



Breastfeeding - Safe nutrition to the infant

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Ensure exclusive breastfeeding for the first six months and continue breastfeeding till two years and beyond

Key points

- Early initiation of breastfeeding (EIBF) i.e. within an hour of birth is crucial.
- Colostrum i.e. milk secreted in the first 3–4 days, is rich in nutrients and should not be discarded.
- Infants should be exclusively breastfed (EBF) for the first six months. Do not give any other feed, not even water.
- Infant should be breastfed frequently and on demand, to establish and maintain adequate breast milk supply.
- Breastfeeding should be continued in addition to nutrient-rich complementary foods (weaning foods), preferably up to two years.
- Lactating mothers with any disease should continue breastfeeding unless medically advised.
- The family should actively support breastfeeding.
- Ensure that the mother is counseled on how to hold a baby while breastfeeding. Additionally, mothers must be informed regarding the appropriate method of latching the baby to breast.
- Ensure nutritionally adequate diet is consumed both during pregnancy and lactation.
- During pregnancy and lactation period, medicines can be taken only on physician's advice.
- A lactating mother should avoid addictive substances like tobacco (smoking and chewing), alcohol and psychotropic drugs.

Rationale: Exclusive breastfeeding for the first six months ensures nutritional adequacy for infant growth and development and also the health of the mother.

- Breast milk is the most natural and complete food for normal growth and healthy development of infants.
- Breast milk should be given within an hour of birth and no other feeds should be given.
- The first breast milk-Colostrum is secreted soon after birth and continues for 3–4 days and is rich in nutrients and has anti-infective factors.
- Breastfeeding reduces risk of infections and is associated with better cognitive development of children and provides long-term health benefits (prevention of obesity and diabetes).
- Breastfeeding establishes mother-infant contact and promotes mother-child bonding.
- Breastfeeding helps in retraction of the uterus and minimizes blood loss after delivery.
- Breastfeeding prolongs birth interval due to delayed return of menstruation.
- Risk of breast cancer is lower in mothers who breastfeed their children.

When to start breast feeding and how long to continue?

As soon as the baby is born, skin contact and breastfeeding must be established at the earliest (within one hour of birth). Such an early initiation of breastfeeding (EIBF) facilitates milk production and also helps in mother-infant bonding. Also, putting the baby to breast immediately after birth helps uterus to contract firmly and reduces blood loss after delivery. Colostrum is the first milk secreted during the first 3–4 days after birth; and should be fed to the newborn immediately after birth. Colostrum should not be discarded.

Avoid feeding honey, glucose, water, or dilute milk formula before initiation of breastfeeding and anytime during the first 6 months. The newborn should be encouraged to suckle at mother's breast which helps in increasing milk secretion. Emotional Quotient of the breastfed infants is better than the non-breastfed infants.

Infant should be exclusively breastfed (EBF) for the first 6 months and exclusively breastfed infants do not need water. Feeding water reduces the breast milk intake and increases the risk of diarrhea and is to be totally avoided. Water is not required, even if the climate is hot. An enabling environment should be created for the mother, both at home (by family members) and elsewhere for promotion of optimal breastfeeding. Breastfeeding should be continued at least for two years.

What ensures an adequate supply of breast-milk?

On-demand feeding and frequent suckling ensure optimal breast milk production. Adequate growth of the baby indicates that there is adequate supply of breast milk. It is necessary that a woman is emotionally prepared during the pregnancy period for breastfeeding and is encouraged to eat a well-balanced diet. Anxiety and emotional disturbances must be avoided, and adequate rest should be ensured. Milk production of the mother is also influenced by appropriate feeding skills of the mother with respect to holding or positioning of the infant in her lap and latching the infant's mouth to the mothers' nipple.

Frequent suckling by the baby and complete emptying of one breast prior to offering the second one is important for feeding nutrient concentrate and higher fat content of hind milk as well as for sustaining adequate breast milk output. This will also facilitate optimum consumption by the

for sustaining adequate breast milk output. This will also facilitate optimum consumption by the young infant. It is necessary to prepare the mother's breast, particularly the nipples, for effective breastfeeding. Expressed milk can be fed to a young infant within a few minutes at room temperature. A working mother can express her breast milk hygienically and store it safely under refrigerated conditions (2–4° C) for upto 8 hours.

What are the common myths and problems?

Mothers usually feel breast milk is watery and less in quantity. A newborn's capacity to drink milk is limited as the stomach size is small. Hence, inadequate secretion of breast milk is only a misconception and mothers should not discontinue breastfeeding. Also, on-demand-feeding and frequent suckling will ensure optimal breast milk production. Complete emptying of one breast is important prior to offering the second breast in order to sustain adequate milk production.

It is often misconstrued that breast milk should be discontinued when it appears stained with blood. However, breastfeeding should not be discontinued as the bloody stain will disappear gradually. In case pain is experienced while breastfeeding or blood staining persists consult healthcare personnel / doctor for treatment or advice. Breastfeeding should be continued during treatment and after.

What are the advantages of breast-milk?

Breast milk contains all essential nutrients needed for an infant and protects from infections. Breast milk is natural and more easily digested and absorbed compared to formula milk prepared from other sources. Colostrum, which is the milk secreted during the first 3–4 days after birth, is rich in proteins, minerals, vitamins especially vitamin A and antibodies. In addition, breast milk adequately hydrates the baby, has a laxative effect and prevents constipation. Breastfeeding helps in birth spacing by delaying further pregnancies. Emotional bond between mother and infant is positively influenced by breastfeeding. Evidence suggests that human milk confers long-term benefits such as lower risk of certain autoimmune diseases, inflammatory bowel disease, obesity, and related disorders and probably some cancers. Therefore, "breast milk is the best milk" for the newborn and growing infant. Breastfeeding is associated with better cognitive and brain development in infants.

In addition to providing nutrients, breast milk has several special components such as growth factors, enzymes, hormones, and anti-infective factors. The amount of milk secreted increases gradually in the first few days after delivery, reaching the peak during the second month and it is maintained until about six months. An average Indian woman secretes about 750ml of milk per day during the first six months and 600ml of milk per day subsequently up to one year.

What are the effects of maternal malnutrition on breast-milk?

- The nutritional composition of breast milk is usually maintained well within the normal limits, even in mild to moderate undernutrition.
- However, if a mother is severely undernourished, quality and composition of breast milk as well as quantity may be affected.
- Undernourished mothers should be given additional allowance of foods that are rich in

- nutrients, good quality proteins and essential fats.
- Provision of nutrition supplements should be initiated at the earliest to fulfill her requirements as well as the baby's nutritional needs.

How does breast-milk protect against infection?

Diseases and death among breastfed infants are much lower than those among non-breastfed infants. Exclusive breastfeeding protects against diarrhea and upper respiratory tract infections. The gut flora and the low pH of breast milk (pH 6.36–7.36) inhibit the growth of pathogens. The prebiotic bifidus factor in breast milk promotes the natural gut flora. Breast milk has immunoglobulins (IgA), lactoferrin, complement factors and lactoperoxidase, which protect the infant from several infections. Antibodies to E-coli and some viruses are found in breast milk, which protect the gut mucosa. Breastfeeding also protects infants from vulnerability to allergic reactions.

Are medicines and addictive substances secreted in breast milk?

Many medicines (like antibiotics, painkillers and hormones) and addictive substances (caffeine, alcohol and psychotropic drugs) are secreted into breast milk and could prove harmful to breastfed infants. Hence, caution should be exercised by lactating mothers and appropriate medical guidance should be taken for the above referred medicines or addictive substances.

Should HIV positive women breast feed their babies?

HIV may be transmitted from mothers to infants through breast milk. HIV positive mothers should be made aware of the risk of transmission of HIV through breast milk and its consequences. Based on the principle of informed choice, HIV infected women should be counseled about the risk of HIV transmission through breast milk and the risks and benefits of each of the feeding methods, with specific guidance in selecting the option that is considered to be most likely to be suitable in a specific situation. However, HIV positive mothers living in resource-poor settings may not have access to safe, hygienic and affordable replacement feeding options. In such situations, considering the important role of breast milk in child growth and development, every effort should be made to promote exclusive breastfeeding for up to four months followed by weaning and complete stoppage of breastfeeding at six months in order to restrict transmission through breastfeeding. In any case, mixed feeding ie., breastfeeding along with other feeds should be strictly discouraged as it increases the risk of HIV transmission. This is in agreement with National AIDS Control Organization (NACO) guidelines.

Risk of not feeding breastmilk

- **For infants :** Not being breastfed is associated with an increased incidence of infections, higher risks of childhood obesity, type 1 and type 2 diabetes and leukemia. In some cases, it can also lead to sudden infant death syndrome.
- **For mothers :** Breastfeeding reduces risk of breast cancer and ovarian cancer, obesity, type 2 diabetes, metabolic syndrome and cardiovascular diseases such as stroke and heart attacks

Source: ICMR National Institute of Nutrition, Hyderabad - Dietary guidelines for Indians 

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