

Review Article

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CONCEPTUAL STUDY OF *UPADHATU STANYA* AND ITS ROLE IN INFANTS

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ABSTRACT

Background: *Stanya* is described in *Ayurveda* as an important *Upadhatu* of *Rasa Dhatu*. It is formed after proper digestion, absorption and transformation of maternal nutrition through the action of *Agni* and *Dhatvagni*. In the postnatal period, *Stanya* acts as the first and most natural food for the infant. It supports growth, immunity, strength, digestion, nourishment, emotional bonding and healthy development of the child. In modern science, breast milk is considered the ideal nutrition for infants because it provides a balanced mix of nutrients, bioactive factors, antibodies, and protection against infections. WHO and UNICEF recommend breastfeeding initiation within the first hour after birth, exclusive breastfeeding for the first six months and continued breastfeeding up to two years or beyond with complementary feeding. **Aim:** To study the concept of *Upadhatu Stanya* and its role in infant health. **Objectives:** To understand the *Ayurvedic* concept of *Stanya* as *Rasa Dhatu Upadhatu*. To explain the process of *Stanya Utpatti*. To study the role of *Stanya* in infant nourishment, growth and immunity. To correlate *Stanya* with modern breast milk physiology. To understand the effect of *Stanya Kshaya* and *Stanya Dushti* on infants. **Material and Methods:** This is a conceptual review article based on classical *Ayurvedic* texts, available commentaries and modern scientific literature. Classical concepts related to *Rasa Dhatu*, *Upadhatu*, *Stanya*, *Stanya Utpatti*, *Stanya Sampat* and infant health were reviewed. Modern literature related to lactation physiology, breast milk composition, immunity and infant nutrition was also

analyzed. **Observation and Result:** *Stanya* is directly related to maternal nutrition, *Rasa Dhatu* quality, mental state and proper functioning of *Agni*. Pure and adequate *Stanya* supports infant growth, strength, complexion, immunity, digestion and mental development. Modern science also supports that breastfeeding reduces gastrointestinal infections, diarrhea and other childhood infections while supporting optimal physical and cognitive development. **Discussion:** The *Ayurvedic* concept of *Stanya* as *Rasa Dhatu Upadhatu* shows a close relation between maternal nutrition and infant nourishment. Modern breast milk physiology also confirms that maternal health, hormonal regulation, emotional status and feeding practices influence milk secretion and quality. **Conclusion:** *Stanya* is not only food for the infant but also a natural protective, developmental and emotional support system. The concept of *Upadhatu Stanya* provides a holistic view of infant nutrition, combining maternal health, digestion, mental balance and child development.

Keywords: *Stanya*, *Upadhatu*, *Rasa Dhatu*, Breast Milk, Infant Nutrition, Lactation

INTRODUCTION

Ayurveda explains human physiology through the proper balance of *Dosha*, *Dhatu*, *Mala* and *Agni*. Among the seven *Dhatu*, *Rasa Dhatu* is the first nourishing tissue formed after digestion of food.¹ It circulates throughout the body and provides nourishment to all other *Dhatu*. From *Rasa Dhatu*, *Stanya* is formed as an important *Upadhatu* in females, especially after childbirth. Therefore, the quality and quantity of *Stanya* mainly depend on the quality of maternal *Rasa Dhatu*.²

Stanya has been given great importance in *Kaumarabhritya* because it is the first natural food of the newborn. In the early stage of life, the infant has immature digestion, weak immunity and complete dependence on the mother for nutrition. At this stage, pure and adequate *Stanya* supports proper growth, strength, complexion, sleep, satisfaction, immunity and emotional security. It is also considered suitable for the delicate digestive system of the newborn.³

In *Ayurvedic* view, the formation of *Stanya* is influenced by maternal food, lifestyle, emotional state, *Agni*, *Rasa Dhatu*, *Vata Dosha* and hormonal-like physiological processes. Any disturbance in maternal diet, excessive stress, grief, anger, fasting, poor nutrition, excessive exertion or disease may lead to *Stanya Kshaya* or *Stanya Dushti*. This may directly affect infant health and may cause poor weight gain, crying, disturbed sleep, digestive complaints and reduced strength.⁴

Modern science also recognizes breast milk as the ideal nutrition for infants. It contains proteins, fats, carbohydrates, vitamins, minerals, enzymes, hormones, immune factors and living cells. Exclusive breastfeeding for the first six months is recommended because it supports optimal growth and protects against infections. After six months, safe complementary feeding should be started while breastfeeding continues up to two years or beyond.⁵

AIM AND OBJECTIVES

Aim:

To study the concept of *Upadhatu Stanya* and its role in infant health.

Objectives:

- To understand the *Ayurvedic* concept of *Stanya* as *Rasa Dhatu Upadhatu*.
- To explain the process of *Stanya Utpatti*.
- To study the role of *Stanya* in infant nourishment, growth and immunity.
- To correlate *Stanya* with modern breast milk physiology.
- To understand the effect of *Stanya Kshaya* and *Stanya Dushti* on infants.

MATERIAL AND METHODS

This review article is based on a literary and conceptual study. Classical *Ayurvedic* references related to *Rasa Dhatu*, *Upadhatu*, *Stanya*, *Stanya Utpatti*, *Stanya Sampat*, *Stanya Kshaya*, *Stanya Dushti* and infant health were reviewed from classical texts and commentaries. Modern literature related to breast milk composition, lactation physiology, infant nutrition, immunity and breastfeeding recommendations was also studied. The collected information was analyzed and presented in a structured manner with *Ayurvedic* and modern correlation.

CONCEPTUAL STUDY

Concept of *Upadhatu*

In *Ayurveda*, *Upadhatu* means secondary tissue products formed during the metabolism of main *Dhatu*. They are not waste products. They perform important physiological functions in the body. Each *Dhatu* produces certain *Upadhatu* during its transformation. *Stanya* is considered an *Upadhatu* of *Rasa Dhatu* in females. *Rasa Dhatu* is the first tissue formed after digestion of food. It nourishes the whole body and supports life, strength, complexion and

satisfaction. Since *Stanya* is derived from *Rasa Dhatu*, maternal nutrition becomes the main basis for healthy lactation.⁶

Concept of *Stanya*

Stanya means breast milk. It is the natural food of the newborn and infant. It is produced in the breasts of the mother after childbirth and acts as the primary source of nutrition. In *Ayurveda*, *Stanya* is not seen only as milk. It is a complete nourishing substance which carries the essence of maternal *Rasa Dhatu*. Healthy *Stanya* is described as suitable in color, smell, taste, consistency and digestibility. It should not cause discomfort to the infant. Proper *Stanya* nourishes the infant, improves strength and supports normal growth.⁷

Formation of *Stanya* as *Rasa Dhatu Upadhatu*

After food intake, food undergoes digestion by *Jatharagni*. Properly digested food forms *Ahara Rasa*. This *Ahara Rasa* is further processed by *Dhatvagni* and forms *Rasa Dhatu*. In lactating women, a portion of well-formed *Rasa Dhatu* moves toward the breasts and transforms into *Stanya*. This shows that the condition of maternal *Agni* is very important. If *Agni* is proper, *Rasa Dhatu* becomes pure and nourishing. If *Agni* is weak or disturbed, *Rasa Dhatu* becomes poor in quality, leading to inadequate or vitiated *Stanya*.⁸

Role of *Agni* in *Stanya Utpatti*

Agni is the main factor responsible for digestion, metabolism and tissue formation. Proper *Agni* helps in the formation of good quality *Ahara Rasa*. From this, healthy *Rasa Dhatu* is formed, and from healthy *Rasa Dhatu*, adequate *Stanya* is produced. If *Mandagni* is present, food is not properly digested. This may lead to poor *Rasa Dhatu* formation and reduced *Stanya*. If *Tikshnagni* is present, excessive metabolism may cause dryness and depletion. If *Vishmagni* is present, irregular digestion may disturb milk production and quality. Therefore, balanced *Agni* is essential for proper lactation.

Role of *Rasa Dhatu* in Lactation

Rasa Dhatu is directly responsible for nourishment. Its main function is *Preenana*, meaning satisfaction and nourishment. Since *Stanya* is derived from *Rasa Dhatu*, both mother and infant are affected by its quality. When *Rasa Dhatu* is healthy, the mother has proper lactation, good strength, proper hydration, stable mind and better postpartum recovery. The infant receives adequate nutrition and develops properly. When *Rasa Dhatu Kshaya* occurs, *Stanya Kshaya* may develop, resulting in insufficient breast milk.

Physiological Importance of *Stanya*

Stanya performs many important functions in infant life. It provides nourishment, supports growth, improves immunity and maintains emotional bonding between mother and child. It is light, natural and suitable for infant digestion. In *Ayurvedic* understanding, the newborn has delicate *Agni* and immature body systems. Therefore, heavy or unsuitable food may disturb digestion. *Stanya* is naturally suitable because it is specifically produced for the infant and changes according to the needs of the child.⁹

Features of Pure *Stanya*

Pure *Stanya* should be normal in color, smell, taste and consistency. It should be pleasant, nourishing and easily digestible. It should not produce discomfort, abdominal pain, loose stool, constipation, vomiting or excessive crying in the infant. Good quality *Stanya* keeps the child satisfied after feeding. The baby sleeps well, passes urine and stool normally, gains weight properly and remains active according to age.

Role of *Stanya* in Infant Growth

The infant grows rapidly in the early months of life. At this stage, the requirement of nutrition is very high. *Stanya* provides natural nourishment and helps in proper development of body tissues. From an *Ayurvedic* view, *Stanya* supports the formation and nourishment of infant *Dhatu*. It maintains strength, complexion, enthusiasm and proper physical growth. If milk is adequate and pure, the infant remains calm, active and healthy.

Role of *Stanya* in Infant Immunity

Although classical texts describe immunity through concepts like *Bala*, *Ojas* and proper *Dhatu Poshana*, the role of *Stanya* in supporting infant resistance can be understood clearly. A well-nourished infant develops better strength and disease resistance. Modern science also explains that breast milk contains antibodies and immune-protective factors which help protect the baby from infections.¹⁰ UNICEF states that breastfed babies have fewer ear infections, less diarrhea and are less likely to develop pneumonia and other common childhood illnesses.

Role of Mother's Diet in *Stanya*

Maternal diet plays a direct role in the formation of *Rasa Dhatu* and *Stanya*. Fresh, nourishing, warm, easily digestible and balanced food supports healthy lactation. Proper intake of fluids,

milk, ghee, grains, pulses, vegetables and suitable postpartum diet helps maintain milk production. Improper diet such as excessive dry, spicy, stale, incompatible, very light or insufficient food may disturb *Agni* and *Rasa Dhatu*. This can reduce milk quantity or affect quality. Therefore, *Pathya Ahara* is very important for lactating mothers.

Role of Mother's Mental State in *Stanya*

The emotional state of the mother strongly affects lactation. In *Ayurvedic* view, excessive grief, anger, fear, anxiety, stress and mental disturbance may affect *Stanya Pravritti*. A calm, happy and emotionally supported mother generally has better lactation. This concept closely matches modern physiology where stress may interfere with oxytocin release and milk ejection. Thus, emotional care of the mother is equally important as nutritional care.¹¹

Concept of *Stanya Kshaya*

Stanya Kshaya means reduction in breast milk quantity. It may occur due to poor nutrition, dehydration, excessive fasting, postpartum weakness, mental stress, disturbed *Agni*, *Rasa Dhatu Kshaya* and *Vata Prakopa*. In infants, *Stanya Kshaya* may lead to excessive crying, poor sleep, frequent hunger, reduced weight gain, dryness, weakness and irritability. The mother may also feel breast emptiness, weakness and anxiety due to insufficient feeding.

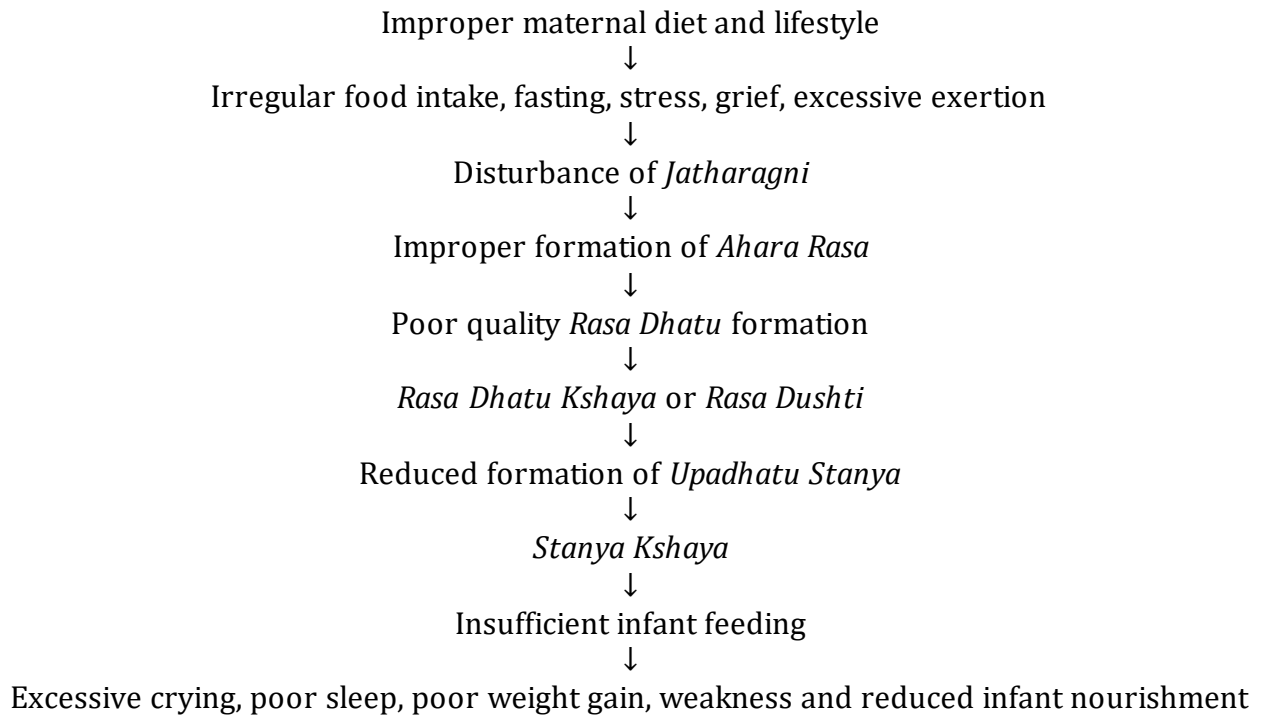
Concept of *Stanya Dushti*

Stanya Dushti means vitiation of breast milk due to involvement of *Dosha*. When *Vata*, *Pitta* or *Kapha* disturb the quality of *Stanya*, the infant may show different symptoms. *Vataja Stanya Dushti* may cause abdominal distension, pain, constipation, crying and dryness. *Pittaja Stanya Dushti* may cause loose stool, burning, yellowish discoloration, irritability and excessive thirst. *Kaphaja Stanya Dushti* may cause heaviness, excessive sleep, mucus, poor digestion and lethargy.¹²

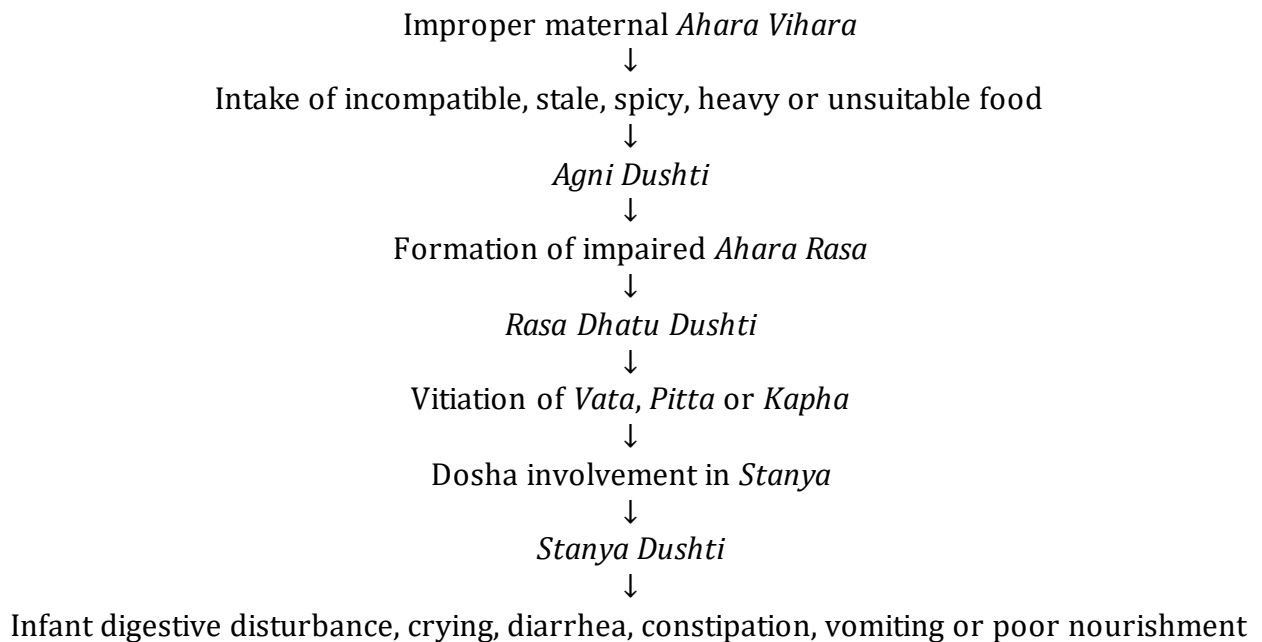
Importance of *Stanya Sampat*

Stanya Sampat means healthy and complete quality of breast milk. It depends on mother's diet, digestion, mental health, postpartum care and proper feeding practices. When *Stanya Sampat* is maintained, both mother and child remain healthy. The infant receives natural nutrition, develops immunity, gains weight properly and shows better physical and mental development. Therefore, maintenance of *Stanya Sampat* is a major goal in postpartum care.

SAMPRAPTI OF STANYA KSHAYA



SAMPRAPTI OF STANYA DUSHTI



MODERN REVIEW

Breast Milk

Breast milk is the natural and ideal food for infants. It is specially designed to meet the nutritional and immunological needs of the baby. It contains water, carbohydrates, proteins, fats, vitamins, minerals, enzymes, hormones, antibodies and bioactive factors. The

composition of breast milk changes according to the stage of lactation, time of feeding and needs of the infant. Colostrum, transitional milk and mature milk have different roles in infant nourishment and protection.¹³

Colostrum

Colostrum is the first milk secreted after childbirth. It is thick, yellowish and rich in immune factors. It is produced in small quantity but is highly valuable for the newborn. Colostrum supports early immunity, helps in gut maturation and protects against infections. It also helps in the passage of meconium and supports early digestive adaptation.

Transitional Milk

Transitional milk appears after colostrum and gradually changes into mature milk. It contains increasing amounts of fat, lactose and calories. This stage supports the growing nutritional demand of the infant. It acts as a bridge between immune-rich colostrum and nutrient-rich mature milk.¹⁴

Mature Milk

Mature milk is produced after the initial postpartum period. It contains foremilk and hindmilk. Foremilk is thinner and rich in water and lactose, while hindmilk is thicker and richer in fat. Both are important. Foremilk helps in hydration and energy supply, while hindmilk supports weight gain and satiety.

Composition of Breast Milk

Breast milk contains:

- Water for hydration.
- Lactose for energy and brain development.
- Fats for growth, brain development and weight gain.
- Proteins for tissue development and immunity.
- Vitamins and minerals for metabolism and growth.
- Antibodies for immune protection.
- Enzymes and hormones for digestion and regulation.
- Human milk oligosaccharides for gut microbiota support.

Role of Breast Milk in Infant Nutrition

Breast milk provides balanced nutrition in a form that is easily digestible for infants. It matches the immature digestive capacity of the newborn. It supports steady weight gain, organ development, brain growth and normal metabolism. WHO states that exclusive breastfeeding for six months has many benefits for both infant and mother, especially protection against gastrointestinal infections.

Role of Breast Milk in Immunity

Breast milk provides passive immunity through antibodies and immune cells. It protects the infant from diarrhea, respiratory infections, ear infections and other common infections. Early initiation of breastfeeding within one hour after birth helps protect the newborn from infections and reduces newborn mortality risk.

Role in Gut Health

Breast milk supports the development of healthy gut microbiota. Human milk oligosaccharides promote beneficial bacteria and help protect against harmful pathogens. A healthy gut environment supports digestion, immunity and nutrient absorption. This modern concept can be correlated with proper infant *Agni* and *Dhatu Poshana* in *Ayurveda*.¹⁵

Role in Brain Development

Breast milk contains essential fatty acids and nutrients required for brain development. Proper breastfeeding supports cognitive development, neurological maturation and emotional security. UNICEF notes that exclusive breastfeeding supports proper physical and cognitive development in infants.

Role in Mother-Infant Bonding

Breastfeeding is not only a feeding process. It supports skin-to-skin contact, emotional bonding and psychological security. During breastfeeding, the infant feels warmth, safety and comfort. This emotional bond supports infant behavior, sleep and neurodevelopment. It also helps the mother develop confidence and emotional attachment with the child.

Hormonal Regulation of Lactation

Lactation is mainly regulated by prolactin and oxytocin. Prolactin helps in milk production, while oxytocin helps in milk ejection. Suckling by the infant stimulates these hormones. Stress, pain, fear and anxiety may interfere with oxytocin release and disturb milk let-down. This supports the *Ayurvedic* view that maternal mental state affects *Stanya Pravritti*.

Exclusive Breastfeeding

Exclusive breastfeeding means the infant receives only breast milk, without any other food or liquid, not even water, except medically indicated drops or medicines. WHO and UNICEF recommend exclusive breastfeeding for the first six months. After six months, complementary foods should be introduced while breastfeeding continues up to two years or beyond.¹⁶

MODERN PATHOGENESIS OF INSUFFICIENT LACTATION IN FLOW CHART

Poor maternal nutrition, stress, illness or improper breastfeeding technique



Reduced calorie intake, dehydration or hormonal disturbance



Reduced prolactin and/or impaired oxytocin reflex



Poor milk production or poor milk ejection



Inadequate breastfeeding



Reduced infant intake



Poor weight gain, frequent crying, dehydration risk and feeding dissatisfaction

MODERN PATHOGENESIS OF INFANT HEALTH PROBLEMS DUE TO LACK OF BREASTFEEDING

Delayed initiation or inadequate breastfeeding



Reduced colostrum intake



Low transfer of antibodies and protective factors



Weak early immune protection



Higher risk of gastrointestinal and respiratory infections



Poor nutrient intake and disturbed gut microbiota



Poor growth, frequent illness and reduced developmental support

RESULT AND FINDINGS

- *Stanya* is described as an important *Upadhatu* of *Rasa Dhatu*.
- Proper formation of *Stanya* depends on healthy maternal *Agni* and good quality *Rasa Dhatu*.

- Pure and adequate *Stanya* supports infant nourishment, growth, strength and immunity.
- Maternal diet, hydration, rest and emotional state have direct influence on lactation.
- *Stanya Kshaya* may cause poor infant satisfaction, excessive crying, poor sleep and poor weight gain.
- *Stanya Dushti* may produce digestive and systemic symptoms in the infant depending on the involved *Dosha*.
- Modern science confirms that breast milk provides ideal nutrition, immune protection and developmental support.
- Exclusive breastfeeding for six months is recommended by WHO and UNICEF for optimal infant health.
- Early breastfeeding initiation helps protect newborns from infection and supports breastfeeding continuation.
- The *Ayurvedic* concept of *Stanya* closely correlates with modern understanding of breast milk as a complete nutritional and immunological fluid.

DISCUSSION

Ayurveda explains *Stanya* as a product of *Rasa Dhatu*, which clearly shows the importance of maternal nutrition and digestion in lactation. If the mother takes proper food and maintains balanced *Agni*, the quality of *Rasa Dhatu* remains good and healthy *Stanya* is produced. This concept gives a very practical approach to postpartum care because it connects mother's diet, digestion, lifestyle and mental state with infant health.¹⁷

The role of *Stanya* in infants is not limited to nutrition. It supports *Bala*, growth, sleep, satisfaction, immunity and emotional bonding. The infant depends fully on breast milk in the early months of life. Therefore, any reduction or vitiation in *Stanya* may affect the infant's physical and functional development. Classical descriptions of *Stanya Kshaya* and *Stanya Dushti* show that infant symptoms can be understood through the condition of maternal milk.¹⁸

Modern science also supports the importance of breastfeeding in infant health. Breast milk contains nutrients, antibodies, enzymes, hormones and bioactive substances that protect the infant and support development.¹⁹ Exclusive breastfeeding for six months and continued breastfeeding with complementary food up to two years or beyond is recommended globally.

Thus, the *Ayurvedic* concept of *Upadhatu Stanya* and modern concept of breast milk are complementary to each other.²⁰

CONCLUSION

Stanya is an essential *Upadhatu* of *Rasa Dhatu* and plays a central role in infant nourishment, growth, immunity and emotional development. Its formation depends on proper maternal nutrition, balanced *Agni*, healthy *Rasa Dhatu*, stable mental state and good postpartum care. In infants, adequate and pure *Stanya* supports strength, digestion, sleep, satisfaction and protection from diseases. Modern science also confirms that breast milk is the ideal food for infants and provides both nutritional and immunological benefits. Therefore, the concept of *Upadhatu Stanya* presents a complete and holistic understanding of mother-infant health.

CONFLICT OF INTEREST: Nil

SOURCE OF SUPPORT: None

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