.* **190**: 543–550. doi:10.1016/j.jad.2015.11.004; Access provided by the University of Pittsburgh Library System

Further reading

- Baumslag, Naomi; Michels, Dia L. (1995). *Milk, money, and madness: the culture and politics of breastfeeding*. Westport, Connecticut: Bergin & Garvey. ISBN 9780313360602.
- Cassidy, Tanya and Abdullahi El Tom, eds. *Ethnographies of Breastfeeding: Cultural Contexts and Confrontations* (Bloomsbury Academic; 2015) 255 pages; Scholarly essays on a variety of topics such as networks of milk sharing through Facebook, public-health guidelines on infant feeding and HIV in Malawi, and dilemmas involving breastfeeding and bonding for babies born from surrogate mothers.
- Halili, Hassan Kamal; Che, Musa Norsuhaida (June 2014). "Women's right to breastfeed in the workplace: legal lacunae in Malaysia". *Asian Women*. Research Institute of Asian Women (RIAW). **30** (2): 85–108. doi:10.14431/aw.2014.03.30.2.85.
- Hausman, Bernice L. (2003). *Mother's milk: breastfeeding controversies in American culture*. New York, New York: Routledge. ISBN 9780415966573.

External links

- Breastfeeding



Wikimedia Commons has media related to ***Breastfeeding***.



Look up ***breastfeeding*** in Wiktionary, the free dictionary.

(<https://www.dmoz.org/Home/Family/Babies/Breastfeeding/>) at DMOZ

- Breastfeeding Resources (<http://www.llli.org/resources.html/>) La Leche League International
- Breast-Feeding Content Resources (<http://www.who.int/topics/breastfeeding/en/>) WHO reports on Breast Feeding
- Human Milk Secretion: An Overview (<http://mammary.nih.gov/reviews/lactation/Neville001/>) US National Institute of Health
- The World Alliance for Breastfeeding Action (<http://www.waba.org.my/>) (WABA) is a global network of individuals & organisations concerned with the protection, promotion & support of breastfeeding worldwide.
- Center for Disease Control and Prevention Breastfeeding (<http://www.cdc.gov/breastfeeding/index.htm>) CDC
- LactMed (<http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT>), a database of the safety of drugs to which breastfeeding mothers may be exposed, by the U.S. National Library of Medicine

Retrieved from "https://en.wikipedia.org/w/index.php?title=Breastfeeding&oldid=756692173"

Categories: Babycare | Breastfeeding | Children's rights | Women's rights | Human behavior | Interpersonal relationships | Infant feeding | Midwifery | Human female endocrine system

- This page was last modified on 26 December 2016, at 05:35.

- Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.