

# A Study the health Issues of Lactating Mothers

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**Abstract-** *Women's healthcare status is correlated with biological, social, & cultural aspects. Indian women are particularly susceptible during pregnancy and lactating. Lactating moms have unique dietary requirements due to the increased caloric and nutrient intake necessary for breastfeeding. This paper is focusing the health status and issues of lactating mothers. During lactation, the mother provides nearly as efficient nutrition to her infant as the placenta does while also safeguarding him or her. Lactating women should be wisely given nutritional supplements since they have the potential to boost the infant's nutrition intake by increasing the efficiency of lactation. A mother's consumption of all the nutrients is inadequate to meet her growing infant's demands in poor nations, according to recent discoveries. Lactation is the process by which a mother produces and secretes milk from her breasts for her newborn to consume.*

**Keywords-** Health, Mother, Pregnancy, Lactating, Nutrition

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## INTRODUCTION

Lactating mothers constitute the most vulnerable segment of population from nutritional view point. The women in all stages of their life, seems to be the most neglected group in our country, under the influence of prevailing customs and traditions. The various studies have shown that the nutritional status of newborn is maximum affected by mother's nutritional status and her dietary intake. One of the times when the body is under a lot of stress is during lactation, which means that more nutrition is needed. A nursing mother's diet is typically supplemented with a few particular items. Mothers' diets are given extra consideration during nursing, along with nourishing supplements. Both the production of mother's milk & recuperation from lactation-related stress are extremely important during this time. It has been discovered that the majority of rural Indian women's regular meals are deficient in both quantity & quality of nutrients. Breastfeeding women are responsible for preserving both their own and their developing child's health. Lactation is referred to as the critical period during which the mother continues protecting her young child with nearly the same efficiency in feeding as the placenta. Nutrition supplements are prudently given to nursing mothers as they may enhance lactation performance & thus improve the infant's intake of nutrition. It has been discovered that in underdeveloped nations, a mother's intake of all the nutrients is insufficient to support her growing infant's needs. The type of diet that women consume throughout pregnancy & nursing has a direct impact on the health of the newborn as well as the success of lactation. Consequently, the food of the mother plays a crucial role during lactation.

Due to milk secretion, nursing moms have more nutritional needs than pregnant women. Its amount and quality are determined by the mother's diet. Many Indian breastfeeding moms eat extremely low-income diets that primarily consist of cereals (Rawtani, Land Verma 1988). Therefore, the mother's diet should get extra attention during nursing, along with the addition of nourishing supplements. The majority of non-conventional diets advocate for wholesome eating habits (cutting back on or giving up fat, sugar, alcohol, and caffeine, while increasing fibre and fresh vegetables) that are generally safe for most people with normal digestion. Certain extremely restrictive diets, such as veganism or macrobiotics, might cause problems like anaemia or decreased bone mass, particularly in young children. Only under expert supervision should children, expectant or lactating mothers, and patients with chronic illnesses make such significant dietary modifications. Any dietary modification may have the negative effect of causing social disruption when a patient is unable to eat with friends & relatives. Acute side effects from high dosage nutritional supplements include flushing (niacin) and diarrhoea (vitamin "C") during the course of treatment. Water-soluble vitamins rarely cause persistent or more severe side effects, while long-term use of large dosages of vitamin B<sub>6</sub> can cause neuropathies. High quantities of fat-soluble vitamins are more likely to cause adverse effects, while they are still rare. Whereas vitamin D is associated with hypocalcaemia, vitamin A is linked to birth abnormalities as well as irreparable damage to the liver and bones. Elevated concentrations of individual minerals or amino acids may result in insufficiencies of nutrients with comparable

metabolic pathways. Overconsumption of zinc and selenium can lead to immunological suppression, & MMV severing primrose oil can worsen epilepsy in the temporal lobes.

### INDIAN LACTATING MOTHERS' HEALTH STATUS

Women's healthcare status is correlated with biological, social, & cultural aspects. Women are supposed to live longer than males, however there are a number of factors that affect women's lifespan that also affect their quality of life. Women are more likely than men to become ill and incapacitated, according to numerous studies. Maternity is a significant element affecting women's livelihoods; if maternity care is ineffective or unavailable, it tends to have an impact on women's livelihoods (Kowsalya & Manoharan, 2017). According to research, Indian women's health and nutritional status tend to deteriorate, which is linked to the country's clearly visible traditions & cultural practices. Indian women are particularly susceptible during pregnancy and nursing. One crucial thing to keep in mind is that, in comparison to other factors influencing the child's birth weight, mothers' nutritional health has a greater overall influence. According to Kominiarek and Rajan (2016), breast milk is the recommended food for infants worldwide. The World Health Organisation (WHO) and the American Academy of Paediatrics advise nursing exclusively throughout the first six months of a baby's life and for at least a year after that. Like during pregnancy, a nursing mother's energy or nutritional needs enhance during lactation. According to the National Institute of Nutrition (2010), for the best growth and development of her offspring, a nursing mother needs an extra 600 calories and 19 grammes of protein per day during the first six months of lactation & additional 520 calories and 13 grammes of protein per day throughout the next six months of lactation. This estimate is based on 780 millilitres of milk produced on average per day and 67 kcal/100 millilitres of energy content (Kominiarek & Rajan, 2016).

According to the Ministry of Home Affairs (2018), the Infant Mortality Rate (IMR) is defined by the Census of India as "the amount of infant deaths during the year occurred amongst the number of live births during the same year per 1,000 live births." IMR and the Under Five Mortality Rate (U5MR) decreased from 57% and 74% in 2005–06 to 41% and 50% in 2015–16, reported to the National Family Health Survey (2016). While exclusive breastfeeding (55%) for infants younger than six months of age and breastfeeding within an hour of delivery (41%) have significantly improved. IMR is still high in rural regions (46% and 56%, respectively), as opposed to 29% and 34% in metropolitan areas. UNICEF research on Uttar Pradesh (UNIEF, 2018) states that around 70,000 infants can be saved if exclusive breastfeeding is practiced during the first six months of life, followed by weaning until the age of two. The study emphasises that exclusive breastfeeding will be a huge lifesaver and face saver for a state like Uttar Pradesh, where the IMR is as high as 25% compared to the entire

country. National Coordinator of the Breastfeeding Promotion Network of India Dr. Arun Gupta states that "nearly 4.5 lakh children in UP do not live to celebrate first birthday." In the United States, there are 72 baby fatalities for every 1,000 live births, and 51.7% of newborns are malnourished. The UNICEF state representative, Dr. Nimal Hettiaratchy, stated that "healthy children are the foundation of India's desire to become a superpower."

### PROCESS OF LACTATION

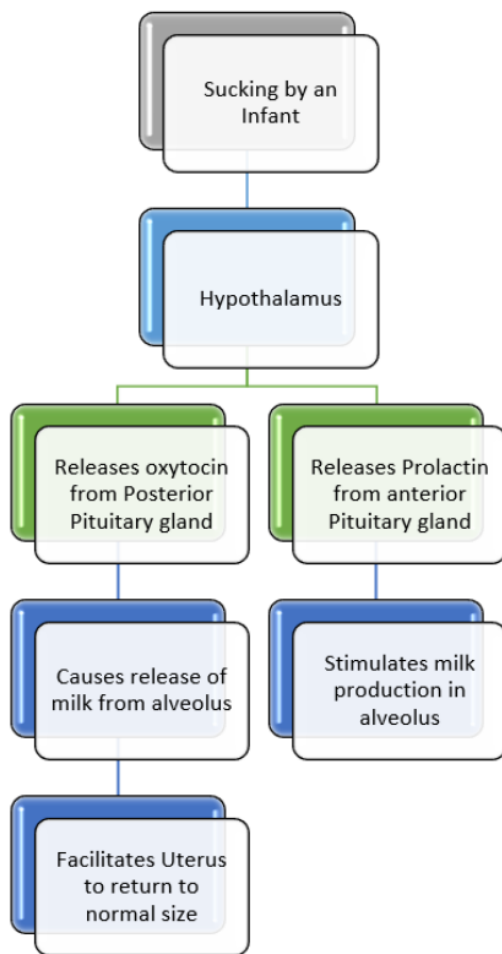
Lactogenesis & galactopoietics are two steps in the lactation process. Although galactopoietics focuses on keeping milk secretion going strong, lactogenesis refers to the actual process of milk secretion. Forming the breast is an important step in preparing for milk secretion. Estrogen & progesterone work together during puberty to shape the gland. Progesterone causes the alveoli to enlarge, while estrogen is critical for gland and duct size expansion. The glands swell during pregnancy due to the surge of estrogen & progesterone. The alveoli of the gland are prepared to secrete milk during pregnancy by a combination of prolactin and estrogen. The lactogenic hormone prolactin is one of the most important hormones for milk production. A novel endocrine reflex, initiated by sucking on the breast, causes the anterior pituitary to secrete prolactin, which the gland then continues to secrete. Additionally, growth hormone, cortisol, & thyroxin are required for milk production. When the posterior pituitary gland releases the hormone oxytocin, it triggers the secretion of milk by means of the hormone prolactin.

As part of the lactation process, the alveoli produce milk components and then release milk into the ducts. During lactation, a web of hormones, enzymes, nerves, muscles, and reflexes work in tandem. During the postpartum period, the breasts should be able to begin lactation immediately, continue to produce milk continuously throughout each nursing period, undergo changes in milk composition as the baby grows, and sustain lactation throughout the duration of breastfeeding.

Several hormones contribute to lactogenesis, although prolactin is the most important. Breast milk production cannot occur without growth hormone and chronic somatotrophin. The primary hormone responsible for milk ejection is oxytocin. During pregnancy, the anterior pituitary and the placenta start producing prolactin, & plasma level likewise increases progressively. But its impact on milk production won't be known until after the baby is born. Although prolactin is essential for milk production, it is halted during pregnancy due to the elevated levels of estrogen in the blood. Milk is transported from the alveoli's epithelial cells to the sinuses, where it can be consumed by the newborn. The posterior pituitary gland produces oxytocin, which mostly facilitates this process. It is believed that the peripheral skin & nipple areola of a nursing

mother are among the most highly innervated tissues in the body. Breast receptors send signals to the hypothalamus in response to the tactile stimulation of sucking. Oxytocin is secreted into the bloodstream when the hypothalamus stimulates the pituitary gland. By way of the circulatory system, oxytocin reaches the uterus & mammary gland, where it triggers the myoepithelial cells lining the alveoli and tiny ducts to constrict, leading to the expulsion of milk through the duct.

As breastfeeding becomes habitual, the letdown response is triggered by a variety of events associated with nursing, the most important of which is the tactile stimulation of the infant's sucking. When the baby cries, when feeding time rolls around (even when the infant isn't there), or whenever anything else that typically happens when breastfeeding is involved could cause milk to be released.



**Figure 1: Process of Stimulation of Milk**

**LACTATION-RELATED HEALTH ISSUES**

**Description**

- 1) A breast abscess is characterized by the buildup of pus inside the breast tissue.
- (2) prevalent bacteria are the most prevalent cause of breast infections.

- (3) Nursing mothers are nearly always the ones who contract an infection.

A breast abscess is characterized by the buildup of pus inside the breast tissue. Mastitis, an infection of the breast, typically comes first. When an illness or trauma occurs in the breast, it manifests differently than when it occurs elsewhere in the body. tiny abscesses form when infections isolate themselves from the surrounding tissue. These could look like cysts.

**Cause**

Staphylococcus aureus, a type of common skin bacterium, is the most prevalent cause of breast infections. Nursing mothers are nearly always the ones who contract an infection. In the beginning stages of breastfeeding, the germs enter the body through a skin break, most commonly a cracked nipple. Pus forms and fills the diseased area. It is important to distinguish between breast cancer and breast infections that are not associated with breastfeeding. Subareolar abscesses, which form beneath the areola (the darker area surrounding the nipple), are really uncommon in women in their twenties and thirties who do not breastfeed. This disease almost solely affects people who smoke. Patients who are not nursing should undergo surgical excision or biopsies if they develop a suspected abscess in any part of their breasts other than the subareolar region.

**Symptoms**

- (1) Breast pain, tenderness, redness, or hardness, swelling, a sensation of heat in the affected area.
- (2) Fever and chills
- (3) A general ill feeling
- (4) Tender lymph nodes under armpits.

**Risk factors**

The following factors may be associated with breast abscess.

- (1) Postpartum (after giving birth) pelvic infection
- (2) Fatigue
- (3) Anaemia
- (4) Diabetes mellitus
- (5) Use of steroid medications
- (6) Low immunity states
- (7) Heavy cigarette smoking
- (8) Silicone implants

**Breast feeding**

While you are lactating (breast-feeding), you are responsible for meeting all of your infant's nutritional needs. The head of the household. During the last trimester of pregnancy, when an extra 200 calories of dietary energy per day is required, extra stores can be used to meet some of these extra requirements. However, during the first three months of breastfeeding and thereafter, an extra 450 to 570 calories per day are required. When the reserves of energy that are stored during pregnancy are depleted. It will aid new mothers in getting back to their weight before pregnancy. Concern about whether or not their infants are getting enough milk is something that nearly every nursing mother experiences. Concerns regarding the sufficiency of our milk supplies are understandable given that the consumption of breast milk cannot be quantified in the same manner as the consumption of formula. Weaning or the early introduction of meals or supplements is most commonly justified by moms citing the "perception" of inadequate breast milk production. Even though it's extremely rare, there is a tiny number of women who simply cannot make enough milk regardless of their efforts.

Checking if supplies are indeed low should be the first order of business. Some expectant moms mistakenly believe that their infant isn't getting enough milk if he or she isn't on a three-hour routine or sleeping through the night by the six-week mark. Some nursing mothers have a tendency to place the blame on their breast milk whenever their baby has a problem, such as when he spits up or is gassy, or when he eats more frequently than usual. We suppose it's because there isn't enough milk. Be wary of becoming stuck in the practice of blaming nursing for your baby's every action. There will be days when a baby is fussy, easy going, and fed formula or breast milk.

**Anaemia:** Anaemia is the most prevalent medical condition that can be observed in pregnant women. A haemoglobin level below 10 gm/dl is considered anaemia during pregnancy. Deficiencies in iron and folate are the most prevalent reasons. Common causes include normal, recurring iron loss in menstrual blood, an insufficient nutrition (particularly among teenage girls), and several pregnancies. The increased demand on a pregnant woman's blood supply by the developing fetus increases her risk of anaemia. The baby may be born prematurely, with low birth weight, or suffer from malnutrition. Some of the symptoms of anemia include weakness, headache, pallor, tachycardia, and hypotension.

**Back pain:** Progesterone eases pelvic and lower back ligaments and joints in preparation for childbirth. Aches and pains in the pelvic and pubic region are the results of this. **Hypertension:** This medical problem affects pregnant women when their blood pressure readings are consistently high (> 140 mm Hg systolic and > 90 mm Hg diastolic) on two separate occasions, at least 6 hours apart. After the 20th week of gestation, hypertension becomes a problem for 8-10% of pregnant women. The severity & presence of symptoms such as edema, proteinuria, seizures,

abnormalities in blood coagulation, or liver functions help classify gestational hypertension into different subtypes.

**Pre-eclampsia:** Pre-eclampsia is a dangerous medical condition in which high blood pressure develops during pregnancy together with an abnormally high protein level in the urine. Deaths among mothers are caused by it. An increase in blood pressure is the most obvious symptom of the condition, which affects the endothelium of the mother's blood vessels as well as her kidneys and liver. Fetal growth retardation, low birth weight, premature delivery, or stillbirth are all outcomes.

**Toxemia:** Toxemia is a disease that exclusive to pregnant women. Symptoms that manifest in the last trimester of pregnancy include a woman's rapid weight increase as a result of water retention, protein in her urine, and elevated blood pressure. The woman and the unborn child are at risk of death or serious brain damage if the condition is left untreated.

**Heartburn and Indigestion:** The increasing weight of the developing baby places extra strain on the digestive tract, making the final trimester a peak time for heartburn and indigestion. The result is an unpleasant aftertaste & burning feeling in the upper belly.

**Constipation:** The increased pressure of an enlarged womb causes constipation in the majority of pregnant women. Taking iron supplements while pregnant can also cause constipation. Extreme irritable bowel syndrome or painful, frequently bleeding hemorrhoids are possible complications of chronic constipation.

**Vaginal bleeding:** While it's common in the first trimester and usually doesn't indicate anything wrong, bleeding in the second and third trimesters is a common indicator of a miscarriage but doesn't necessarily signal a miscarriage is about to happen. While about half of all bleeding pregnant women do not experience losses, about fifteen to twenty percent of all pregnancies do, with the vast majority of these miscarriages happening in the first twelve weeks. **Placental abruption:** The placental lining separating from the mother's uterus is known as placental abruption, and it is a pregnancy abnormality. It is the leading reason for third trimester hemorrhage. Fetal mortality rates range from 20% to 40% depending on the degree of separation, and it happens in 1% of pregnancies. Maternal mortality is also significantly impacted by placental abruption. The long-term consequences of placental abruption include fetal distress, excessive bleeding, problems with the mother's blood clotting, and difficulties with uterine contractions following birth.

**Sexually Transmitted Diseases:** The most significant dangers to the developing baby come

from STDs such as gonorrhea, syphilis, chlamydia, genital herpes, AIDS, and many more. In terms of bacterial STDs that can affect a developing fetus, chlamydia is by far the most common. Premature birth and stillbirth are both made more likely by this. Jaundice: Approximately 3.5 percent of pregnant women have abnormal liver function tests and jaundice in pregnancy. These might be devastating effects on the health of mothers and their unborn children. The most prevalent causes of jaundice during pregnancy are hepatitis A, B, C, D, and E viruses.

**Malaria:** With an annual death toll of 1.5 million and an impact on over 2000 million people, it has emerged as a serious worldwide health concern. Severe maternal anaemia, low birth weight (LBW), and perinatal death can be decreased with the effective control of these illnesses (Desai et al., 1996).

**Thyroidism:** In pregnancy, thyroid hormone deficiency or hypothyroidism is the most frequent thyroid condition, increasing the risk of miscarriage and preterm birth. Pregnancy complications caused by hyperthyroidism include stillbirth, miscarriage, and premature delivery. According to Zimmermann (2009), it has a negative impact on children's cognitive development and causes cretinism in newborns. Some of the symptoms of Graves' disorders, including as low birth weight, rapid heart rate, hypertension, anxiety, irritability, nausea, vomiting, and diarrhoea, can appear as early as a few days after delivery (Polak et al., 2006).

**Milk supply is low:** When a woman has a medical issue that prevents her from producing enough milk, such as breast hypoplasia, breast reduction surgery, or a double mastectomy, this is known as primary lactation failure.

Inadequate milk supply owing to avoidable causes, such as the use of infant formula, ineffective milk transfer by the baby, or untreated breast engorgement, is known as secondary lactation failure.

**Breast pain:** A painful breast can make it difficult, if not impossible, to nurse a baby. After a perceived lack of milk production, it is the second most prevalent reason why people stop nursing exclusively.

**Inverted nipples :** It can be challenging for nipples that are inverted or retracted to adhere to the breast. These moms require extra help in order to breastfeed their infants. The baby is born, and then treatment begins. The nipple is stretched out by hand multiple times daily. To prepare the baby for breastfeeding, the nipple is drawn out using a pump or a plastic syringe.

**Nipple pain:** Baby nipple pain, also known as the lalgia, is one of the most typical postpartum complaints. They usually start the day after delivery and go away after five days. It is not typical to experience pain that lasts more than a week, extreme agony, cracking, fissures, or localized swelling. A doctor should examine the mother further. Babies frequently experience sore nipples as a result of

improper latching on. Inadequate latching onto the areola and subsequent excessive pressure on the nipple, as well as poor suction release during feeding, are contributing factors. Another factor could be the misuse of topical treatments or breast pumps. Another symptom of infection is nipple soreness. Babies can also experience discomfort when they bite their nipples.

**Candidiasis:** Breast candidiasis symptoms include redness, swelling, stinging, burning, or a glossy or white patchy look. It is possible for the infant to have an uncleanable white tongue. Infant thrush may be accompanied with the common yeast infection known as candidiasis. To eradicate this infection, treatment is necessary for both the mother and the baby. First-line treatments for nystatin, ketoconazole, or miconazole include topical application to the nipple and oral administration to the infant. To completely eliminate the infection, it is essential to thoroughly clean both garments and breast pumps.

Valentia violet is another over-the-counter remedy for yeast infections. Typically, it effectively alleviates pain quickly. Stains clothes and is a pain to clean up. After a few days, the baby's lips will no longer be purple.

**Milk stasis:** "Milk stasis" occurs when the milk duct becomes clogged and stops draining normally. This has nothing to do with infection and may impact just a small area of the breast. Changes in the baby's feeding posture and the use of heat prior to feeding help alleviate the condition. More evaluation is required if it occurs multiple times.

**Mastitis:** Mastitis is Inflammation of the breasts is known as mastitis. The affected area will feel localized discomfort, redness, swelling, and heat. When mastitis progresses to a later stage, it causes systemic infection symptoms such as nausea and fever. Usually happens within a couple of weeks after giving birth, however it can happen whenever. Commonly caused by milk stasis and progressing to systemic infection as a secondary or primary local infection. (Deborah L. O'Connor and colleagues) In addition to these conditions, women can experience severe headaches, swelling, convulsions, fever, impaired vision, excessive weight gain, infections of the urinary tract, TB, diabetes, and other major health issues during and after pregnancy.

## CONCLUSION

The term "lactation" refers to the time when a mother produces milk for her infants by secreting it from her breasts. For many mammals, including humans, it is a physiologically necessary last step in the mating process. Breastfeeding is one of the best strategies to guarantee a child's great health and life because human milk guarantees the newborns' systemic protection, growth, and development. It is important to educate lactating women and their families on commonly accepted variations so that dietary guidelines can support breastfeeding without

imposing too many restrictions on women's lifestyles. This will help parents make informed decisions about what to feed their infants, which is crucial for optimal health during breastfeeding. Lactating mothers produce 20-30 ounces of milk each day, which is about 850 millilitres.

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