



Breast Feeding

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Objectives

- Define breast feeding(BF) and related terminology**
- Ascertain the composition of breast milk**
- Recognize the main advantages of BF**
- identify the barriers to BF**
- Outline ten steps of successful BF**

One of the most highly effective preventive measures a mother can take to protect the health of her infant is to breastfeed.



- ❑ Every infant and child has the right to good nutrition according to the "Convention on the Rights of the Child".**
- ❑ Infant and young child feeding is a key area to improve child survival and promote healthy growth and development.**
- ❑ The first 2 years of a child's life are particularly important, as optimal nutrition during this period lowers morbidity and mortality, reduces the risk of chronic disease, and fosters better development overall.**

□3 in 5 not breastfed

Globally, 3 in 5 babies are not breastfed in the first hour of life.

□820 000 children could be saved

Over 820 000 children could be saved yearly if all children 0-23 months were optimally breastfed.

□41% of infants aged 0-6 months

Only 41% of infants under 6 months of age are exclusively breastfed.

Breastfeeding and complementary feeding terms and definitions

- ❖ **Exclusive breast feeding** : the infant takes only breast milk and no additional food, water, or other fluids with the exception of medicines and vitamin or mineral drops.
- ❖ **Partial breast feeding or Mixed Feeding** : the infant is given some breast feeds and some artificial feeds, either milk or cereal, or other food or water
- ❖ **Bottle –Feeding** : the infant is feeding from a bottle, regardless of its contents, including expressed breast milk.

❖ **Artificial Feeding** :the infant is given breastmilk substitutes and not breastfeeding at all.

❖ **Breast Feeding on Demand:**

Breast feeding whenever the baby or mother wants, with no restrictions on the length or frequency of feeds.

**On demand, unrestricted breastfeeding
Why?**

- **Earlier passage of meconium**
- **Lower maximal weight loss**
- **Breast-milk flow established sooner**
- **Larger volume of milk intake on day 3**
- **Less incidence of jaundice**

WHO's infant and young child feeding recommendations

- **Initiate breastfeeding within one hour of birth.**
- **Breastfeed exclusively for the first six months of age (180 days).**
- **Thereafter give nutritionally adequate and safe complementary foods to all children.**
- **Continue breastfeeding for up to two years of age or beyond.**

Importance and Promotion of Breast feeding



Initiation of **Breast feeding**
within **1 hour** of birth



Exclusive breast feeding for
6 months

Timely initiation of appropriate
complementary feeding at **6 months**
along with continued **breast feeding** for **2 years**



Support from community towards
breast feeding

Breastmilk is the ideal food for infants. It is safe, clean and contains antibodies which help protect against many common childhood illnesses.

Breastmilk provides all the energy and nutrients that the infant needs for the first months of life, and it continues to provide up to half or more of a child's nutritional needs during the second half of the first year, and up to one third during the second year of life.

Types and Composition of Human Breast Milk

- **Types of Breast Milk:**
 - **Colostrum or Early Milk**
 - **Transitional Milk**
 - **Mature Milk**
- **Colostrum or Early Milk** is produced in the late stage of pregnancy till 4 days after delivery; and is rich in antibodies.
- **Transitional Milk** produced from day 4 – 10 is lower in protein in comparison to Colostrum.

- **Mature milk** is produced from approximately ten days after delivery up until the termination of the breastfeeding.

Mature milk is lower in protein but higher in fat and carbohydrates.

Mature milk contains about 90% water to meet baby's fluid needs.

Immunologic specificity

- **Colostrum = Baby's first vaccination**

Colostrum



Colostrum

Property

- **Antibody-rich**
- **Purgative**
- **Growth factors**
- **Vitamin-A rich**

Importance

- **Protects against infection and allergy**
- **Clears meconium; helps prevent jaundice**

The composition of breast milk changes depending on how long the baby nurses at each session, as well as on the age of the child.



Breast milk it is often described as having two parts, **foremilk and **hind milk**. Foremilk is the milk released at the start of a feeding; hind milk is the milk released at the end.**

Foremilk is thin, watery, and lower in fat, calories, and vitamins A and E than hind milk.

The hind milk providing up to two or three times more fat than the foremilk.



COLOSTRUM



FOREMILK



HINDMILK

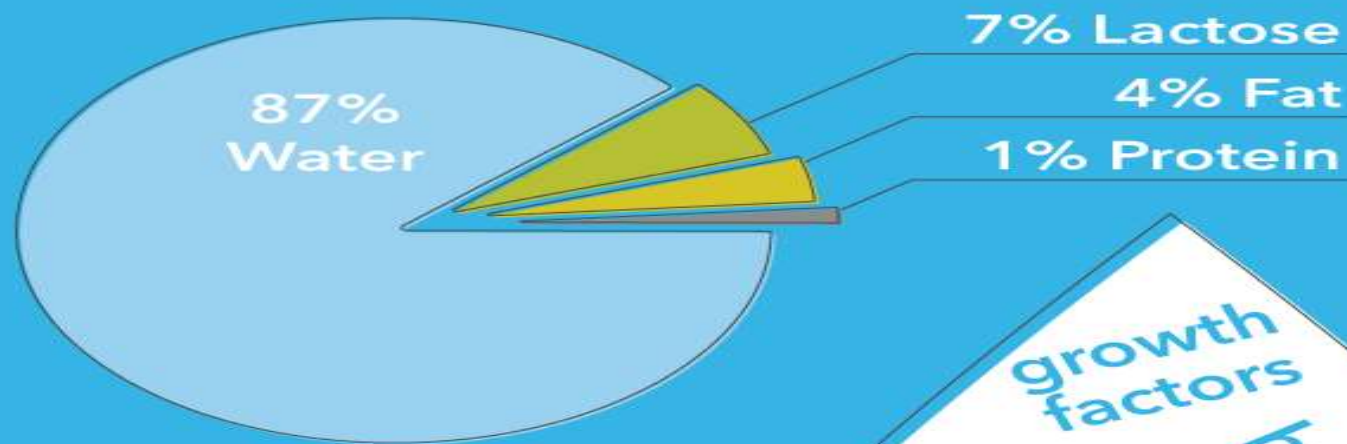
Breast milk is like a biological clock, literally changing by the hour. For instance, breast milk contains low levels of an amino acid called tryptophan (the precursor to the "sleep" hormone melatonin) in the morning and much higher levels at night

Breast Milk Composition

- 😊 **Fat** (4% concentration provides up to 50% of caloric needs, cholesterol levels constant, lipolytic enzymes aid in fat digestion)
- 😊 **Carbohydrates** (lactose = milk sugar predominantly in human milk, 7% concentration provides up to 40% caloric needs, essential for development of CNS, enhances calcium & iron absorption).

Bifidus factor = growth factor present only in human milk required for establishing an acidic environment in the gut to inhibit growth of bacteria, fungi and parasites)

HAVE YOU EVER WONDERED
What's in breast milk?



Lactose and fat provide most of the energy in breast milk



Breast milk changes during a feeding and over time to meet the needs of your growing child

Gut health

growth factors
good bacteria

hormones

Development

proteins

live cells

enzymes

Nutrition

vitamins

antibodies

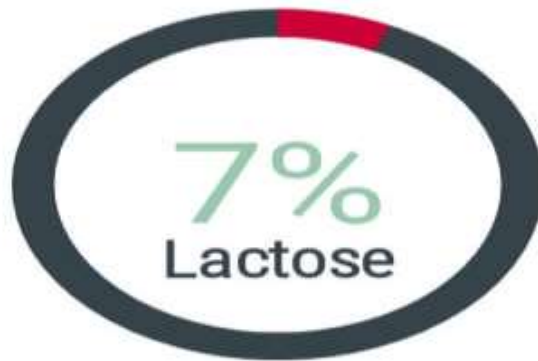
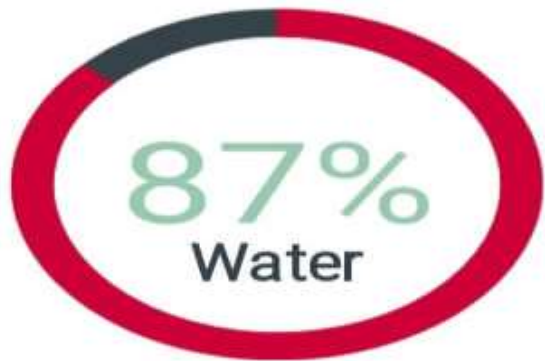
Immunity

minerals

Protein

- **Lactoferrin => Isolates external iron**
- **Secretory IGA => Most important immunoglobulin, breast milk is only source for first 6 weeks**

Nutrient breakdown of breast milk



FAMILY & CO.
NUTRITION

Benefits of breastfeeding



Promotes infant immunity

Nurtures mother-baby bond



Cost-effective

Environment-friendly



Works as a contraceptive

Induces oxytocin production



These benefits include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits

- **Environmental**
 - **Saves resources**
 - **Less waste**
 - **No refrigeration**
 - **No manufacturing**
 - **No bottles, cans**
 - **No trucking**
 - **No handling**



Breastfeeding

No water
No waste
No energy
No pollution
No irrigation
No transport
No packaging

Totally environmentally friendly

www.breastfeeding.asn.au

Photo by Karen Maurer

Australian Breastfeeding Association

- **To Families**

- Less trips to doctors, hospitals**
- Less medical prescriptions**
- Less stress**
- Less illness**
- More bonding**
- Inexpensive**

In low-income communities, the cost of cow's milk or powdered milk, plus bottles, teats, and fuel for boiling water, can consume 25 to 50% of a family's income.

Lansinoh.

11 Benefits of breastfeeding for baby

Get sick less and have a lower risk of allergies.



Have a lower risk of obesity and Types 1 and 2 diabetes.



Have a lower incidence of SIDS (Sudden Infant Death Syndrome).



Have a reduced risk for ear infections (otitis media) and gastroenteritis.

Are on a path to optimal brain development.



Respond better to immunizations against Polio, Tetanus, Diphtheria, and Haemophilus influenza (bacterium that can cause a severe infection).



Have optimal oral development because of their jaw movements and nutrients in breastmilk decrease the risk of tooth decay.

Get nutrients that help strengthen and develop their immature immune system in a way no other substance can.



Are protected against respiratory infections including those caused by rotaviruses.



Are less likely to be hospitalized with pneumonia or bronchiolitis, and have a decreased risk of lower respiratory tract infections.



Have been associated with a slightly enhanced performance on cognitive development tests.

Benefits to Infant

- **There is well documented evidence that skin to skin contact between infant and mother helps to maintain the body temperatures, reduce risk of hypoglycemia, enhance oxytocin release and beneficial nutrition with intake of colostrum**
- **Helps in Gastrointestinal development and function**
- **Helps in development of the immune system**
- **Helps in cognitive development of the infant**
- **Breastfeeding improves IQ, school attendance, and is associated with higher income in adult life.**



- **Infants who are breastfed have reduced risk of infection compared to formula fed infants.**
- **Exclusively breastfed infants have at least 2½ times fewer illness episodes than infants fed breast-milk substitutes.**
- **Lower risk of infections e.g. otitis media 2.4 times, Lower respiratory tract infection 1.7 to 5 times.**

- **Reduced risk of sudden infant death syndrome 2.0 times**
- **Breastfed infants have reduced risk of obesity later in life compared to formula fed infants.**
- **Reduce hospitalization 3 times**

Benefits of Breastfeeding to Mothers

- **Enhance early maternal – infant bond.**
- **Helps involution of the uterus.**
- **Long term breastfeeding helps in loss of the excess weight acquired during pregnancy.**
- **Prolonged Breastfeeding prolongs anovulation.**

Breastfeeding contributes to natural birth spacing, providing 30% more protection against pregnancy than all the organized family planning programs in the developing world.

- Documented long term effect of breastfeeding include reduced risk of breast, ovarian and endometrial cancers.

It is estimated that increased breastfeeding could avert 20 000 maternal deaths each year due to breast cancer.

BENEFITS OF BREASTFEEDING

For Mom



Mothers who are breastfeeding burn extra calories each day, helping them return to their pre-pregnancy weight quicker.



Women who breastfeed have lower rates of developing breast and ovarian cancer.



Reduces the risk of postpartum depression and creates a unique bonding experience for mom and baby.



For Baby

Breast milk is rich in nutrients and the perfect natural food for babies. Breastfed babies are also less likely to become obese.



Antibodies in breast milk help babies fight off viruses and bacteria, while protecting them from various infections.



Children who were breastfed as babies have lower risks of developing ear infections, respiratory infections, allergies, and diabetes.



How Achieving Optimal Breastfeeding

- **Activities, attitudes and procedures during the delivery and post partum period have an impact on breastfeeding**
- **Breastfeeding should be started and fully established before discharge from the hospital**
- **Physicians and health care professionals should observe at least one feeding and ensure this is done properly and breast milk is produced**
- **Lactation specialist should also work with parents that are having difficulty with breast feeding.**
- **Early follow up after leaving the hospital is required.**

Breastfeeding Posture

Bring your baby to your nipple, don't bring your nipple to your baby.

Keep your shoulders relaxed.

A rolled up towel can help raise your baby's head up.

Keep your feet flat on the floor.

Avoid looking down at your baby the whole time.

Sit all the way back in the chair. You can place a pillow behind you for support.

Create a breastfeeding station with everything you need including snacks, water, remotes, phone, nipple cream, pillows, etc.



Signs of Effective Breastfeeding

1-Frequent feedings 8-12 times daily.

2-Intermittent episodes of rhythmic sucking with audible swallows should be heard while the infant is nursing.

3-Infant should have about 6-8 wet diapers in a 24 hour period once breast feeding is established.

4-Infant should have minimum of 3-4 bowel movements every 24 hours.

5-Stools should be about one tablespoon or larger and should be soft and yellow after day 3.

6- Average daily weight gain of 15 -30g.


7-Infant has regained birth weight by day 10 of life.





BREASTFEEDING

VS



FORMULA FEEDING

Most mothers know that breast milk is the more healthier choice then why do a large number chose to formula feed?

Why some mothers choose formula vs. breast milk?

Barriers To Effective Breastfeeding

- **Lack of confidence in mother**
- **Belief that breast milk is not sufficient**
- **Lack of adequate support system**
- **History of previous breast surgery**
- **Breast engorgement, cracked and sore nipples**
- **Retractile nipples**

- **Distressed by physical discomfort of early breastfeeding problems.**
- **Convenience issues**
- **Pressures of employment/school**
- **Worries that breast shape will change**
- **Formula manufacturers manipulate people through their ads**
- **Doctors and nurses need more lactation training**

- **Mothers given very little time to adjust to changes of new life and needs of newborn baby.**
- **Family demands**
- **Non-supportive family/health professionals**
- **Embarrassment**

Reason for Supplementation

There are rare exceptions during which the infant may require other fluids or food in addition to, or in place of, breast milk.

The feeding programme of these babies should be determined by qualified health professionals on an individual basis.



Acceptable medical reasons for supplementation or replacement



Infant conditions:

- ❖ **Infants who cannot be BF but can receive BM(breast milk) include those who are very weak, have sucking difficulties or oral abnormalities or are separated from their mothers.**
- ❖ **Infants who may need other nutrition in addition to BM include very low birth weight or preterm infants, infants at risk of hypoglycemia, or those who are dehydrated or malnourished, when BM alone is not enough.**

- ❖ **Infants with galactosemia should not receive BM or the usual BMS. They will need a galactose free formula.**
- ❖ **Infants with phenylketonuria should receive phenylalanine free formula.**
- ❖ **Hyperbilirubinemia related to poor intake**
- ❖ **Delayed bowel movement or dark stools at day 5**
- ❖ **Delayed milk production**



Maternal conditions:

- BF should stop during therapy if a mother is taking anti-metabolites, radioactive iodine, or some anti-thyroid medications.**
- Some medications may cause drowsiness or other side effects in infants and should be substituted during BF.**
- BF remains the feeding choice for the majority of infants even with tobacco, alcohol and drug use.**
- If the mother is an intravenous drug user BF is not indicated.**

❑ Avoidance of all BF by HIV+ mothers is recommended when replacement feeding is acceptable, feasible, affordable, sustainable and safe.

Otherwise EBF is recommended during the first months, with BF discontinued when conditions are met.

Mixed feeding is not recommended.

❑ BF is not recommended when a mother has a breast abscess, but BM should be expressed and BF restarted once the breast is drained and antibiotics have started. BF can continue on the unaffected breast.

❑ Mothers with herpes lesions on their breasts should stop from BF until active lesions have been resolved.

❑ BF can be continued when mothers have hepatitis B, TB and mastitis, with appropriate treatments undertaken.

Other Options If Breastfeeding is Not Possible

Mother can still use her milk, even if she decides not to breastfeed:

- **Use a breast pump (electric/manual)**
- **Cup or bowl feeding**
- **Spoon feeding**
- **Eyedropper or feeding syringe**
- **Nursing supplementary**
- **Get milk from donation bank???**





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Promotion of breast feeding

WHO and UNICEF launched the Baby-friendly Hospital Initiative (BFHI) to help motivate facilities providing maternity and newborn services worldwide to implement the Ten Steps to Successful Breastfeeding.

WHO actively promotes breastfeeding as the best source of nourishment for infants and young children, and is working to increase the rate of exclusive breastfeeding for the first 6 months up to at least 50% by 2025.

Ten Steps summarize a package of policies and procedures that facilities providing maternity and newborn services should implement to support breastfeeding.

WHO has called upon all facilities providing maternity and newborn services worldwide to implement the **Ten Steps.**

The Ten Steps to Successful Breastfeeding

1-Have a written breastfeeding policy that is routinely communicated to all health care staff.

2-Train all health care staff in the skills necessary to implement this policy.

3-Inform all pregnant women about the benefits and management of Breast feeding .

4-Help mothers initiate breastfeeding within one hour of birth.

5-Show mothers how to breastfeed and how to maintain lactation, even if they are separated from their infants.

6-Give infants no food or drink other than breast-milk, unless medically indicated.

7-Practice rooming in - allow mothers and infants to remain together 24 hours a day.

8-Encourage breastfeeding on demand.

9-Give no pacifiers or artificial nipples to breastfeeding infants.

10-Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from the hospital or birth center.



Any Question ?