

BREASTFEEDING

Ques. - Lactation refers to which period?

Ans. Lactation describes the secretion of milk from the mammary glands and the period of time that a mother lactates to feed her young. The process occurs in all. In humans the process of feeding milk is called breastfeeding or nursing or lactating.

Ques. – What makes breast milk nutritionally superior to any other baby food/milk?

Ans. Breastfeeding is the best way to satisfy the nutritional and psychological needs of the baby.

The exceptional nutritional quality of human milk has been recognised for a long time.

Mother's milk is designed for easy digestion and assimilation. Protein in mother's milk is in a more soluble form which is easily digested and absorbed by the baby. Same is the case with regard to fat and calcium in human milk which are also easily absorbable. The milk sugar – lactose in mother's milk provides ready energy. In addition, a part of it is converted into lactic acid in the intestines which destroys harmful bacteria present there and helps in absorption of calcium and other minerals. The amount of vitamins such as thiamine, vitamin A and vitamin C found in mother's milk depends on the diet of the mother. Under normal conditions, breast milk provides reasonable amounts of these vitamins.

The human milk has inherent anti-infective properties which no other milk has.

Modern science and technology has not been able to produce a better food for young infants than mother's milk.

This protective function of human milk is particularly important in developing countries where there is much exposure to infection.

Ques. – What are the advantages of Breastfeeding?

Ans. Some of the advantages of breastfeeding are:

- Breast milk is the best natural food for babies.
- Breast milk is always clean.
- Breast milk protects the baby from diseases.
- Breast milk makes the child more intelligent.
- Breast milk is available 24 hours a day and requires no special preparation.
- Breast milk is nature's gift to the infant and does not need to be purchased.
- Breastfeeding makes a special relationship between mother and baby.
- Breastfeeding helps parents to space their children.
- Breastfeeding helps a mother to shed extra weight gained during pregnancy.

Ques. What is the composition of human breast milk?

Ans. A healthy mother secretes approximately 850ml of milk in a day

Nutrient composition of mature breast milk:

Nutrients	Amount/100 ml
Energy	65 kcal
Protein	1.1 g
Carbohydrate	7.4g
Fat	3.4g
Calcium	28mg
Iron	Negligible
Vitamin A	137 I.U. retinol
Thiamine	0.02µg
Riboflavin	0.02µg
Niacin	-
Vitamin C	3mg

Source: Text Book of Nutrition and Dietetics by Kumud Khanna et. Al, 2005 (ICMR, 1990)

Ques. - What makes breast milk the most suitable for the newborn?

Ans.Breast milk contains all the nutrients in adequate quantity and quality that an infant needs in the first 6 months of life, including fat, carbohydrates, proteins, vitamins, minerals and water

Breast milk also contains bioactive factors that enhance infant's immature immune system, providing protection against infection, and other factors that help digestion and absorption of nutrients.

Ques. What is the quantity and quality of fats present in breast milk?

Ans. Breast milk contains about 3.5 g of fat per 100 ml of milk, which provides about one half of the energy content of the milk. The fat is secreted in small droplets, and the amount increases as the feed progresses.

Only Breast-milk fat contains good quality fats which are important for the brain development of the baby like docosahexaenoic acid or DHA, and arachidonic acid or ARA

Ques. What is the quantity and quality of carbohydrates present in breast milk?

Ans. The main carbohydrate is the special milk sugar 'lactose', a disaccharide. Breast milk contains about 7 g lactose per 100 ml, which is more than in most other milks, and is another important source of energy for the infant.

Another kind of carbohydrate present in breast milk is oligosaccharides, or sugar chains, which provide important protection against infection.

Ques. What is the quantity and quality of proteins present in breast milk?

Ans. Protein found in breast milk differs in both quantity and quality from cow's / buffalo's milk, and it contains a balance of amino acids (building blocks of proteins) which makes it much more suitable for a baby.

The concentration of protein in breast milk (0.9 g per 100 ml) is lower than in animal milks. The much higher protein in animal milks can overload the infant's immature kidneys with waste nitrogen products. The quality of casein found in human breast milk is different from other animal milk and therefore results in the formation of much softer, more easily-digested curds in the infant's body.

Among the whey, or soluble proteins, human milk contains more alpha-lactalbumin; cow milk contains betalactoglobulin, which is absent from human milk and to which infants can become intolerant.

Ques. Does breast milk contain adequate amount of vitamins for the baby?

Ans. Breast milk normally contains sufficient vitamins for an infant, unless the mother herself is deficient. However, the exception is vitamin D, for this the infant needs to be exposed to sunlight so as to generate endogenous vitamin D in the body of the infant.

Ques. Does breast milk contain adequate quantity of minerals for the baby?

Ans. Breast milk contains adequate quantities of minerals for the baby. The minerals iron and zinc are present in relatively low concentration, but their bioavailability and absorption is high.

Ques. Does my kid require any iron supplements along with breast feeding?

Ans. Provided that maternal iron status is adequate, term-infants are born with a store of iron to supply their needs during first 6 months of life; only infants born with low birth weight may need supplements before 6 months.

Term infant - infant born at a gestational age between 37 and 42 completed weeks

Delaying clamping of the cord until pulsations have stopped (approximately 3 minutes) has been shown to improve infant's iron status during the first 6 months of life.

Ques. Is Breast milk capable of providing protection to my baby against infection and diseases?

Ans. -Breastmilk is baby's 'first immunization'. It helps to protect against diarrhoea, ear and chest infections like pneumonia, and other health problems. The protection is greatest when breastmilk alone is given for the first six months.

Breast milk contains many anti-infective factors that help to protect an infant against infections. These factors prevent the pathogenic bacteria, viruses and fungi from passing the mucosal defence barrier of the intestine and causing diseases.

The bifidus factor present in breast-milk promotes the growth of natural gut flora (good bacteria like *Lactobacillus bifidus*). The gut flora and the low pH (6.8-7.2)

(Source:<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2426592/?page=2>) of breast-milk inhibit the growth of pathogens in the intestine.

Breast-milk contains immunoglobulins (IgA), lactoferrin, lactoperoxidase and other similar compounds which protect the infant from several infections.

Antibodies to *E. Coli.* and some viruses are found in breast milk, which protect the gut mucosa. Breast-feeding also protects infants from vulnerability to allergic reactions specially some of the foreign proteins

The protection provided by these factors is uniquely valuable for an infant because:

- They protect without causing the effects of inflammation, such as fever, which can be dangerous for a young infant.
- Contains antibodies formed in the mother's body against the bacteria in her gut, and against infections that she has encountered, so they protect against bacteria that are particularly likely to be in the baby's environment.

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Inflammation: A localized protective reaction of tissue to irritation, injury, or infection, characterized by pain, redness, swelling, and sometimes loss of function.

Bifidusfactor: A carbohydrate in human milk which contains nitrogen and stimulates the growth of *Lactobacillus bifidus* in the intestine. In turn, this organism lowers the pH of the intestinal contents and suppresses the growth of *E. coli.* and other pathogenic bacteria

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

Ans. Composition of breast-milk depends to some extent on mother's nutritional status. In general, even undernourished mothers can successfully breast-feed their children. But if the mother is severely malnourished, then both quality and quantity of breast-milk may be affected.

- Protein content of breast-milk appears to be much less affected as compared to fat in case the mother is malnourished. Concentration of water-soluble vitamins as well as fat soluble vitamin A (beta-carotene) are influenced by the quality of the maternal diet.
- Supplementation of vitamin A and B-complex to lactating mothers increases the levels of these vitamins in breast-milk.
- Zinc and iron from breast-milk are better absorbed than from other food sources.
- Trace element composition of breast-milk, however, is not affected by the mother's nutritional status.

Ques. - What ensures an adequate supply of breast-milk?

Ans. It is necessary that the woman is emotionally prepared during pregnancy for breast-feeding and is encouraged to eat a well-balanced diet.

- Anxiety and emotional upset must be avoided and adequate rest should be ensured.
- It is necessary to prepare the breast, particularly the nipple, for breast-feeding.
- Mother should initiate breast-feeding as early as possible after delivery and feed the child on demand. Milk production of the mother is determined by the infant's demand.
- Frequent sucking by the baby and complete emptying of breast are important for sustaining adequate breast milk output.
- A working mother can express her breast milk and store it hygienically upto 8 hrs. This can be fed to her infant by the caretaker.

Ques. – What are the factors that affect lactation?

Ans. Successful lactation is subject to influence by a number of factors related both to the mother and her environment. While some of these directly affect the secretion of milk in the mother's body, others may be responsible for certain circumstances and situations that may promote or prevent the mother from adequately nursing her child. These include:

1. Neuroendocrine factors

Suckling by the infant and the continuous emptying of the breasts provide the necessary neuroendocrine stimulation which is important to maintain the physiological process of lactation. It is also brought about by the physical contact between mother and child. Thus, breastfeeding is itself a stimulant for further production of milk. If for any reason, the child cannot be fed for sometime, the breasts must be manually emptied at regular intervals to maintain the regular intervals to maintain the flow of milk.

2. Nutritional factors

The importance of good nutrition in promoting lactation cannot be overemphasized. Poor nutrition of mother definitely affects the quantity of milk production even though the quality and composition of milk may be maintained to some extent. This is done at the cost of mother's own body stores. However, with the quantity of milk being less, the amount of nutrients available to a child from a poorly nourished mother is low. A well balanced nutritious diet is therefore, of extreme importance for the mother to provide enough milk for the child as well as to maintain her own health and nutritional status.

3. Psychological factors

The neuroendocrine stimulation and particularly the Let Down reflex are associated with psychological factors. Even the cry or the thought of the baby may lead to ejection of milk due tolerated emotions. On the other hand, emotions like fear, anxiety, worry, grief, or anger may retard milk secretion. The mother must therefore regard lactation as a pleasant experience and not as a binding or imposition on her.

4. Social factors

With increasing urbanization and industrialization coupled with more and more women working outside home, lactation has by and large declined. Many women feel that breastfeeding may affect their figure adversely. Combined with all this is the effect of advertisements and mass media related to the availability of convenient infant formulae which have a negative effect on breast feeding practices.

Ques. - Are drugs secreted in breast-milk?

Ans. Yes, drugs (antibiotics, caffeine, hormones and alcohol) are secreted into the breast-milk and could prove harmful to the breast-fed infant; therefore, caution should be exercised by the lactating mother while taking medicines.

Ques. – What is Colostrum and why is it important for the infant?

Ans.

- Soon after delivery, small quantities of thick, yellowish, viscous liquid known as colostrum is secreted in breast milk by the mother.

- Colostrum is the special milk that is secreted in the first 2–3 days after delivery. Although colostrum is secreted in small quantities (40–50 ml), it is sufficient to meet the caloric needs of a normal newborn in the first few days of life.
- Colostrum is rich in white cells and antibodies. These anti-infective proteins and white cells provide the first immunization against the diseases that a baby may encounter after delivery and also enhances the development and maturation of the baby's gastro-intestinal tract.
- It also stimulates the baby's immature intestine to develop in order to digest and absorb milk and to prevent the absorption of undigested protein therefore, it is important that infants receive colostrum, and not other feeds, at this time as anything except for colostrum can damage the intestine and may cause allergies.
- It contains a larger percentage of protein, minerals and fat-soluble vitamins (A, E and K) than milk secreted.
- The presence of vitamin A, which is important for protection of the eyes, makes the colostrum appear yellowish in colour.
- Colostrum also has a mild purgative effect (to cause emptying of the bowels), which helps to clear baby's gut of meconium (the first, very dark stools) and helps to prevent jaundice by clearing the bilirubin from the gut.

Some mothers consider this first milk as something dirty and indigestible. Difference in colour and consistency could be possible reasons for such beliefs.

Delayed initiation of breastfeeding is a common practice in the country and this deprives the new borns from the concentrated source of anti-infective properties, vitamin A and protein available in colostrum.

(Source: BPNI, IYCF WHO 2009)

Ques. What are prelacteal feeds? Should these feeds be given to the baby?

Ans. Feeds other than breastmilk like glucose water, honey, ghutti, animal or powder milk given before breastfeeding are called prelacteal feeds.

No, Pre-lacteal feeds should strictly not be given to the baby before initiating breastmilk as these feeds are potentially harmful and invariably contribute to diarrhoea in the new born. These feeds are not safe for the baby since the baby's immune system is under-developed at this time and the feeds may expose the baby to harmful pathogens, as these are not prepared hygienically.

Giving prelacteal feeds may also lead to late initiation of breastfeeding which not only deprives the child of the valuable colostrum also causes engorgement (inflammation) of breasts which further hampers establishment of successful lactation.

(IYCG guidelines 2006)

Ques. What is Transition Milk?

Ans. Breastmilk at different stages of lactation is defined by different terms. The quantity and quality of breast milk gradually changes in consistency from thick to water-like/thin consistency depending on the specific needs of the child. As the name suggests, it is the type of milk that is produced after the colostrum rich milk and before the mature milk. During the two weeks that follow the colostrum stage, the milk increases in quantity and changes in appearance and composition. The immunoglobulins and protein contents decrease while fat and sugar contents increase. At this time, the breasts feel full, hard and heavy, the milk is then said to have “come in”.

On the third day, an infant is normally taking about 300–400 ml per 24 hours, and on the fifth day 500–800 ml.

From day 7 to 14, the milk is called **transitional**, and after 2 weeks it is called **mature milk**.

Ques. – What is Mature Milk?

Ans. Mature milk increases in quantity and contains all the nutrients needed for healthy physical and mental development of the baby even though it appears thinner, more watery than even cow's milk. Mature milk changes even during the length of a single feed to exactly suit the needs of a baby.

Ques. – What is Foremilk?

Ans. The milk that comes at the start of a feed is called foremilk. Foremilk, which is watery and bluish in colour, has a low level of fat and is high in lactose, sugar, protein, vitamins, minerals and water. It satisfies the baby's thirst and is produced in larger amounts than hindmilk. Mothers sometimes worry that their milk is too thin in the beginning. Milk is never 'too thin', it is important for a baby to have foremilk and hindmilk to get a complete meal and all the water that the baby needs.

Ques. – What is Hind-milk?

Ans. Hind-milk, which comes later in a feed, is richer in fat and this extra fat makes it look whiter than foremilk. It satisfies the baby's hunger and supplies much of the energy of a breastfeed. Therefore, it is important not to take a baby off the breast too quickly. Babies who are fed fore and hindmilk sleep well and grow healthy. There is, however, no sudden change from foremilk to hindmilk. The fat content increases gradually from the beginning to the end of a feed. The baby needs both the foremilk and the hindmilk for appropriate weight gain.

Ques. – What is Term Milk?

Ans. The composition of milk changes according to the gestational age or maturity of the baby. So the milk produced by a woman who has a full term delivery varies in composition to the milk produced by a woman who has a premature delivery.

Ques. – When does a woman produces Preterm milk?

Ans. Milk produced by a woman who has delivered prematurely (before completing 37 weeks of gestation) is called Preterm milk. This milk has more protein; minerals, immunoglobulins and lactoferrin than mature milk, making it more suited for the needs of a preterm baby. Preterm milk is essential and best suited for the survival and growth of a preterm baby. The breastmilk of preterm mothers contains more proteins to suit the fast growing needs of a premature baby.

Ques. - Can preterm babies be successfully breastfed?

Ans Yes. A pre-term baby (born before 37 weeks of gestation) can be successfully breastfeed

Mother's own milk is best for low-birth weight babies. However, not all of these infants are able to feed from the breast in the first days of life. For them, other options are available.

- In order of preference, they are:
- Expressed breastmilk (from the mother);
- donor breastmilk (only if the donor is HIV-tested and the milk is correctly heat-treated); and
- infant formula

Note: All of these should be given by cup and spoon

(Source: facts for life)

Ques. – How are animal milks and infant formula different from breast milk?

Ans. Animal milks are very different from breast milk in both the quantities of the various nutrients, and in their quality. The animal milks can be home-modified to mimic the nutritional composition of breastmilk; however, they will never be equivalent or have the same anti-infective properties similar to breast milk.

Infant formula is usually made from industrially modified cow milk or soy products. During the manufacturing process the quantities of nutrients are adjusted to make them more

comparable to breast milk. However, the qualitative differences in the fat and protein cannot be altered, and the absence of anti-infective and bio-active factors remains.
(IYCF WHO 2009)

Myths About Breastfeeding

Ques. Does a pregnant woman need to drink lots of milk to produce more breast milk?

Ans. - This is simply not true. Any type of food and fluid taken in adequate quantity is sufficient to produce enough milk. The production and quality of breastmilk is not dependent on the milk intake of the mother. The baby's suckling on the breast is the key factor and more suckling makes more milk.

Ques. Is it true that small breasts will not be able to produce enough milk?

Ans. Being able to breastfeed successfully does not depend on the size of one's breast. The size of the breast is an indicative of the amount of the fatty tissue layer under the skin. Breastmilk is produced by special glands known as mammary glands in the breast that are present in all women. Therefore, nursing women with small breasts will be able to produce adequate amounts of milk.

Ques. Is it true that Lactating women should stop eating certain foods during breastfeeding?

Ans. No, one can continue eating most of the routine foods during breastfeeding. If you are worried about a particular food, eat a small amount each time and see if it causes any problem to your baby. If it bothers your baby every time you eat it, you may consider avoiding that food. No foods are restricted except highly spiced and strongly flavored foods, as they impart flavor to the milk which may be repulsive to the baby.

Ques. Will a nursing mother be able to breast feed the second baby irrespective of the fact that she was not able to breastfeed the earlier baby?

Ans. A nursing mother can be successful in breastfeeding even if she was not able to breastfeed her earlier baby. One just needs to be confident enough during breastfeeding. Therefore, family support is very crucial at this stage.

Ques. - When should breastfeeding be started?

Ans. Newborn babies should be given to the mother to hold immediately after delivery. They should have skin-to-skin contact with the mother and begin breastfeeding within one hour of birth.

Skin-to-skin contact and breastfeeding soon after birth stimulate production of the mother's breastmilk. Breastfeeding also helps the mother's womb contract, which reduces the risk of heavy bleeding or infection and helps to expel the placenta (afterbirth).

Ques. - Why breastfeeding should be started within one hour of birth or as soon as possible?

Ans.

- Early initiation of breastfeeding is extremely important for establishing successful lactation as well as for providing 'Colostrum' (mother's first milk) to the baby. Ideally, **the baby should receive the first breastfeed as soon as possible and preferably within one hour of birth.**
- The new born baby is very active during the first half an hour to one hour and if the baby is kept with the mother and effort is made to breastfeed, the infant learns sucking very fast as sucking; rooting and swallowing reflexes are present during this time.
- This early suckling by the infant starts the process of milk formation in the mother and helps in early secretion of breast milk and better flow.
- It prevents breast swelling and pain and also reduces post-delivery bleeding.

Ques. – Which are the reflexes that help a baby in being appropriately breastfed?

Ans. The baby's reflexes are important for appropriate breastfeeding. The main reflexes are:-

- **Rooting Reflex:** When something touches a baby's lips or cheek, the baby turns to find the stimulus, and opens his or her mouth, putting his or her tongue down and forward. This is the rooting reflex and is present from about the 32nd week of pregnancy.
- **Suckling Reflex:** When something touches a baby's palate, he or she starts to suck it. This is the sucking reflex.
- **Swallowing Reflex:** When the baby's mouth fills with milk, he or she swallows. This is the swallowing reflex.

A majority of infants can breastfeed fully at a gestational age of 36 weeks by coordination of suckling, swallowing and breathing

Ques. - After Caesarean- section delivery, can a women breastfeed successfully?

Ans. A caesarean section, or c-section, is the delivery of a baby through a surgical incision in the mother's abdomen and uterus. In certain circumstances, a c-section is scheduled in advance. In others, it's done in response to an unforeseen complication.

Yes. This operation does not affect your ability to successfully breastfeed your baby. After caesarean section under general anesthesia, initiation of breastfeeding may be delayed unlike a normal delivery. In such situations, breastfeeding can be initiated within a few hours, as soon as the mother regains consciousness. One can start breastfeeding after 4 hours of operation or when out of the effect of anaesthesia.

The mother can also tilt her body to one side in the lying-down position and start feeding, or she can put the baby on her abdomen and then feed the child.

Healthy newborn infants are often separated from their mothers after delivery and may not be put to the breast for hours, or sometimes for days, waiting for breast milk to 'come in' or without any reason. This practice is detrimental to successful breastfeeding and must be discouraged, therefore for maintaining skin-to-skin contact and breastfeeding soon after birth stimulate production of the mother's breastmilk.

Ques. - What are the appropriate positions of breastfeeding for good attachment?

Ans. To be well attached at the breast, a baby and his or her mother need to be appropriately positioned. There are several different positions of breastfeeding for the mother and for the baby:

Position of the mother	Position of the baby
The mother can breastfeed the baby in sitting or lying down position or standing, whichever position is most comfortable for both the mother and the baby. However, she needs to be relaxed and comfortable, and without strain, particularly of her back. If she is sitting, her back needs to be supported, and she should be able to hold the baby at her breast without leaning forward	The baby can breastfeed in several different positions in relation to the mother: <ul style="list-style-type: none">• across her chest and abdomen,• under her arm• alongside her body
Positions of the mother	



Source: IYCF, WHO (2009)

Whatever the position of the mother, and the baby's general position in relation to her, there are four key points about the position of the baby's body that are important to be observed:

1. The baby's body should be straight, not bent or twisted. The baby's head can be slightly extended at the neck, which helps his or her chin to be close in to the breast.
2. He or she should be facing the breast. The nipples usually point slightly downwards, so the baby should not be flat against the mother's chest or abdomen, but turned slightly on his or her back able to see the mother's face.
3. The baby's body should be close to the mother which enables the baby to be close to the breast, and to take a large mouthful.
4. Baby's whole body should be supported. The baby may be supported on the bed or a pillow, or the mother's lap or arm. She should not support only the baby's head and neck. She should not grasp the baby's bottom, as this can pull the baby too far out to the side, and make it difficult for the baby to get his or her chin and tongue under the areola.

Ques. - Is it desirable to give gripe water and/ or ghutti to the baby?

Ans. No, Use of ghutti and gripe water is an unscientific practice. It is better not to use them. These preparations sometimes contain medications which are harmful and may induce sleep which is not natural. Any other food or drink given may be harmful for the baby and also increases chances of getting diarrhoea. Giving these would deprive your baby of adequate amount of breastmilk.

Ques. One has to breastfeed from both the breasts each time the baby is fed?

Ans. One breast must be emptied out fully before the second is offered, so that the baby receives both foremilk and hind milk. When the baby releases one breast other should be offered. If the baby is still hungry he will feed from the other breast. Alternate breast should be offered at each feed.

Ques. – What should be the breastfeeding pattern?

Ans. To ensure adequate milk production and flow for 6 months of exclusive breastfeeding, a baby needs to feed as often and for as long as he or she wants, both day and night. This is called **demand feeding, unrestricted feeding, or baby led feeding.**

Babies feed with different frequencies, and take different amounts of milk at each feed. The 24-hour intake of milk varies between mother-infant pairs from 440–1220 ml, averaging about 800 ml per day throughout the first 6 months.

Infants who are feeding on demand according to their appetite obtain what they need for satisfactory growth. They do not empty the breast, but remove only 63–72% of available milk. More milk can always be removed, showing that the infant stops feeding because of satiety, not because the breast is empty.

However, breasts seem to vary in their capacity for storing milk. Infants of women with low storage capacity may need to feed more often to remove the milk and ensure adequate daily intake and production. It is thus important not to restrict the duration or the frequency of feeds – provided the baby is well attached to the breast.

Nipple damage is caused by poor attachment and not by prolonged feeds.

After a short rest, the baby can be offered the other side, which he or she may or may not want.

If a baby stays on the breast for a very long time (more than one half hour for every feed) or if he or she wants to feed very often (more often than every 1–1½ hours each time) then the baby's attachment needs to be checked and improved.

Prolonged, frequent feeds can be a sign of ineffective suckling and inefficient transfer of milk to the baby. This is usually due to poor attachment, which may also lead to sore nipples. If the attachment is improved, transfer of milk becomes more efficient, and the feeds may become shorter or less frequent. At the same time, the risk of nipple damage is reduced.

Ques.- What are the cues of hunger that a baby shows when it is hungry?

Ans. The mother learns to respond to her baby's cues of hunger and readiness to feed, such as restlessness, rooting (searching) with his mouth, or sucking hands, before the baby starts to cry. The baby should be allowed to continue suckling on the breast until he or she spontaneously releases the nipple.

Ques. – how heat treatment of expressed milk done?

Ans. Heat treatment of expressed breastmilk

- Heat-treated breastmilk involves heating expressed breastmilk (enough for one or two feeds) in a small pan or in a metal container standing in a pan of water until it comes to a boil.
- The milk is then left to cool in a clean, covered container before it is fed to the baby by cup

Ques. - How long can a lactating mother continue to breastfeed?

Ans. The lactating mother should breastfeed your baby exclusively for first 6 months and continue breastfeeding well upto 2 years or beyond. **(IYCF guidelines 2006)**

Continuing breastfeeding while giving adequate complementary foods after 6 months to the baby provides all the benefits of breastfeeding to the baby.

In other words, the child gets energy, high quality protein, vitamin A, anti-infective properties and other nutrients besides achieving emotional satisfaction from the breastfeeding much needed for optimum development of the child. Breastfeeding especially at night ensures sustained lactation.

Initially when the complementary foods are introduced after six months of age, the complementary food should be fed when the infant is hungry. As the child starts taking complementary foods well, the child should be given breastfeeding first and then the complementary food. This will ensure adequate lactation.

Ques. – What should be done if milk leaks from breast after feeding the baby?

Ans. It is a temporary problem and quite normal. If you notice the milk is leaking, press your elbows firmly against the outer margins of your breasts. This will slow down the flow.

Ques. – What signs will indicate if the breast milk supply is adequate?

Or

How would a lactating mother get to know if enough milk is being produced?

Ans. Sign of getting adequate milk supply is the baby passing urine 6 times (or more) in 24 hours and baby gaining weight 500gms per month. The feeling of inadequate milk is usually apparent and not true as it comes from the mother believing that she is not producing enough breastmilk or if the baby asks for feeds more frequently or cries a lot.

Put the baby more often at your breast. Increased suckling frequently will increase "prolactin" production and in turn increase your milk supply. Also, avoid tension which inhibits the milk flow.

Ques. – What should be done if a lactating mother experiences pain in the nipples while feeding the baby?

Ans. One of the causes of pain could be that the baby is suckling in an incorrect position. If the baby is suckling only at the nipple, it causes sore nipple, which is painful. **The treatment is to feed your baby in the correct position.** Once your baby starts suckling in the correct position, pain will immediately disappear. Applying any cream or lotion is not recommended.

Put few drops of your own breastmilk over the damaged area and allow it to dry.

Ques. - Should a lactating mother stop breastfeeding the child in case of illness?

Ans. No. the mother should not stop breast feeding the child even if she is ill as most of the diseases do not affect the baby even typhoid, malaria, tuberculosis, jaundice or leprosy.

Ques. - I am taking medicines. Can I continue breastfeeding my baby?

Ans. Yes. Most commonly used drugs don't cause any harm to babies. For further advice consult your doctor.

Ques. – Is washing the breast before and after each feed necessary?

Ans. No. Daily bathing is all that is required. Avoid applying soap on your nipples. Frequent washing or cleaning of the breast is likely to remove the antibacterial lubricating oil produced by the special glands present in the areola.

Ques. - I want to start bottlefeeding so that baby does not refuse to accept it later. What do you think?

Ans. Bottle feeding should strictly be avoided at any stage. After 6 months of exclusive breast feeding, the child can be fed top milk using a clean bowl and spoon or from a cup.

Ques. - What is the harm of using one bottle-feeds a day when I am boiling the bottles carefully?

Ans. Bottle-feeding leads to three major problems:

1. Baby starts refusing the breast due to nipple confusion.
2. It will reduce your own milk supply.
3. The baby becomes more prone to infections because of bottle. In spite of boiling the bottle the chances of infection are higher in the babies who are bottle-fed than who are not given bottles.

Ques. - In case I need to give artificial milk, how should I give?

Ans. Ideal is to exclusively breastfeed the child for first six months. However, one must consult the doctor, before giving artificial milk to the baby. If recommended by the doctor, the artificial milk should be fed with a cup or a spoon and not with a bottle. Any mistake in the process of preparing a bottle-feed can lead to infections.

Ques. - Does smoking affect my milk and my baby?

Ans. Yes. Smoking can reduce the milk supply. It may also make the child more prone to respiratory infections and asthma.

Ques. – Is it a thing to worry, if the baby is passing frequent?

Ans. An exclusively breastfed baby passes frequent, somewhat loose stools. It is normal.

Ques. – if the breast milk looks thin and watery. Is it a thing to worry?

Ans. No, Foremilk (at the start of breastfeed) is thin and contains less fat. Hindmilk (near the end of a feed) is thicker and full of fat. A baby needs both. It has a unique quality of changing with the baby's needs. Feed the baby in an unrestricted manner to ensure that the baby receives both fore and hindmilk.

Ques. - I don't have enough milk, What to do?

Ans. Most mothers can produce adequate breastmilk for their babies. If you feel that you don't have enough milk, you should check the positioning of the baby during breastfeeding. See if you are following a demand schedule or not.

Most mothers can increase their own milk supply by allowing the baby to suckle more often. "More suckling makes more milk" is true for all mothers. Sign of getting adequate milk supply is the passing of urine 6 times (or more) in 24 hours. Avoid hurry and be confident.

Ques. - How can a mother ensure breastfeeding immediately post-delivery as it seems difficult in a hospital?

Ans. Talk to the staff of the hospital where you are going to deliver the baby about your determination to breastfeed. Ask for the baby to be near you as soon as he is delivered and let the baby remain with you as long as you stay there.

Ques.-What should be done if the breasts feel full and firm?

Ans. You can have this feeling in case there is delay in feeding the baby or missing breastfeeds. It can be relieved by unrestricted feeding to the baby along with hand expression of milk.

Ques. – How can breast infection or abscess formation be prevented?

Ans. Unrestricted feeding in the correct position usually prevents this. But in case sore or cracked nipples develop, and are followed by engorgement, it may lead to swelling, pain and redness on the side of the infection. It is to be treated by the doctor with drugs. If an abscess develops it has to be removed surgically. Mother can continue to breastfeed from the same side even after surgery.

Ques. – what should be the breast feeding pattern in case of twin babies?

Yes. They can be breastfed simultaneously using one breast for each feed and alternating the breasts for next feeds. Breastmilk production is usually sufficient to meet with the requirements of both the babies. If required fresh milk can be used with cup and spoon.

Ques. – the baby should be breast fed from both breasts each time?

Ans. Let your baby decide that. Take your hint from him. He may prefer to have milk from one or both breasts at each feed.

Ques. - Exclusive breastfeeding for first 6 months: What does it mean? (IYCF guidelines 2006)

Ans. Exclusive breastfeeding means that babies are given only breast milk and nothing else – no other milk, food, drinks and not even water. During the first six months **exclusive breastfeeding** should be practiced. Breast milk provides best and complete nourishment to the baby during the first six months. The babies who are exclusively breastfed do not require anything else namely additional food or fluid, herbal water, glucose water, fruit drinks or water during the first six months.

Breast milk alone is adequate to meet the hydration requirements even under the extremely hot and dry summer conditions prevailing in the country.

It also helps in reducing specially the ear infections and risk of attacks of asthma and allergies.

Recent WHO studies estimate that death rate in babies can go down four times if they are exclusively breastfed for the first six months.

It must be remembered that benefits of breastfeeding are reduced if it is not exclusive breastfeeding.

Ques. – What does artificial feeding includes? (Ref:Handbook of AWWs)

Ans. Artificial feeding includes infant formula (powdered milk), animal milk (cow, buffalo, goat, camel milk) and condensed milk

Ques. – What are the problems of bottle feeding?

Ans. Mother should avoid using bottle at any age as bottle feeding could be harmful and can make the child refuse breastfeeding.

_ Baby foods are expensive. The mother over dilutes the baby foods which may lead to malnutrition

_ If bottle feed is not prepared hygienically or the feeding bottles and teats are not cleaned properly and sterilized by boiling, chances of getting infection to the child are more.

_ If the child does not finish the bottle feed and the milk remains in the bottle until the next feed, the milk can get spoilt and cause infection, if fed.

_ The teat is often left uncovered and exposed to flies and dust leading to infection

Ques. – What are the dangers of artificial feeding?

Ans. Mother should not give artificial milk or powdered milk to babies below six months as infant formula is not as good or complete as breastmilk.

Mothers using artificial milk face difficulties in rearing the baby because artificial feeds/formulas:

– do not contain appropriate amount of proteins, fats, vitamins and minerals which a baby needs.

– quality of proteins is different from that of breastmilk

– contains higher amount of salt, calcium and phosphate

– chances of infection to the infant are more

– can cause indigestion and respiratory infections

– are expensive and less nutritious

– are inferior to breast milk in all respect.

Ques. – What are some of the known benefits of breastfeeding for infants?

Ans. Studies all over the world show that each baby who is breastfed gets fewer common infections.

Breastfeeding reduces the frequency of infections of the middle ear (otitis media).

Studies have shown that Breastfeeding reduces of attacks of asthma in children.

Ques. – How does Breastfeeding prevent another pregnancy too soon for the mother specially for whom contraception is unavailable, unaffordable or unacceptable?

Ans. - Breastfeeding is an integral part of the reproductive cycle: exclusive Breastfeeding, followed by continued Breastfeeding with the addition of appropriate complementary foods, completes this cycle before the next pregnancy occurs.

Studies have shown that Breastfeeding spaces births, helping to prevent another pregnancy too soon for the many women for whom contraception is unavailable, unaffordable or unacceptable. As long as a mother breastfeeds fully or nearly fully, she is 98% protected against further pregnancy for the first six months and 96% for up to 12 months, as long as her periods (her menses) have not returned.

Ques. – What are the other benefits of breastfeeding for the mother?

Ans Breastfeeding apart from preventing another pregnancy also increases the level of oxytocin (A hormone that stimulates the uterus to contract during child birth and the breasts to release milk.), resulting in less blood loss after delivery.

Breastfeeding also reduces the frequency and severity of anaemia, because lactating mothers find that their monthly periods return later compared to mothers who bottle-feed.

When any cycle is interrupted, there are repercussions on health, often long-term. Breastfeeding for at least three months can reduce the risk of pre-menopausal breast cancer by one half. Breastfeeding for at least two months per child reduces the risk of ovarian cancer by 25%. The risk of hip fracture in women over 65 is reduced by half for women who have breastfed. For women who have breastfeed each of their children for nine months, the risk is reduced to one quarters.

Ques.- How breastmilk is produced?

Ans. The female breast is the gland that produces milk. The female breast begins to prepare for lactation with the onset of puberty. As a woman matures there is a further mammary

development giving a characteristic structure to the breasts. During pregnancy, the glandular cells of the breast change into actual secreting cells. By the time the baby is born, the breast reaches a degree of development capable of producing milk.

The breast consists partly of gland tissues and partly of supporting tissues and fats. The gland tissue (technically known as alveoli) are small sacs, made up of millions of milk secreting cells which goes along small tubes towards the nipple. Before they reach the nipple, the tubes become much wider, and form lactiferous sinuses in which milk collects. The nipple contains many sensory nerves so it is very sensitive. This is important for the responses which help milk to come. Around the nipple there is a circle of dark skin called areola. Beneath the areola are the lactiferous sinuses. **Therefore, areola must go inside the baby's mouth in order to draw milk from sinuses.**

Ques. - How breastmilk flows and reaches the baby?

Ans. Every time the baby suckles at the breast, he stimulates the nerve ending in the nipple. These nerves carry message to the brain, which releases a hormone called prolactin. The prolactin goes in the blood and stimulates milk secretion by the breast for the current feed and the next feed.

Prolactin works after the baby suckles and makes milk for the next feed. These events from the stimulation of the nipple to secretion of milk are called the milk secretion response, or prolactin

If your baby suckles more, your breast will make more milk. If the baby stops suckling or if he never starts, the breast stops making milk.

In case of twin babies and they both suckle, then the breasts will make extra milk for two babies. Feeding during night increases the supply of milk as more prolactin is secreted at night.

Ejection and flow of milk to your baby is due to production of another hormone called oxytocin. Stimulation of sensory nerves in the nipple by suckling also induces the production of 'oxytocin', which acts on the muscle cells around the alveoli causing the ejection and flow of breastmilk to your baby's mouth. These events are the milk flow response, or oxytocin reflex.

Oxytocin is produced quickly with the start of the suckling and is responsible for milk transfer from breast to the baby. If oxytocin is not produced adequately, the baby may have difficulty in getting the milk. It may seem that breast is not producing milk, but the fact is the milk is there but not flowing.

Oxytocin release is affected by the mother's mental state. Feeling confident that your milk is the best and enough for the baby will stimulate oxytocin reflex. If one lacks confidence or doubts one's ability to produce enough amount of milk for the baby it leads to decrease in oxytocin, and sets out a cycle of poor confidence, less secretion of oxytocin and you feel that the baby is not getting enough. Negative feelings like pain, worries, anxiety also inhibit the oxytocin reflex.

Ques. How can fathers support the mothers to be able to breastfeed successfully?

Ans. Needless to mention, to be able to breastfeed the child, the mothers need support from all the family members. The father and other family members can help the mother in the following mentioned practical ways:

- a) Appreciate her decision letting her know that she is setting a good example for mothers in the community by exclusively breastfeeding her baby.
- b) Learning yourself about breastfeeding
- c) Helping your wife with child care , so that she can rest .Spend some time with your baby to hold and cuddle him.
- d) Helping your wife by giving extra time and attention to your elder children.
- e) Making your partner feel good about herself by praising her job as a mother.
- f) Telling your wife and your relatives that you want your wife to breastfeed, and that you know that mother's milk is the best food for your baby.

Other family members should avoid:

One should not doubt the mother's ability to provide enough milk for the baby.

- one should not feel embarrassed if the mother is feeding the baby outside home.
- In case if any of the family members smoke, please do not smoke in the baby's room.

Ques. – Why is it important to learn Hand Expressing of Breastmilk for lactating women?

Ans. It is possible to continue breastfeeding the baby after returning to work. Working outside the home is often cited as a reason for the decline in breastfeeding rates around the world because breastfeeding and working outside are seen as mutually exclusive activities. But it has been observed that many working mothers have breastfed their babies successfully by manually expressing breastmilk.so therefore all mothers should learn how to express their breastmilk. This can be taught during pregnancy and practiced soon after birth.

Ques.-What are the advantages of expressing breastmilk?

Ans. Hand expression is the most useful method. Following are the advantages of expressing breastmilk:

- Feed a low birth weight or sick baby.
- Relieve engorgement.
- Maintain the milk supply when the mother is ill.
- Relieve leaking breasts.
- Leave milk for the baby when you go out to work.
- Feed a baby while he learns suckling from inverted nipples.

Ques. - How to stimulate oxytocin reflex

Ans. Before expression it is essential to stimulate the oxytocin reflex to assure better breastmilk flow to the baby.

The oxytocin reflex can be stimulated with good thoughts and feeling and by holding the baby on one's lap and providing good skin to skin contact.

Stimulate the nipples by massaging the breasts gently towards the nipple and stroking the nipple and areola gently with fingertips, or gently rolling a closed fist over the breast, while sitting in a relaxed manner.

Ques. - What is the method of expression of Breastmilk?

Ans. For expression of milk one should wash hands thoroughly. Sit or stand comfortably holding a clean container near the breast.

Be confident, take a warm soothing drink, stimulate the nipple. The thumb and the first finger should be placed on the areola above and below the nipple opposite each other. The thumb and the finger should be pressed inwards towards the chest wall. Then the areola behind the nipple should be pressed between the finger and thumb so that the lactiferous sinuses beneath the areola are compressed. Pressure should be alternately given and released till the flow of milk starts.

If the procedure is painful, it implies that the technique is wrong. You should not slide the fingers along the skin nor should the nipple itself be squeezed. Pressing or pulling the nipple cannot express the milk. Pressure should be given on all the sides to ensure expression from all segments of the breasts. The breast should be expressed for at least 3 to 5 minutes and when the flow slows, then express the other breast and repeat alternately.

To express milk adequately it, takes 20 to 30 minutes. It is important not to attempt expression in a shorter time.

Ques.- How to store expressed milk?

Ans. Breastmilk can be stored in a refrigerator for 24 hours and at room temperature for 8 hours. Refrigerated breastmilk should not be heated; as it will destroy protective substances. It should be brought to room temperature before being fed by a cup.

Ques. – How can working mother breastfeed successfully?

Ans. Guidelines for successful breastfeeding for working mothers-

Before returning to work:

- Enjoy this special time with your baby.
- Learn how to express breastmilk.
- Breastfeed the baby frequently and on demand to establish a good milk supply
- A few days before you return to work, give expressed breastmilk-feed to your baby with a cup or a spoon.

On Joining Work:

One should

- Breastfeed early in the morning.
- Also, breastfeed just before leaving for work and then again after coming back.
- If the place of work is nearby, come back home to breastfeed during breastfeeding breaks.
- Again breastfeed frequently after coming back in the evening.
- At night breastfeed the child as many times as possible.
- If creche facilities are available near to place of work then baby can be fed during breastfeeding breaks.
- Express breastmilk during work in a clean container for storage to be given to baby later on or discard to relieve heaviness. This will ensure adequate milk production.

Problems during Breastfeeding

Ques. – How can one judge if nipples are working for breastfeeding?

Ans. One can judge the workability of the nipple by gently pulling them out. If the nipples stand erect, they are working for breastfeeding. This is called the "Nipple Protractility".

Ques. – What problems can be encountered during breastfeeding?

Ans. Breastfeeding is the most natural thing for every mother. It is a unique experience to be cherished. But sometimes certain simple problems faced by mothers result in stoppage of breastfeeding or giving of supplements of animal milk/commercial infant formula to the baby.

Following problems that may be encountered are:

- Flat nipples,
- inverted nipples,
- breast engorgement,
- swelling,
- sore nipples
- not enough milk etc.

These problems are preventable if due care is taken from the pregnancy period to prepare for breastfeeding.

Some of these problems relate to shape and size of the nipple and others relate to breast tissue as a whole.

Flat nipple

The length of the resting nipple is not important for breastfeeding. However, the areola embedded in the breast tissue beneath should be able to be pulled out to form the teat. The nipple is just a guide to show where the baby has to take the breast. Having flat nipples is not a thing to worry.

Inverted nipple

Nipple that does not come out erect and on trying to pull out rather it goes deeper into the breast is an inverted nipple. Fortunately, true inverted nipples are very rare and usually during pregnancy the nipple becomes normal and protractile. If they remain inverted, these can be treated in consultation with your doctor.

Long nipple

A long nipple may be a common problem as the baby may suck on the nipple only and may not take enough of breast tissue into his mouth. To help, the baby should be brought closer to the breast to enable him to take more breast tissue into his mouth.

Sore nipples and cracked nipples

The most common cause of sore nipples in the first few days of feeding is the incorrect positioning /attachment of the baby at the breast meaning that the baby sucks only at the "nipple". If feeding continues in the poor position, it may lead to cracked nipple and later to mastitis and breast abscess.

Ques. – How can sore and cracked nipples treated?

Ans. For cracked nipples, treatment consists of feeding in correct position, washing the nipple once daily only with water and exposure of nipple to air and sun as much as possible, and application of a drop of your hind milk on the nipple after each feed and continued breastfeeding will help.

For Sore nipples_if it pains during breastfeeding, the mother should wait until the baby releases the breast, or you can put your finger gently into the baby's mouth to break the suction first, so as to avoid injury at the nipple. Then, again start to breastfeed in a CORRECT POSITION and if your child is attached properly it will not cause pain.

Breastfeeding should be continued on the affected breast as sore nipples usually heal after correcting the suckling position.

Medicated creams are best avoided as they may worsen the soreness and draw away the attention from the crucial issue.

Ques. – What is Fullness and engorgement of the breast?

Ans. Milk production is continuous and, if enough milk is not remove engorgement (puffiness/inflammation) of breasts may result. The engorged breast is tight, shiny and very painful. This is a frequent problem in lactating mothers.

The common causes of engorged breasts are:

- Other feeds given before starting breastfeeding
- Delayed starting of breastfeeds
- Long intervals between feeds
- Early removal of the baby from the breast while breastfeeding
- Bottle-feeding and any other restrictions on breastfeeding

If breast is engorged the baby is not able to take feed properly due to poor attachment, inadequate emptying which further leads to decreased production of milk. Engorgement of the breast can be prevented by avoiding other feeds being given before breastfeeding, keeping the baby always with the mother, unrestricted and exclusive breastfeeding on demand, and feeding in the correct position.

When engorgement occurs, expression of breastmilk should be done to relieve breast engorgement, reduce pain and make the mother comfortable.

Ques. – What should be done in case of blocked duct in the breasts?

Ans. If the baby does not suckle well on a particular segment of the breast, the thick milk blocks the milk duct leading to a painful hard swelling.

Treatment

- Improving suckling/ position - the baby should be fed frequently on the affected breast and in different suckling positions so as to improve the emptying.
- Massaging the lump towards the nipple to promote emptying of the breast.
- Rest and wearing loose clothes.

Ques. – What causes swelling of the breasts and what is the treatment in case of swollen breasts?

Ans. If the blockage of the duct or engorgement continues, infection may supervene. The breast becomes red, hot, tender and swollen (It is called mastitis). An abscess may form or swelling may occur, associated with fever.

Treatment for swollen breasts

- Express the milk frequently and continue breastfeeding.
- Warm water fomentation may also help alleviate pain.
- Consult a doctor for pain .Incision to drain the abscess may be necessary sometimes.
- Restart breastfeeding from the affected breast as soon as possible.

Ques. – Is Leakage of milk from the breast normal?

Ans. Yes it is a common condition in early lactation. Milk leaking is usually the result of an active ejection reflex during first few weeks of lactation. It commonly occurs when it is time for a feed or when intervals between feeds are increased and when you have loving thoughts about your baby.

You remain reassured that this is due to normal oxytocin reflex.

Ques. – In case of appearance of blood in the breast milk, what should be done?

Ans. Some mothers notice a little blood in the milk, even in the absence of a nipple fissure. It is usually a harmless and self-limiting condition. You should continue breastfeeding.

Ques. – Is it possible to continue breastfeeding the baby after returning to work?

Ans. Yes, It is possible to continue breastfeeding the baby after returning to work. Working outside the home is often cited as a reason for the decline in breastfeeding rates around the world because breastfeeding and working outside are seen as mutually exclusive activities. But it has been observed that many working mothers have breastfed their babies successfully.

Ques. – What are the signs of good positioning of the baby?

Ans. For feeding, the baby you should hold him with head straight, facing the breast with his nose opposite to your nipple and his body close, supporting infant's whole body not just the neck and shoulder. Your nipple should touch the infant's mouth. Wait till his mouth opens wide, and offer the whole breast to your baby to get as much as he can into his mouth.

Good body positioning is recognized by the following signs

- His neck is straight or bent slightly back
- His body is turned towards you
- His body is close to you
- His whole body is supported
- There is eye contact between you and your baby

Ques. – How can one recognise poor positioning of the baby at the breasts?

Ans. Poor positioning of the baby may be recognized by any one of the following signs

- His neck is twisted or bent forward.
- His body is turned away from you
- His body is not close to you.
- Only his head and neck are supported.
- There is no eye contact between you and your baby.

Ques. - How should the baby suckle at the breast?

Ans. Babies suckle for closeness, comfort and pleasure as well as because they are hungry. To suckle effectively, the baby must take enough of the breast into his mouth, so that his tongue can press on the **lactiferous sinuses**. He must pull out or stretch the breast tissue to form a teat that is much longer than the "resting nipple". The nipple just forms one third of this teat. The mother can sometimes see the long, stretched breast tissue for a moment

when your baby stops suckling. This is good attachment. This the way the baby draws all the milk from your breast.

If the baby is not well-attached, it may result in pain and damage to your nipples and breast engorgement due to ineffective removal of breastmilk. Your baby feels unsatisfied and he wants feed very often and for along time. He may get too little milk and not gain weight and the breastmilk may dry up.

Signs of good attachment are

- Chin touching breast
- Mouth wide open
- Lower lip turned outward
- More areola visible above than below the mouth
- There should be no pain

Signs of poor attachment are

- Chin separated from the breast
- Mouth looks closed
- Lower lip pointed forward
- More areola visible below the mouth and lower lip
- You feel nipple pain

In effective suckling - baby suckles with slow deep sucks and sometimes pauses and you see or hear the infant swallowing.

Ques. - How long the baby should suckle?

Ans. The suckling pattern varies, with some babies fulfilling their requirements in 5-10 minutes while others take longer. The baby should be allowed to decide the duration of the feed. But if breastfeeds are very long (more than about half an hour) or very short (less than about 4 minutes) it may mean there is some problem. In the first few days, or with a low-birth-weight baby, breastfeeds may be very long and this is normal. You should feed your baby from one breast completely and then put the baby to the second breast, so that both breasts get equal stimulation for milk production.

Ques. - How many time a day should the baby be breastfed?

Ans. The baby should be fed on demand with at least more than 8 feeds in 24 hours. Initially the demands are very frequent but by 1-2 weeks the frequency decreases. The baby should be fed as frequently and for as long as he wants to, even at night. Breastfeeding at night

helps maintain the milk supply as more prolactin is secreted during the night. Satisfied child releases breast spontaneously. Mothers do not have to stop breastfeeding.

In case you have a caesarian section your baby may start to suckle within four hours or as soon as you are out of the effect of anaesthesia. To initiate breastfeeding immediately after birth, hold him close to your breast for skin to skin contact and start feeding. Touch your baby around his mouth. He will open mouth widely, offer whole breast at this time and he will take mouthful of breast. Skin-to-skin contact stimulates milk flow, helps in better mother-child bonding and development of the baby.

2. Ensure that breastmilk is your baby's first food. No foods like sugar, water or any other milk food or drink should be given as these inhibit the establishment of successful breastfeeding. Such feeds also interfere with production and supply of breastmilk, create "nipple confusion" and increase rate of infection.

3. Feed your baby on demand till the baby is satisfied. When your baby is satisfied he releases the nipple himself. You should offer alternate breast at each feed, so that your baby receives both foremilk and hindmilk.

Ques. What should the pregnant lady consume to prepare herself for Breastfeeding?

Ans. During pregnancy, one needs to eat a balanced diet containing food from all food groups throughout pregnancy and breastfeeding -

1. **Energy giving food**, like cereals and their products, starchy roots, tubers, sugar, and those rich in fats like nuts, fats and oils.

2. **Body building food**, which include food of animal origin, like milk and milk products, eggs, meat, fish, poultry and plant protein ,food like pulses, legumes, nuts and oilseeds.

3. **Protective food**, which include green vegetables and fruits.

To meet additional requirements during pregnancy extra food should be taken. Both alcohol and smoking should be avoided during pregnancy.

During pregnancy take care of your nipple and breasts. There is no need for any special soap or oil.

You should always be confident of breastfeeding your baby successfully. Talk to a mother who has recently breastfed her own baby successfully as she can be very helpful in answering many of your questions.

As per the latest IYCF guidelines, 2006:

- _ A lactating mother requires to eat more than what she was eating during pregnancy.
- _ A lactating mother requires 550 calories extra per day to meet the needs of production of mother's milk for the new born baby.
- _ A good nutritious diet prepared from low cost locally available foods, family support and care, and a pleasant atmosphere in the family helps improve lactation and ensures health of both the mother and the baby.

Diet

- _ In your diet include more of cereal, pulse and green leafy vegetable in daily diet.
- _ Take vegetables and one seasonal fruit a day.
- _ Take milk, butter milk, fluids and a lot of water.
- _ Egg, meat, fish are beneficial.
- _ Energy dense foods like ghee/oil and sugar are necessary to meet the increased energy needs. Traditional preparations like panjiri, laddoo are useful.

Rest

- _ Breastfeed in a relaxed state. Any type of mental tension decreases milk secretion IFA tablets
- _ Take iron and folic acid tablets for first six months of lactation

Ques. - What is the Lactational Amenorrhea Method, LAM?

Ans. The lactational amenorrhea method is just one of a variety of highly effective natural family planning methods. This method is used after childbirth, and involves breastfeeding your child exclusively for at least six months in order to prevent pregnancy. The LAM method has been around for thousands of years but declined greatly in popularity over the past century.

In 1988, however, the LAM method was reintroduced thanks to new studies that proved its effectiveness in preventing pregnancies during the postpartum period.

Ques. - How Does the Lactational Amenorrhea Method Work?

Ans. The LAM method works by changing the way in which your body produces your reproductive hormones. In order to ovulate and menstruate, your pituitary gland (a small gland inside of your brain) produces two hormones: Follicle Stimulating Hormone (FSH) and Gonadotropin Releasing Hormone (GnRH). These hormones send signals to female eggs to mature and subsequently be released during ovulation. When you breastfeed, though, this process gets interrupted, thereby interfering with the production of both FSH and GnRH.

As your baby suckles, nerve impulses travel through your body and are received by your brain. This signals the production of a hormone called prolactin, which works to inhibit both FSH and GnRH. As a result, ovulation does not occur and menstruation stops, making it almost impossible to become pregnant.

Ques. - Who Can Use the Lactational Amenorrhea Method (LAM)?

Ans. Any woman who is dedicated to exclusively breastfeeding her child after birth can use the LAM method to protect against pregnancy. It is most effective in women who:

- are exclusively or almost exclusively (85% of feeds) breastfeeding
- have not experienced the return of their menstrual periods
- are less than six months postpartum

Ques. - How to use the Lactational Amenorrhea Method?

Ans. LAM is one of the simplest natural family planning methods to use. It involves no complex calculations or calendars and requires little preparation or planning. Simply follow these steps when feeding your baby for the first six months of life:

- begin breastfeeding as soon as possible after delivery
- breastfeed between six and ten times a day, upon request
- avoid long intervals between feeds
- avoid the use of bottles and pacifiers
- don't give any supplemental food or liquids to your baby (such as juice or water)

Ques. - How Effective is the Lactational Amenorrhea Method?

Ans. The LAM method is actually highly effective in preventing pregnancy when used correctly during the first six months of the postpartum period. If you continue to breastfeed regularly and exclusively and your periods do not return, LAM is between 98% and 99% effective. Most women have trouble maintaining such a rigorous breastfeeding schedule, though. These women should use an alternate form of birth control in addition to LAM.

Ques.- What are the advantages of Lactational Amenorrhea Method?

Ans. Advantages of the Lactational Amenorrhea Method are:

There are a number of advantages of breastfeeding for contraceptive purposes:

- LAM is highly effective in preventing pregnancy when used correctly.
- LAM is easy and simple to use.
- LAM is inexpensive and causes no side effects.
- LAM doesn't interfere with intercourse.
- LAM is acceptable in most cultures.
- There are numerous health benefits of breastfeeding for both you and baby.

Ques. – What are the disadvantages to the Lactational Amenorrhea Method?

Ans. As with any birth control method, LAM is not without its drawbacks:

- LAM is most effective in the first six months of postpartum. After six months, LAM becomes less effective.

- It can be difficult to maintain regular breastfeeding schedules, especially for working mothers.
- LAM does not protect against STDs, Sexually Transmitted Diseases.

Ques. How effective is the Lactational Amenorrhea Method after Six Months?

Ans. LAM can be continued after your baby has turned six months of age, though it will be less effective than it is during the early postpartum period. After six months, your baby will require supplemental feeding, and this may interfere with breastfeeding. As long as your baby continues to breastfeed for more than 65 minutes a day, and your periods have not returned, LAM should still be quite effective in preventing pregnancy.

With perfect use, the LAM method is between 90% and 96% effective in guarding against pregnancy after six months. However, it is recommended that women use an additional type of birth control after their baby turns six months of age

<http://www.epigee.org/fetal/contraception.html>

HIV and Breastfeeding

Ques. - Can an HIV positive woman breastfeed her babies?

Ans. If a woman is infected with HIV (Human Immunodeficiency Virus), there is a risk that she can pass the infection to her infant through breastfeeding. In the first six months, this risk is much greater if the infant is fed both breastmilk and other liquids and foods than if fed breastmilk alone. Therefore, it is recommended that the baby receives breastmilk alone for the first six months, unless it is acceptable, feasible, affordable, sustainable and safe to give breastmilk substitutes (infant formula) exclusively. (factsforlife)

In any case, mixed feeding i.e. breast feeding along with other feeds should be strictly discouraged as it increases the risk of HIV transmission. (NIN – 2010)

Ques. - Which breastfeeding practices may be followed by an HIV positive mother and for how long?

Ans. Exclusive breastfeeding for the first six months of the child's life protects the infant from death due to diarrhoea, pneumonia and malnutrition. There is, however, a risk of HIV infection through the breastmilk.

The risk of transmitting HIV to the infant can be reduced by adopting following feeding practices:

1. **Exclusive breastfeeding** without mixed feeding (breastmilk and other foods and drinks), since the risk of transmitting HIV to the infant is much lower with exclusive breastfeeding than mixed feeding.

Mothers known to be HIV-infected (and whose infants are HIV uninfected or of unknown HIV status) should therefore, exclusively breastfeed their infants for the first 6 months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life.

2. **By shortening the duration of breastfeeding** once a nutritionally adequate and safe diet without breastmilk can be provided to the child.
3. **Feeding the baby a breastmilk substitute (infant formula) alone** can eliminate the risk of transmitting HIV through breastmilk but can also greatly increase the risk of dying from infections such as diarrhoea or pneumonia, especially in the first 6 months of life.

The above mentioned feeding practices are however generic, so the risks of HIV transmission through breast milk and the risks and benefits of each feeding method, with

specific guidance in selecting the option most appropriate in her situation must be informed to the HIV infected mothers by the medical staff.

Therefore, to achieve appropriate infant feeding practices in HIV positive mothers, capacity building of counselors and health workers, including doctors and nursing staff, is mandatory to ensure either '**exclusive breastfeeding**' or '**exclusive artificial feeding**' as chosen by the mother.(IYCF Guidelines 2006)

Ques. – What is mixed feeding and Is it safe to give mixed feeding to baby of an HIV infected mother during first 6 months after birth?

Ans. Giving both breastmilk and other foods and liquids to the infant during first 6 months is known as mixed feeding.

No, mixed feeding is not advisable since Mixed feeding not only greatly increases the risk of transmitting HIV to the baby in the first six months but also causes more illness, such as diarrhoea and pneumonia, and malnutrition, and increases the risk of death.

Ques. - What should be done if HIV-positive mothers decide to stop breastfeeding?

Ans. Mothers known to be HIV-infected who decide to stop breastfeeding at any time should stop gradually within one month. Mothers or infants who have been receiving ARV (**anti-retroviral therapy**) prophylaxis - a group of medicines for people with HIV infection should continue prophylaxis for one week after breastfeeding is fully stopped. Breastfeeding should not be stopped abruptly.

Ques. - What should be fed to infants when HIV positive mothers stop breastfeeding?

Ans. When mothers known to be HIV-infected decide to stop breastfeeding at any time, infants should be provided with safe and adequate replacement feeds to enable normal growth and development.

Alternatives to breastfeeding include:

For infants less than six months of age: Commercial infant formula milk
Conditions needed to safely formula feed
a. safe water and sanitation are assured at the household level and in the community;

and

- b. the mother, or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant; **and**
- c. the mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; **and**
- d. the mother or caregiver can, in the first six months, exclusively give infant formula milk; **and**
- e. the family is supportive of this practice; **and**
- f. the mother or caregiver can access health care that offers comprehensive child health services.

Expressed, heat-treated breast milk: Mothers known to be HIV-infected may consider expressing and heat-treating breast milk as a temporary feeding strategy.

For children over six months of age:

All infants should be started on other foods to meet their growing nutritional needs.

- Commercial infant formula milk as long as the conditions to give safe replacement foods are fulfilled;
- Animal milk (boiled for infants under 12 months), as part of a diet providing adequate micronutrient intake;
- Meals, including milk-only feeds, other foods and combination of milk feeds and other foods, should be provided four or five times per day.

Ques. – How expressed breast milk can be given heat treatment at home?

Ans. Heat-treated breastmilk involves heating expressed breastmilk (enough for one or two feeds) in a small pan or in a metal container standing in a pan of water until it comes to a boil. The milk is then left to cool in a clean, covered container before it is fed to the baby by cup.

(Source: facts for life)

Ques. – When should an infant of HIV positive mother be given heat treated breast milk?

Ans. Heat-treated, expressed breast milk may be given in the following circumstances:

- In special circumstances such as when the infant is born with low birth weight (less than 2.5 kg) or is otherwise ill in the neonatal period and unable to breastfeed;

or

- When the mother is unwell and temporarily unable to breastfeed or has a temporary breast health problem such as mastitis (inflammation in the breasts);

or

- To assist mothers to stop breastfeeding;

or

- If antiretroviral drugs are temporarily not available.

Ques. – What should be the feeding practice when the infant is HIV-infected?

Ans. If infants and young children are known to be HIV-infected, mothers should be strongly encouraged to exclusively breastfeed for the first six months of life and continue breastfeeding up to two years or beyond so they can receive the benefits of breastmilk.

Source: Guidelines on Principles and recommendations for infant feeding in the context of HIV and a summary of evidence, 2010. WHO.....

Ques. – What should be the feeding practice in case the mother does not know her HIV status?

Ans. A new mother who does not know her HIV status should exclusively breastfeed her child for the first six months and continue breastfeeding for up to two years and beyond in addition to feeding the child other nutritious foods and drinks.

(Source: Facts for life – UNICEF 2012)