

YOUR GUIDE TO SUCCESSFUL BREASTFEEDING



If problem persists, then mother need to ask assistance from Lactation Consultant/
BF Nurse/Counsellor.

Visit our: Lactation Clinic, OPD-WWRC, HMC
1st Floor, Station 3, Exam Rm # 4, Tel No:- 40261158
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Patient and Family Education

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مركز صحة المرأة والأبحاث
Women's Wellness and Research Center

عضو في مؤسسة حمد الطبية
A Member of Hamad Medical Corporation



DEAR MOTHERS, FATHERS AND READERS

Breastfeeding is the best start for both mother and baby. It provides joyful moments of interaction and bonding between mother and baby that enriches their life together. It is a personal experience for the mother feeding her baby by herself. Breastfeeding has several important health benefits for both the mother and the child, as the mother's breast milk is the most complete form of nutrition ever for babies starting from birth. It has no similar alternatives, and it is all the food and drink an infant needs, in quantity and quality, due to its nutritious properties. Breast milk contains all nutrients in the proper quantity, composition and balance necessary to meet all the baby's physical, psychological and mental growth needs from birth to the age of six months.

"Every breastfeeding mother should ensure exclusive breastfeeding, where the baby receives only breast milk (no water, herbal infusions or juices). After the sixth month, the baby's steady growth requires various additional foods and meals. Breastfeeding at this stage is complementary, not substitute to regular meals. Breastfeeding continues to be a beneficial and significant source of nutrition up to the age of two years. The Holy Quran recommends breastfeeding for two years, "Mothers may breastfeed their children two complete years for whoever wishes to complete the nursing [period]." – (Al-Baqara: 233)

As breast milk contains antibodies that provide protection against diseases and help resist inflammation causing germs, breastfed children are less prone than others to common childhood diseases, particularly acute and chronic middle ear infection, respiratory system infection, intestinal system infection, especially diarrhea, gastroenteritis, etc. They are also less likely to suffer allergies, eczema and asthma. Continuing to breastfeed infants during sickness is considered an important recovery factor, as different studies show. Moreover, breastfed children acquire healthy feeding habits as the proportion of lipids in breast milk increases progressively during the breastfeeding period, which gives the baby a feeling of satiation and reduces overfeeding. This is why we find them less likely to develop obesity compared to children who feed on formula milk, where the proportion of lipid is constant.

A mother's confidence in her ability to breastfeed is an important factor in successful breastfeeding, and the lack of this confidence is one of the main factors of frustration and failure of breastfeeding. Other factors include the stress of urban life, spread of formula milk advertisements that often lead mothers to resort to bottle feeding.

Studies have shown that almost half of breastfeeding women need support and encouragement to be able to breastfeed their babies without difficulties, particularly first-time mothers and young mothers (below 18 years of age) when they first attempt to breastfeed immediately after delivery. Accordingly, United Nations organizations, such as the World Health Organization and UNICEF, have adopted a world initiative to encourage breastfeeding and called upon ministries and departments involved in the field of mother and child health worldwide to adopt the initiative under the name “Baby Friendly Hospitals” and to develop and implement breastfeeding policy standards as the most important way to maintain and promote breastfeeding.

The baby friendly initiative aims at training physicians, nurses, administrators, and other medical staff and urges them to support the breastfeeding policy, develop skills, and provide the necessary requirements for success. It also calls for the encouragement of pregnant and lactating women to practice exclusive breastfeeding in particular, and giving them moral and practical support through the provision of information about the importance of breastfeeding and training them in the necessary skills for successful breastfeeding. Furthermore, the initiative implores employers to shoulder part of the responsibility to encourage and facilitate breastfeeding by granting a sufficient maternity leave for working women, designating breastfeeding time on the job, and provide nurseries at the workplace whenever possible. The Ministry of Public Health in Qatar, Hamad Medical Corporation / WWRC have all adopted this and are now implementing this initiative.

DEAR READER,

In view of the foregoing and recognizing our responsibility, we find it imperative to compile this educational booklet, “Your Guide to Successful Breastfeeding”. It aims to raise health awareness as the most important way to maintain and promote breastfeeding in particular and health in general, and to disseminate the necessary and accurate health information about the importance of breastfeeding among mothers, fathers, and all citizens, especially those who are keen on healthy living. We also have taken into consideration the needs of medical staff involved in the promotion of mother and child health, so that this booklet may become an easy and accessible reference in all matters related to breastfeeding. We hope that this booklet will be beneficial, and widely circulated to achieve the desired goal to the benefit of our children and families.



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WHY BREASTFEEDING IS IMPORTANT?

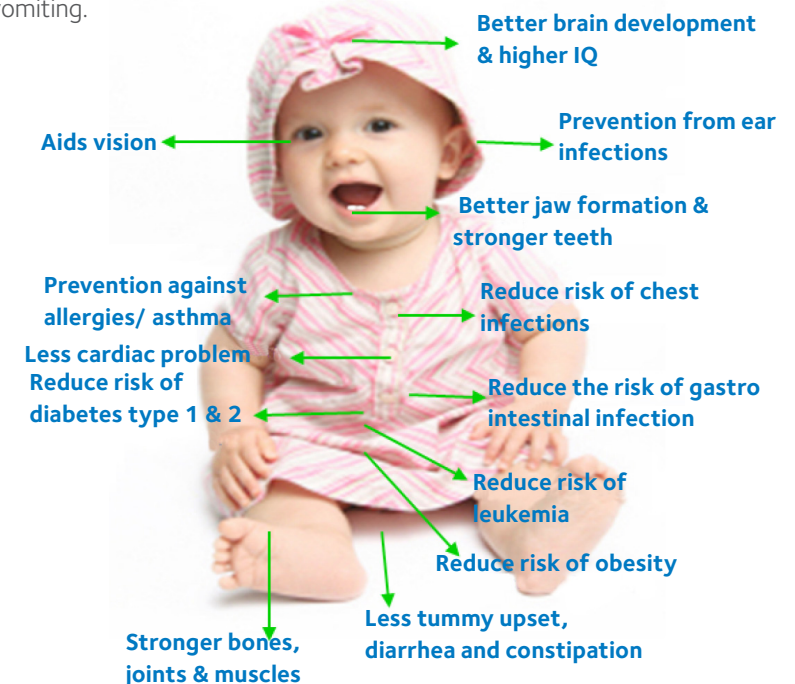
Breastfeeding has many properties and benefits that positively influence the physical and mental health of both mother, baby, as well as the family, and the society economically, socially and environmentally.

BENEFITS OF BREASTFEEDING FOR THE BABY

Mother's breast milk is always the safest and best food for the baby. It is a living organism that is constantly changing in composition depending on the baby's needs day by day and meal by meal. It helps the baby's natural growth and proper psychological and mental development. It satisfies all the baby's nutritional needs, in quantity and quality, over the first six months during which they need no supplementary foods. It contains all the essential nutrients that babies need to grow in optimal proportions. The baby's steady growth at the beginning of the sixth month of their life makes them need various supplementary foods in addition to breast milk, up to the age of two years.

- Contains all nutrients from birth to the age of six months in the needed quantity and quality.
- Contains sufficient amount of water that meet the needs of the baby, regardless of the ambient temperature.
- Compared to other kind of milk, it contains more lactose needed for the baby's body.
- Contains sufficient vitamins, hence the baby needs no vitamin supplements.
- Contains iron in sufficient and proper quantities to protect the infant from anemia.
- Contains sufficient mineral salts, which relieves the kidneys.
- Contains a lot of white blood cells and antibodies for many kinds of infections, and thus protects the baby from the common childhood diseases that may be serious or fatal, such as digestive and respiratory system infections, middle ear infections, severe rash, etc.
- Easy to digest and reduces colic and constipation thanks to the enzymes it contains.
- Creates intimate and emotional contact between mother and baby.
- Contains a special soothing hormone cause relaxation & sleeping.

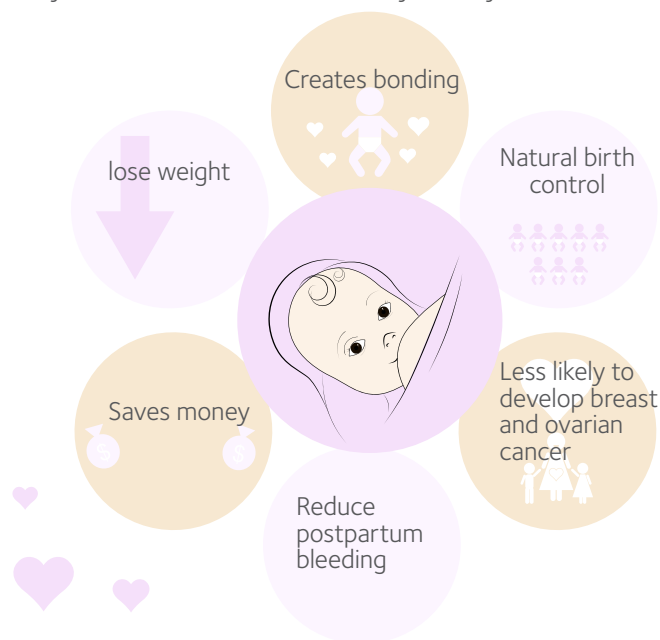
- Reduces the likelihood of anal ulcers and implications of ulcerative colitis.
- Gives the baby a feeling of satiation and reduces the risk of overfeeding due to the progressive increase in the proportion of lipids over the breastfeeding period. Breastfed children are less likely to develop obesity than those who feed on bottle formula milk.
- Some Canadian studies indicate that breastfeeding may reduce the likelihood of chronic diseases, such as high cholesterol, diabetes in young adults.
- During breastfeeding, the baby's heartbeat, respiration rate, and body temperature are different from during bottle-feeding, which enhances blood circulation.
- It is fresh, pure, bacteria-free & readily available always in the right amount and temperature whether at home or away from home.
- It never spoils in the mother's breasts.
- It is scientifically proved that breast milk promote good development of the brain and nervous system. A British study shows that, preterm underweight newborns who were tube-fed breast milk are more intelligent.
- Helps strengthen the vision of the baby.
- Helps strengthen baby's facial muscles and jawbones, which makes them less prone to vomiting.



BENEFITS OF BREASTFEEDING FOR THE MOTHER

There are many benefits for a breastfeeding mother, especially if she is breastfeeding naturally and exclusively, including:

- Breastfeeding helps reduce postpartum bleeding as a result of uterus contractions, under the influence of oxytocin hormone secreted during breastfeeding. It's also shown to reduce anemia.
- Helps the uterus return to its normal size.
- Helps the mother lose the excessive weight gained during pregnancy and quickly regain her figure.
- Breastfeeding mothers are less likely to develop breast and ovarian cancer and bone fracture at a later age.
- Breastfeeding creates bonding between the mother and her baby and gives the mother a feeling of satisfaction and joy.
- Breastfeeding is a natural birth control method for the first few months after delivery (3-6 months), if mother's cycle will not return after delivery, if she breastfed exclusively (during the daytime and night time).
- Reduce the risk of obesity, heart disease, diabetes and bone fracture
- Saves money and time, as breast milk is always readily available



RISKS AND POTENTIAL ISSUES WITH FORMULA MILK FEEDING

- Formula milk is not a substitute for breast milk, as it does not satisfy all the baby's nutrition needs in quantity and quality.
- Formula milk does not contain antibodies that protect the baby from common illnesses and infections.
- Higher risk of diarrhea, malnutrition, and respiratory system infections with infants feeding on formula milk.
- It is hard to control the proportion of water in formula milk, as mothers may miscalculate the proper amount of water, which affects the concentration of milk and it may not meet the nutritional needs.
- Formula milk may cause colic due to the dysfunction of the baby's underdeveloped intestines.
- Formula milk spoils quickly if not used immediately after preparation, especially in hot weather.
- It is prone to contamination during preparation.
- It causes overweight and obesity in infants.
- Increase the risk of allergic diseases.
- Increase the risk of chronic diseases such as acute leukemia, diabetes and heart diseases in young adults.

Risks with Bottle-feeding

The use of feeding bottles, pacifiers, and artificial teats is harmful to breastfeeding, as they may cause the following:

- Weaken the baby's jawbones and sucking strength.
- Nipple confusion to the baby which may weaken the infant's sucking to the breast and undermines continuation of breastfeeding. The baby may even reject breastfeeding.
- Deformation of the jawbone and teeth.
- Reduce milk production.

There are also certain risks that may materialize if control measures are not taken, such as:

- Overweight and obesity.
- Early pregnancy.
- Breast engorgement and inflammation.
- Mother fails to regain her figure early after delivery.
- Weak bonding between mother and infant.

ANATOMY OF THE BREAST

Breasts in women are the organ that secretes milk after delivery. In addition to this physiological function, breasts play an essential role in highlighting a woman's femininity from an aesthetic and sexual perspective.

The breast is a glandular hemispherical mass located under the frontal wall of the chest skin and consists mainly of the nipple, areola and the glandular mass. The breast is basically filled with fatty tissues that give it the shape we know. Within these fatty tissues there is a network of ducts and alveoli (milk secreting cells) along with a network of small arteries and veins responsible for nourishing the breast. Adjacent to the blood tissues there is a nervous sensory network and lymphatic vessels responsible for the disposal of waste and milk that is not discharged through the milk ducts.

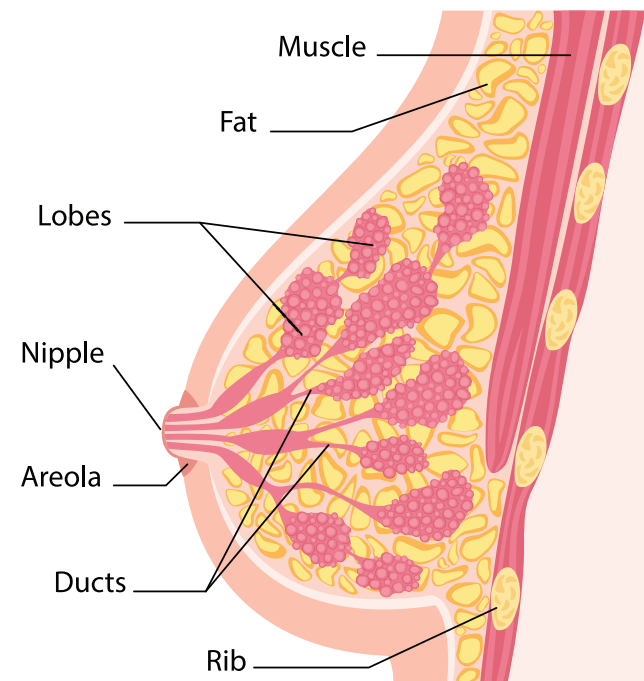
NIPPLE

The nipple is a conical projection in the center of the breast. It has an average height of 1cm. The openings of milk ducts can be seen on its top surface. Nipples are generally dark brown but vary among women. The nipple elongates during pregnancy and become inverted. During pregnancy, it becomes bigger and darker due to the effect of placental hormones.

AREOLA

The nipple is surrounded by a dark brown circular areola with an average diameter of 4cms. The areola is covered with pigmented skin covering a number of glands secreting an oily fluid that helps lubrication. During pregnancy, the pigments develop enlarge and the areola's color changes to very dark brown.

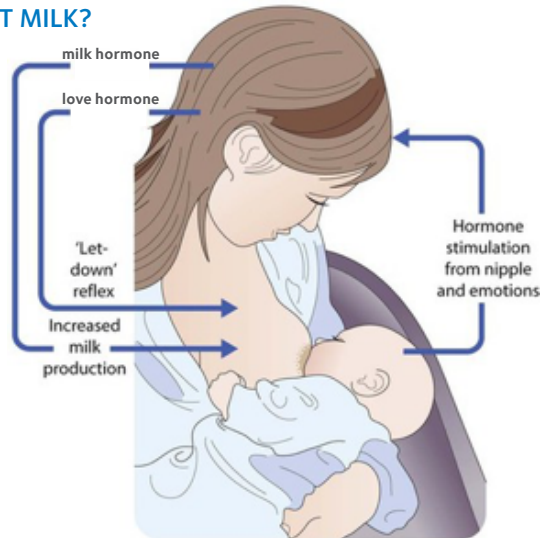
GLANDULAR TISSUE



The breast is filled with heavy fatty tissue that has millions of glandular cells responsible for milk production. They are grouped into many lobes ranging between 10 and 25. The smallest secreting glandular unit in the breast is the end branching of the milk producing ducts. Ducts from each lobe combine to form the main milk duct, which are open to the nipple. The number of ducts is equal to the number of lobes (10–25). These tiny ducts have closed ends surrounded by milk secreting cells, in addition to many muscular cells, which contract with the effect of the estrogen hormone to push milk secretions into the branching ducts. Due to the prolactin hormone secreted by the pituitary gland at the base of the brain, the milk secreting cells are stimulated.

HOW DOES THE BABY GET BREAST MILK?

In the sixth week of pregnancy, the placenta secretes hormones that help milk secreting cells in the mother's breast to grow and form effective glandular tissue upon delivery. During the second term of pregnancy, the pituitary gland at the base of the brain secretes the prolactin (Milk Hormone) responsible for milk secretion. After delivery, the secretion of this hormone increases,



especially at night, and flows abundantly when the infant sucks on the breast. Hence, sucking stimulates the mother's body by sending sensory signals from the nipple and areola to the brain to secrete the prolactin hormone, which activates milk secretion.

There is another hormone called Love Hormone that ensures the flow of milk into the infant's mouth, as it stimulates the soft muscles surrounding the milk cells in the breast to contract and squeeze milk from milk pockets to flow through milk ducts to the baby's mouth. This process is called the milk ejection (let-down) reflex, which the mother feels in the form of tingling in the breast as the milk flows. This milk ejection reflex is affected by the condition of the mother. It weakens with exhaustion, anxiety, pain, smoking, and thus milk production lessens. Prolactin secretion increases when the mother thinks about the baby or hears their voice, or sees them.

Milk secretion also becomes less if a big amount of milk remains in the breast due to the presence of an inhibitor responsible for preventing milk cells from secreting more milk. When breastfeeding or suction resumes the inhibitor is deactivated and milk flow is resumed. This is why if a mother stops breastfeeding from either breast, milk secretion stops in that breast and vice versa. Hence, if a breast fills up, a breastfeeding mother must express the milk by breastfeeding or suction before and after the completion of breastfeeding to ensure the continuity of milk secretion.

BASIC TIPS AND USEFUL INFORMATION

Mothers must be fully aware and follow the below advice to enable them to breastfeed successfully and overcome any breastfeeding problems.

- Nurse/Midwife will encourage the mother to put her baby on her chest skin to skin (without cloth) immediately after delivery for at least one hour, this will help bonding, breathing, heartbeat and regulation of baby's body temperature, stimulate breast milk production. She should start breastfeeding even if her breasts are empty.



- If the baby is separated from the mother for illness (NICU), skin to skin contact should be started immediately when the baby is stable as shown in the picture.



WWRC staff are trained to assist mother to breastfeed successfully at all wards and units. Ask for help during your stay at hospital and after discharge visit Lactation Clinic.



- The mother should breastfeed her baby the first milk – after the delivery – produced during the first 3 days. It is very essential for the baby's health and comes in sufficient quantities. The very first yellow breast milk is the perfect food for all babies. A few drops are enough for baby's small stomach, as the size of a baby's stomach increases by day: In day 1 = 1 to 1½ teaspoon, in day 3 = 4 teaspoons, in day 10 = 12 teaspoons. It has purifying properties to help discharge the dark sticky stools and protect the gut.
- No milk, water or herbs other than breast milk will be given during the first six months of the baby's life, unless it is instructed by the physician.
- A mother needs to breastfeed whenever the baby wants and at least 8-12 times a day. Frequent breastfeeding is important for increasing milk production. She should breastfeed more at night as the secretion of the hormone responsible for milk production increases at night.

- A mother should empty the breast by the baby's sucking during each feeding. If the baby is not able to suck out all the milk, she should express the remaining breast milk, manually or by breast pump. This will help milk production and prevent breast problems e.g. Breast engorgement, pain etc.
- Mothers are not to stop a breastfeeding if she feels breast pain. The more often a baby sucks, more milk will be produced.
- Mothers to change her baby position during each breastfeed, as pressure on the same part of the breast may cause pain.
- The baby to stay with the mother in the same room 24 hours a day. This will help the mother to observe signs that the baby is ready to breastfeed (signs of early hunger).



- Evidence shows that recognizing and responding to early feeding cues/ signs will help the mother to know when her baby is ready to feed and successfully breastfeed. The mother should try to catch her baby's feeding signs early in the cycle – and begin breastfeeding to avoid crying. Crying is a sign of severe hunger that may be difficult for the mother to settle the baby to attach well to the breast, have a good latch and take enough milk.

Early signs— "I feel hungry"

- Baby stirring
- Turning head and seeking / attaching to breast
- Smacking or licking lips
- Opening and closing mouth
- Sucking on lips, tongue, hands, fingers, toes, toys, or clothing

Mid or active signs — "I'm really hungry"

- Hitting you on the arm or chest repeatedly
- Fidgeting or squirming around a lot
- Baby stretching, increasing physical movement and hand to mouth
- Rooting around on the chest of whoever is carrying him
- Trying to position for nursing, either by lying back or pulling on your clothes
- Fussing or breathing fast

Late signs – "Calm me, and then feed me" (calm baby before feeding)

- Baby crying, agitated body movements, color turning red
- Moving head frantically from side to side

Early Signs



Mouth opening



Turning head
Seeking/rooting

Mid or Active Signs



Increasing
physical movement



Hand to mouth

Late Signs



Agitated body
movements



Colour turning red

- Shoulder massage can help mothers relax and enjoy breastfeeding by releasing the hormone which supports relaxation and bonding (Love hormone).



- The mother should not use a bottle to feed her baby and must never use the pacifier, as this causes nipple confusion for the baby and may lead to complete rejection of breastfeeding, which may cause illnesses.



- A breastfeeding mother must eat a fresh variety of foods with high nutritious value. She must have at least 500 additional calories a day.
- The mother must take large quantities of liquids before and during breastfeeding.
- The mother should have physical and mental rest before and during breastfeeding. This is essential for the continuity and success of breastfeeding. She can seek help from a lactation physician or nurse at WWRC once she faces difficulties or problems in breastfeeding.
- Supplementary foods must be gradually added to the baby's diet in the sixth month. The baby can have the regular family food at the age of one year.



PROPER POSITIONS AND BABY LATCHING FOR SUCCESSFUL BREASTFEEDING

Proper position for the baby during breastfeeding is the key to successful and continued breastfeeding. Every breastfeeding mother should ensure the following conditions:

- Mother can breastfeed whether she is sitting, lying or standing.
- Mother needs to learn how to put the baby on the breast, at the right position for the baby to latch well.
- Breastfeeding is successful while the mother and the baby are in a comfortable and relaxed position. Relaxation helps milk production and noise may cause milk depletion.
- The mother needs to breastfeed before the baby starts crying and before breasts are too full, as it is difficult for the baby to properly latch well when the breast is too full.
- The mother may start breastfeeding by touching the baby's lips with her nipple and wait for the baby to open his mouth widely. She should not push in the nipple by force if the baby does not like that.
- Mother need to learn the signs of proper and good latching of the baby from her breast. Improper breastfeeding position and latching prevents the completion of successfully breastfeeding.

VARIOUS PROPER BREASTFEEDING POSITIONS & LATCHING.



FOOTBALL HOLD



CRADLE HOLD



CROSS CRADLE HOLD



SIDE LYING POSITION



FOOTBALL HOLD WITH TWINS

SIGNS OF A GOOD BREASTFEEDING POSITION

- Mother embraces her baby by placing her hand behind his back and shoulders, supporting his head with her wrist and forearm.
- The baby's head, back and pelvis should be aligned and the head slightly raised from the mother's elbow.
- The baby's entire body should turn toward the mother's chest in a way that her body is then facing and in contact with her mother's body (tummy to tummy).
- The baby's chest is directly under the base of the mother's breast. The face and nose should be close to the breast and the chin touching the dark brown part of the breast.
- The mother's shoulders and arms are in a natural and comfortable position.



SIGNS OF BABY GOOD LATCHING FROM THE BREAST



STEPS OF BABY GOOD LATCHING FROM THE BREAST



Step 1. Support and narrow your breast with one hand using a "C hold." Your thumb will be on the outer side of your breast. Your fingers will be on the inner side.



Step 2. Touch your baby's lower lip with your nipple to get your baby to open his or her mouth. Wait until your baby's mouth widely opens.



Step 3. Bring the baby quickly to your breast - not your breast to the baby. Guide your breast into his or her mouth.



Step 4. The nipple and a large part of the darker area around the nipple (areola) should be in the baby's mouth. The baby's lips should be flared out, not folded in. Baby's chin should touch the lower areola.



Steps 5. To remove your baby from your breast, put one finger in the corner of his or her mouth. Push your finger between your baby's gums to gently break the seal. If you do not break the tight seal before you remove your baby, your nipples can become sore, cracked, or bruised.

Poor latching:

If the baby is not well attached to his mother's breast and is not able to have a good breast inside his mouth, sucking only the nipple, this is called poor latching. It will result in the baby not having enough milk to suck, being frustrated, crying, irritable and refusing to breastfeed.

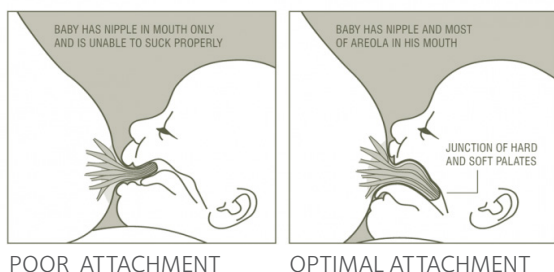
Effects of poor latching

Poor latching will affect the success of continued breastfeeding. This may cause breastfeeding difficulties such as painful nipple(s), sore/nipple damage or inflammation. If the mother receives the information on correct positioning and latching, these breastfeeding difficulties due to poor latching will disappear.

Causes of poor latching

Baby's poor latching may be due to the following causes:

- Mother's lack breastfeeding experience, especially mothers with their first child, or if the mother hired a wet nurse in previous childbirths.
- Use of a feeding bottle immediately after delivery and before the baby learned how to breastfeed during the first days will lead to nipple confusion and poor latching.
- Giving the baby drink other than breast milk, such as formula milk, water, herbal infusions, etc.
- If the baby is underweight, premature or has congenital deformities in the jaw, this may cause breastfeeding difficulties.



- If the mother delays the start of breastfeeding immediately after delivery.
- Inverted nipples that do not protrude when pressing the areole with two fingers, as it will be hard for the baby to latch to such nipple.
- If no support is given to mother by health staff, husband, other family members immediately after labor.

BREAST PROBLEMS RELATED TO BREASTFEEDING

Sometimes breastfeeding may be accompanied with some difficulties and problems such as oversupply, engorgement, nipple damage, breast inflammation, infection, etc. To avoid these difficulties the previously mentioned rules and basics of successful breastfeeding should be followed. The common difficulties are mentioned below:-

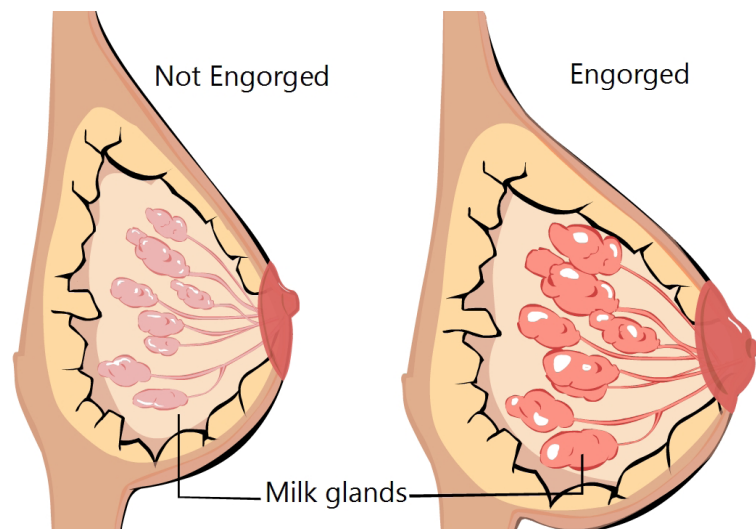
BREASTMILK OVERSUPPLY

Either or both breasts may become too full with milk that the baby finds it difficult to breastfeed. This may happen as a result of the following factors:

- If the baby is not breastfed immediately after delivery for up to 24 hours, breasts often become overfull in the third or fourth day after delivery due to the increase in the production of milk.
- When breastfeeding is scheduled at wide intervals of 4 hours or more.
- If breastfeeding is completed in a short time and the breast is still full of milk.
- If milk is not expressed, the breast will become swollen and little painful, which causes minor difficulty in breastfeeding.
- When the breasts are so full that the nipple sinks into the areola, the mother has to express some milk before putting the baby to the breast. She can start with hand massaging the breast to make it soft and then express the milk by following the steps shown in the figure mention in the next pages.

BREAST ENGORGEMENT

Engorgement happens when the breast is overfull and milk is not removed for a long time. The breast becomes swollen, red, painful and shiny, this may be accompanied with a slight rise in temperature.



HOW TO PREVENT OVERFILLING OR ENGORGEMENT?

In both cases, milk must be removed by breastfeeding, suction, by hand or using a pump following these steps.

- Take a warm shower and relax before breastfeeding. Place warm pads for 10 minutes on the affected area of the breast.
- Express a few drops of milk before a breastfeed.
- Ensure that the baby's position and latching are correct. It may be useful to use ice pads between feeds.
- Breastfeed the baby from both breasts in every feed. Feeding should start from the more full or engorged breast, as the babies suck more actively when they are hungry.
- Remove or express any remaining milk from the breast after each feed by hand or by using a breast pump. This helps the baby get a better latch.
- Wear a comfortable loose bra/ nursing bra.

HOW TO EXPRESS MILK BY HAND?

Nursing mothers should adhere to the hygiene rules and follow these steps:-

- Wash your hands with water and soap before and after expressing milk.
- Apply warm pads to the breast or take a warm shower before expressing milk.
- Drink water or juice while expressing milk to maintain body hydration.
- Massage the breast in circular motion toward the nipple, as shown in the figure below.
- Use two fingers to squeeze the areola around the nipple, and not the nipple itself.
- Squeeze breast inward toward your chest wall to express milk. Then leave the two fingers in this position until all the milk is expressed
- Repeat the process in different locations around the areola and nipple to cover the entire breast.
- For milk flow into the sterilized container the mother should lean forward when expressing milk



Different milk expression devices



HOW TO STORE BREAST MILK

- Milk can be stored at room temperature (25 to 27°C / 77 to 79°F) for 4-6 hours.
- Milk can be stored in the fridge chill compartment (1 to 4°C / 35 to 40°F) for 24-48 hours.
- Milk can be stored in a freezer (-18 to -20°C / 0-4°F) for 3-6 months.
- It is preferable to express milk feed by feed when necessary.
- Milk for each feed should be placed in a separate sterile bottle or glass Bottles should be closed firmly and marked with the date of collection. Older milk should be use first.
- When storing milk in the freezer, bottles should not be completely full to allow for milk expansion.
- Before use, cold or frozen milk should be left at room temperature to warm. It may also be placed in warm water. Cold or frozen milk should never be warmed up by open flame, microwave, or oven.
- Once warmed up or partially used, milk should not be re-refrigerated.



NIPPLE DAMAGE

Nipples may become damaged and painful to breastfeed, normally due to the following reasons:-

- Incorrect latching.
- If breasts are too full or engorged that the baby cannot take the nipple and a big part of the areola below the nipple in their mouth.
- If a mother forcefully removes the breast while the infant is still latching, especially if she does so repeatedly.

HOW TO PREVENT NIPPLE DAMAGE?

In order to avoid nipple damage, a breastfeeding mother must follow these tips:

- Have rest for 15 minutes before feeding, as this facilitates the flow of milk, while tension impedes the flow.
- Rinse hands, breasts and nipple with water before and after breastfeeding and dry. Avoid excessive rinsing and do not use soap or alcohol, as they



remove skin natural oils and disturb pH, which makes the skin less soft and more prone to fissures.

- Aerate the nipple to dry whenever possible.
- Rub nipples with a little breast milk to protect against dryness, as milk contains skin protection ingredients.
- Start feeding the baby before the baby become hungry so that the baby will not snatch the nipple.
- Ensure that the baby positioning and latching is correct.
- Start feeding from the less painful breast.
- Do not press your finger on milk at the brown area, as this may obstruct the flow of milk in to the nipple.
- Vary your position during breastfeeds.
- Do not take out the nipple forcefully while the baby is still latching, as this may injure the nipple. Insert your finger in the corner of the infant's mouth to create some void that helps pull out the nipple, as shown in the figure.
- Avoid wearing skin-irritating clothes.
- Wear a comfortable size bra all day long.
- Use breast pads frequently to avoid milk leakage.
- You may apply analgesic creams or vitamin E, but avoid products containing petroleum derivatives and petroleum jelly (Vaseline).



INFLAMMATION OF THE NIPPLE

It is hard to differentiate between nipple damage and nipple inflammation because if damages goes untreated for a long time, the risk of microbe infiltration causing inflammation of the nipple, and possibly breast abscess, is higher specially if medical treatment is not administered immediately.

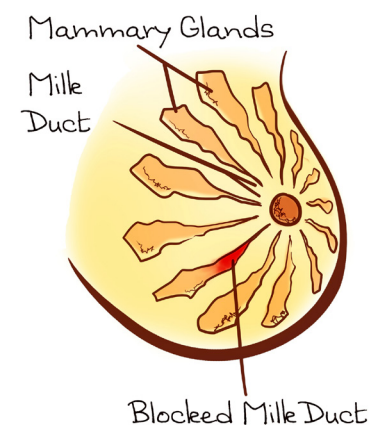
THRUSH (FUNGAL INFECTION)

This kind of infection happens when the nipple is fissured and catches this will cause fungal infection deep and continued pain during breastfeeding accompanied by nipple itchiness and soreness. The nipple and the inside may show white spots. It may also be accompanied by nappy rash. Personal hygiene of the mother and baby should be maintained, particularly in affected areas. Anti-fungal medicines should be taken according to the physician's prescription.



BLOCKED MILK DUCTS

This happens due to the clumping together of particles in the milk inside the milk duct, which leads to blockage. This may be accompanied with slight fever and other symptoms similar to those of the flu.



TREATMENT METHODS

- Check the breast and remove dry milk around the nipple with a sanitized pad soaked in warm or cold water.
- Start feeding from the unaffected breast first and make sure that the breasts are completely “emptied” by breastfeeding if possible.
- Vary the baby position when breastfeeding to distribute pressure to different points.
- Continue to breastfeed and ensure correct positioning and latching. Avoiding breastfeeding increases engorgement and leads to duct blockage and abscess.
- Remove any remaining milk by hand expressing or pump. In doing so, try to squeeze the breast away from the affected duct.
- Do not put pressure on the breast and make sure that the bra is made of cotton and not tight. Avoid wearing skin-irritating fabrics.

MASTITIS AND BREAST ABSCESS

These are the most serious complications of incorrect breastfeeding occur between the tenth and eighteenth day after delivery as a result of prolonged engorgement and blocked ducts and infiltration of germs inside the milk ducts that may be accompanied by damaged and sore nipple.

They affect part of the breast or both. First time breastfeeding mothers are often prone to these complications. 7%-10% of mothers are affected by mastitis and breast abscess.



FACTORS LEAD TO MASTITIS

- Breast engorgement as a result of failure to remove the remaining milk after each feed, especially if the nipples are fissured.
- Blocked milk ducts.
- Stress, exhaustion and insufficient nutrition of the mother that may weaken the immunity system.
- Infection of the milk ducts.

SYMPTOMS OF MASTITIS

- General debility.
- Swollen, redness, and high temperature of the affected part of the breast.
- High body temperature of the nursing mother (38 – 41.5°C). Constant breast pain when breastfeeding and possibly twinkling in the affected breast.

TREATMENT OF MASTITIS

You must consult with a physician without delay, as immediate medical treatment is necessary to heal mastitis. Treatment includes:

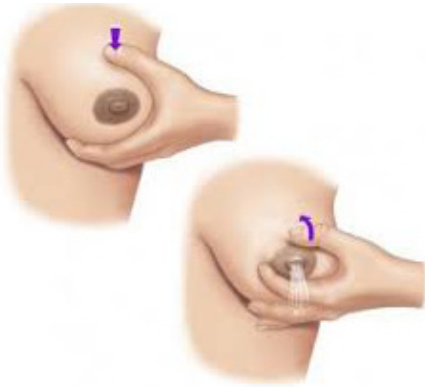
- Complete bed rest.
- Pain killers and antibiotics as prescribed by the physician.
- Consumption of more fluids.
- Application of ice pads.
- Continued breastfeeding first from the unaffected breast and expressing any remaining milk after feeds. Milk may be expressed while the mother is lying down in a warm bathtub. It is advisable not to use power milk pumps. The delay of mastitis treatment may lead to breast infection and abscess.

TREATMENT OF BREAST ABSCESS

- In case of breast abscess, mother must seek a physician advice immediately, as treatment may requires surgery under anesthesia.
- Stop feeding from the affected breast.
- To express milk regularly by hand or milk pumps, preferably not to use electrical ones.
- To continue to feed from the good breast until recovery.
- Mothers should know that breast problems related to breastfeeding will not necessary recur with subsequent deliveries. They should not let this weaken their confidence and their decision to breastfeeding their future babies.

WORKING MOTHERS AND BREASTFEEDING

Working and studying mothers can exclusively breastfeed their babies through expressing their breast milk and storing it in a refrigerator or freezer to be given to their babies by the alternative nursing person during their absence. The hygiene guidelines and rules must be followed by both of them. Working mothers should know and follow the steps on “How to express milk, how to preserve breast milk, how to use different breast milk pumps” if she so desires. These procedures have already been mentioned in previous pages.



HOW TO FEED THE BABY WITH THE FEEDING DEVICES

After milk expression, the mother should not use the bottle for feeding her baby.

Mothers are advised to use a feeding cup as described below:

- Place the baby on her lap in an upright or semi-upright position.
- Draw the feeding cup to the baby lips.
- Tilt the cup to allow the milk to reach the baby lips.
- Avoid pouring the milk into the infant's mouth. Just allow him to suck it.
- Measure the amount of milk taken by the baby in 24 hours (not every feed).
- Newborn babies with low weight can take milk by licking, while full term and full weight baby can suck the milk with some spilling.



COMMON HEALTH PROBLEMS RELATED TO BREASTFEEDING

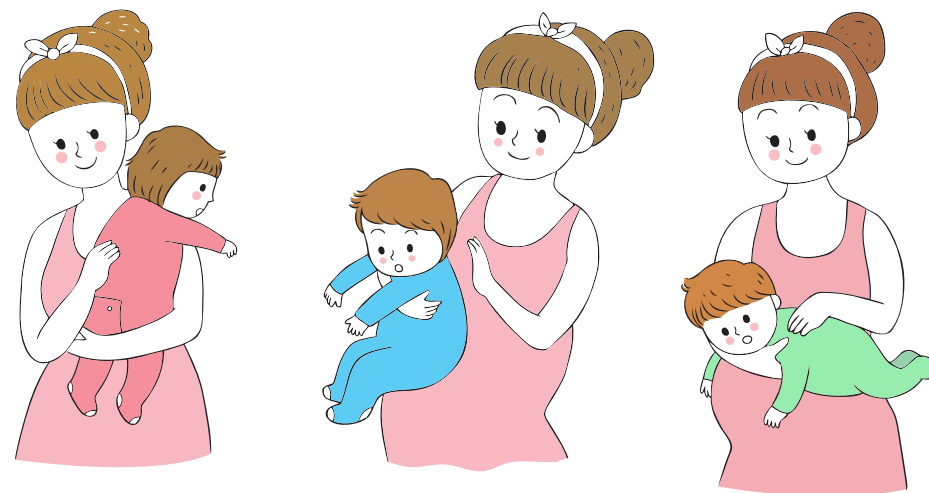
Breastfeeding may cause minor problems for babies such as colic, spitting up or vomiting after feeds, constipation etc..

COLIC:

- The word "colic" is used to describe long periods of crying punctuated by moments where the baby seems happy and comfortable. Crying is often loud with the infant drawing up the knees and clenching the fists. Movements may be rapid. Colic happens any time of the day, but most often at night.
- Colic is normal in babies, as it happens due to the immaturity of the digestive system of newborns.
- Colic often results from the retaining of excessive air inside the baby's intestine, or mother's tension or allergy to certain foods.
- Colic happens when the mother takes certain foods, such as cow milk, spicy food, chocolate, caffeine, onion, banana, grapes, etc. this is why mothers needs to note and avoid foods that cause colic to the baby.
- Bottle-feeding may cause colic, as formula milk contains animal fats or palm oil in particular.
- The baby may cry for many other reasons, such as hunger, fatigue, and sickness. Parents must recognize the different kinds of crying as long as they can and in case of uncertainty, they may consult a physician.

TIPS FOR TREATMENT OF COLIC

- While breastfeeding, it is important that the mother need to give her baby plenty of time to pass out wind that causes colic and to use those various methods to help in passing wind mentioned below.
- To hold the baby, place the baby face down on her thighs or hold him to her shoulder while supporting the baby head with your hand, while resting on your lap, and tap his back. She can also hold him close to her body as a kangaroo does. This is called the kangaroo position. She may try these positions during bouts of crying as well.



- To give the baby warm baths and massage his body. This will help him relax and get rid of colic.



SPITTING UP OR VOMITING AFTER FEEDS

Babies often spit up some milk or vomit shortly after feeds. He/she may cry or feel irritated after feeds. Most often, this results from swallowing small amounts of air into the baby's stomach during feeds. This is common and mother should not be worried. If vomiting is accompanied with other symptoms, it can be a reason to consult a physician without delay, namely:

- If the baby vomits several times at short intervals (e.g. every two hours).
- If vomiting is associated with high temperature, diarrhea or rash.
- If baby refused breastfeeding.
- If a mother is too worried about her baby.

Tips for Treatment of Spitting up or Vomiting

- Feeding the baby for short periods helps his stomach to accommodate the amount of milk better.
- Help the baby release out air by burping every few minutes during a feed instead of waiting until the end of a breastfeed.
- Change the baby position during breastfeeding. It is preferable to breastfeed while the baby is in a more upright position and close to the mother's body. This is called the kangaroo position because it is similar to the way the kangaroo holds its offspring; this will help the food to settle in his stomach.
- Avoid bottle-feeding or adding formula milk.



CONSTIPATION

- The stool of a breastfed baby is usually soft, massed and has a mustard yellow color, with small granular pieces.
- If the baby is passing stool in the form of hard waste at wide intervals, this is called constipation.
- Constipation often occurs when formula milk or additional foods are introduced to the infant's diet.
- If constipated, the baby will feel pain, blush and cry while discharging stools. Constipation is normal, but when it is accompanied with the bloody stool or when the color of the stool changes, or when the mother is too worried, a physician must be consulted without delay.

Tips for treatment of constipation

- Breastfeed more often this will ensure that the baby is receiving a large quantity of liquids already contained in breast milk. Avoid offering formula milk, that which contains animal fats or palm oil.
- Give the baby laxatives, herbal infusions, or medicines only as per instruction of a physician.

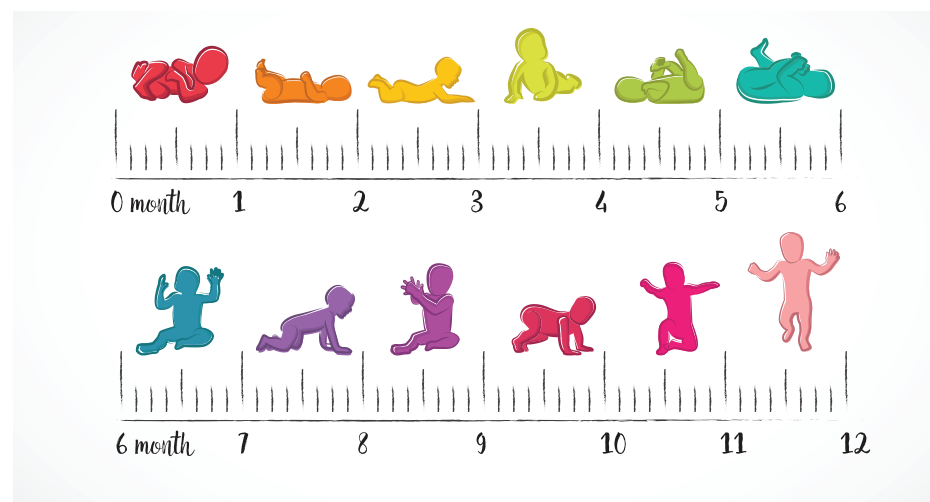
WEANING

Supplementary feeding of babies

- Weaning is the addition of supplementary semi-solid and solid foods to the child's diet.
- Weaning starts gradually at the beginning of the sixth month until the child gets used to the new foods. These foods should be complementary and not substitute to breast milk.
- Weaning continues up to the end of the twelfth month, when the child can eat the family's regular food.
- It is necessary to continue breastfeeding throughout the weaning period until the child turns two years old.

CHILD GROWTH AND DEVELOPMENT

- Mother's breast milk helps the infant's natural growth and proper psychological and mental development.
- Contains all the essential nutrients that infants need to grow in optimal proportions according to your child's age, weight and length.
- Contains several ingredients that promote good development of the brain and nervous system.
- Newborns who were fed breast milk are more intelligent.



REMEMBER

- Breast milk is the best and complete food for babies for the first six months.
- No other milk similar to mother milk.
- It is the normal and safe way of feeding our babies!
- Little breastfeeding is far better than none.
- Every drop, every day counts!
- Any other option is inferior.



