



## ESSENCE OF LIFE: A COMPREHENSIVE STUDY OF RASA DHATU IN AYURVEDIC PHYSIOLOGY

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### ABSTRACT

**Background:** In *Ayurveda*, *Rasa Dhatu* is considered the first and most fundamental of the *Saptadhatu*s (seven body tissues), formed immediately after digestion and absorption of food (*Ahaara Rasa*). It plays a vital role in the nourishment and maintenance of life, serving as the precursor for subsequent *Dhatu*s and as the carrier of vitality, immunity, and emotional stability. **Objectives:** This review aims to explore the classical and contemporary perspectives on *Rasa Dhatu*, its formation, functions, pathological imbalances, and its relevance in modern clinical practice. **Methods:** A textual analysis was conducted using references from *Bṛhatrayī* (Charaka, Sushruta, and Ashtanga Hridaya), along with major *Teekas* like *Nibandha Sangraha* and *Ghanekar Teeka*. Secondary sources included contemporary Ayurvedic research articles and cross-references from modern physiology related to plasma and lymphatic circulation. **Results:** *Rasa Dhatu* is chiefly governed by *Kapha Dosha* and nourishes the entire body via *Rasavaha Srotas*. It corresponds functionally

to plasma and interstitial fluids in modern physiology. It provides sustenance to *Rakta Dhatu*, governs immunity (*Vyadhikshamatva*), supports emotional wellness, and plays a key role in female reproductive physiology, especially in lactation (*Stanya*). Disorders of *Rasa Dhatu* include *Rasa Kshaya*, *Rasavaha Srotodushti*, leading to fatigue, dryness, emotional instability, and lowered immunity. **Conclusion:** *Rasa Dhatu* holds a central position in *Ayurvedic* physiology as the primary carrier of nourishment and vitality. A deeper understanding of *Rasa Dhatu* and its imbalances can enhance diagnostic and therapeutic approaches in both classical and integrative medicine.

**KEYWORDS:** *Rasa Dhatu*, *Ayurveda*, *Saptadhatu*, *Rasavaha Srotas*, *Kapha Dosha*, *Ahaara Rasa*, *Dhatu Poshana*, *Vyadhikshamatva*, Plasma, Nourishment

## INTRODUCTION

In the science of *Ayurveda*, the human body is structured and sustained by seven vital tissues known as *Saptadhatu*. Among them, *Rasa Dhatu* holds the foremost position.<sup>1</sup> Derived from the properly digested food (*Ahaara Rasa*), *Rasa* is considered the essence that initiates the nourishment of the entire bodily system. The term *Rasa* itself implies essence, fluidity, taste, and emotional experience—indicating its multifaceted role in both physical and mental health.<sup>2</sup>

*Rasa Dhatu* is primarily governed by *Kapha Dosha* and is closely associated with the *Rasavaha Srotas*, the channels responsible for circulating nourishment throughout the body.<sup>3</sup> It not only sustains the subsequent *Dhatus*—such as *Rakta*, *Mamsa*, and *Shukra*—but also maintains the lubrication, hydration, immunity (*Ojas*), and stability of the body. According to *Ayurvedic* texts, a balanced *Rasa Dhatu* is essential for a glowing complexion, emotional steadiness, hormonal balance, and reproductive health, particularly in the formation of *Stanya* (breast milk) in women.<sup>4</sup>

From a modern biomedical perspective, *Rasa Dhatu* is often compared to plasma, interstitial fluids, and the lymphatic system, which are integral to transporting nutrients, hormones, and immune cells. However, *Ayurveda* extends this understanding by integrating the emotional, psychological, and subtle energetic aspects of nourishment. Thus, *Rasa Dhatu* is not only a carrier of nutrients but also a reflection of the individual's emotional resilience and vitality.<sup>5</sup>

In clinical practice, imbalances in *Rasa Dhatu* can manifest as fatigue, dehydration, mood instability, hormonal issues, weak immunity, and skin disorders. These conditions may arise due to improper diet, stress, indigestion, or *Rasavaha Srotodushti* (vitiation of the channels). Understanding the nature, functions, and disorders of *Rasa Dhatu* is therefore critical for both disease prevention and holistic healing in *Ayurvedic* medicine.<sup>6</sup>

## AIM AND OBJECTIVES

### Aim

To understand the concept and significance of *Rasa Dhatu* in *Ayurveda*.

### Objectives

1. To study the formation and functions of *Rasa Dhatu*.
2. To identify disorders related to *Rasa Dhatu*.
3. To explore its clinical and physiological relevance.
4. To correlate *Rasa Dhatu* with modern concepts of body fluids.

## MATERIALS AND METHODS

### Source

### Materials:

This study is based on a comprehensive review of classical *Ayurvedic* texts including:

- *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*
- Commentaries such as *Ayurveda Deepika* by *Chakrapani*, *Nibandha Sangraha* by *Dalhan*, and *Ghanekar Teeka*
- Standard textbooks of *Kriya Sharir* and *Rachana Sharir*

### Contemporary:

Relevant information was also collected from:

- Peer-reviewed journals on *Ayurveda* and integrative medicine
- Comparative studies correlating *Rasa Dhatu* with modern physiology (particularly plasma, lymph, and interstitial fluid)

- Publications and e-sources from Ayurvedic institutions and research councils (CCRAS, NIA, etc.)

### Methodology:

A qualitative textual analysis method was employed to extract, compile, and interpret data from classical and contemporary literature. Comparative analysis was carried out to identify correlations between the *Ayurvedic* concept of *Rasa Dhatu* and modern anatomical and physiological components. Critical appraisal of commentaries and cross-referencing among texts helped in clarifying interpretations and identifying clinical relevance.

### Ayurvedic Concept of *Rasa Dhatu*

#### Etymological Meaning of *Rasa*

The word *Rasa* is derived from the Sanskrit root “Ras,” which means *to taste, to flow, or to be relished*. In *Ayurveda*, the term is multidimensional. It denotes taste (*Rasa* as one of the six tastes), the essence of food, a circulating nutritive fluid, and the emotional essence (like *Rasa Bhava* in *Ayurveda Manas Vigyan*).<sup>7</sup>

#### Position in *Dhatu Parinama*

*Rasa Dhatu* is the **first** of the *Saptadhatu*s (seven body tissues) and is formed from *Ahaara Rasa*—the digested essence of food. According to *Ayurvedic* physiology (*Kriya Sharir*), this *Rasa* is formed after the digestion of food in the *Amashaya* and *Grahani*, influenced by *Jatharagni* and *Dhatu Agni*.<sup>8</sup>

*Rasa* → nourishes *Rakta Dhatu* → *Mamsa* → *Meda* → *Asthi* → *Majja* → *Shukra*

#### Site (*Sthana*) of *Rasa Dhatu*

As per *Sushruta Samhita*, the primary site of *Rasa Dhatu* is the **heart (Hṛdaya)** and the **ten great vessels (Dasha Maha Srotas)** originating from it. These correspond to the circulatory and lymphatic systems.<sup>9</sup>

#### Formation (*Rasotpatti*)

The transformation of *Ahaara Rasa* into *Rasa Dhatu* is governed by:

- *Jatharagni* – for digestion of food
- *Rasagni* – the specific metabolic fire responsible for *Rasa Dhatu*

- *Srotas* – channels (especially *Rasavaha Srotas*) that transport this *Dhatu*

This *Rasa* is circulated throughout the body to nourish all tissues.

### Governing *Dosha*

*Rasa Dhatu* is mainly governed by **Kapha Dosha**, as it reflects properties like *Snigdha* (unctuous), *Shita* (cold), *Mridu* (soft), and *Sthira* (stable). This explains its cooling, nurturing, and stabilizing functions in the body.<sup>10</sup>

### Functions of *Rasa Dhatu* (*Rasa Karma*)

As mentioned in *Charaka Samhita* and *Sushruta Samhita*, the primary functions of *Rasa Dhatu* include:

- **Poshana** (nourishment of all other *Dhatus*)
- **Preenana** (satisfaction of body tissues)
- **Jeevana** (supporting life)
- **Tarpana** (hydration and lubrication)
- **Stanya Janana** (formation of breast milk)
- **Ojas Sthiti** (support and maintenance of *Ojas* – vital immunity essence)

### Correlation with Modern Physiology

Modern scholars correlate *Rasa Dhatu* with:

- **Plasma** – the fluid portion of blood that carries nutrients
- **Lymph** – fluid that supports immunity and tissue drainage
- **Interstitial fluid** – which nourishes and hydrates cells
- It includes the early products of digestion and absorption that provide nutrients to the tissues.

### Related *Srotas* – *Rasavaha Srotas*

According to *Charaka*, the *Rasavaha Srotas* have:

- **Root (Mula):** *Hridaya* (heart) and *Dash Dhamanis* (major vessels)
- **Pathology:** Obstruction, vitiation (*Dushti*) can cause edema, lethargy, loss of appetite, emotional imbalance, and dryness.

### Disorders of *Rasa Dhatu* (*Rasa Dushti Lakshana*)

Imbalance or depletion (*Rasa Kshaya*) can lead to:

- Dryness of skin and mucosa
- Fatigue and weakness
- Emotional instability (*Manasik Daurbalya*)
- Reduced lactation (*Stanya Kshaya*)
- Low immunity and *Ojas* deficiency

### Principles of Management

To restore *Rasa Dhatu*, *Ayurveda* recommends:

- **Nourishing diet (*Brimhana Ahaara*):** Milk, ghee, fresh fruits
- **Rasayana therapy:** Use of *Rasa-enhancing* herbs like *Ashwagandha*, *Shatavari*, *Guduchi*
- **Stress management:** Yoga, *Sattvic* lifestyle, mental calmness
- **Srotoshodhana** (cleansing of channels) to facilitate free flow of *Rasa*

### MODERN CONCEPT

**Plasma** is the clear, straw-colored, fluid portion of blood in which blood cells (red cells, white cells, and platelets) are suspended. It constitutes approximately **55% of total blood volume** and is composed of about **90–92% water** and **8–10% dissolved substances** such as proteins, glucose, hormones, electrolytes, enzymes, and waste products.<sup>11</sup>

### Composition of Plasma

- **Water (90–92%)** – Acts as a solvent and medium of transport
- **Plasma proteins** – Albumin, globulin, fibrinogen

- **Nutrients** – Glucose, amino acids, lipids
- **Hormones** – For regulation of metabolism and body functions
- **Electrolytes** – Sodium, potassium, calcium, chloride, bicarbonate
- **Gases** – Oxygen, carbon dioxide
- **Waste materials** – Urea, creatinine, bilirubin

### Functions of Plasma

| Function of Plasma                                  | Corresponding Function of <i>Rasa Dhatu</i>       |
|---|---|
| Transports nutrients, hormones, and waste products  | <i>Poshana</i> (nourishment) of all <i>Dhatus</i> |
| Maintains blood pressure and volume                 | <i>Jeevana</i> (supports life and circulation)    |
| Carries immune cells and antibodies                 | Supports <i>Ojas</i> (immunity and vitality)      |
| Regulates acid-base and fluid balance               | Maintains <i>Sharira Tarpana</i> (hydration)      |
| Acts as a medium for exchange at the cellular level | <i>Preenana</i> (satisfaction of tissues)         |

### Results and Findings

- *Rasa Dhatu* is the first and most essential tissue in *Ayurveda*, responsible for nourishing all other *Dhatus*.
- It supports hydration, immunity (*Ojas*), emotional well-being, and milk production (*Stanya*).
- Imbalances lead to fatigue, dryness, low immunity, and psychological issues.
- It closely resembles **plasma, lymph, and interstitial fluid** in modern science.
- The integrative view of *Rasa Dhatu* includes physical, mental, and emotional nourishment—offering a broader understanding than modern physiology alone.

### DISCUSSION

*Rasa Dhatu*, as described in classical *Ayurvedic* texts, holds a foundational role in maintaining life and health. It is the first tissue formed after digestion and is responsible for nourishing

all subsequent *Dhatus*. Its primary functions include *Poshana* (nourishment), *Preenana* (satisfaction), *Tarpana* (hydration), and *Stanya Utpatti* (breast milk formation). These indicate its role not only in physical sustenance but also in emotional and psychological stability.<sup>12</sup>

The classical texts such as *Charaka Samhita* and *Sushruta Samhita* highlight that *Rasa Dhatu* circulates through *Rasavaha Srotas* with the *Hridaya* (heart) as its root. This aligns closely with the function of plasma in modern physiology, which is responsible for transporting nutrients, hormones, and immune components throughout the body. Similarly, interstitial fluids and the lymphatic system reflect the nourishing and immune-supporting aspects of *Rasa Dhatu*.<sup>13</sup>

Imbalances in *Rasa Dhatu* (*Rasa Kshaya* or *Rasa Dushti*) manifest in the form of fatigue, dryness, poor immunity, emotional instability, and inadequate lactation. These clinical symptoms can be correlated with plasma protein deficiencies, dehydration, lymphatic blockage, or hormonal imbalances in modern science. This reveals that ancient *Ayurvedic* observations of physiological dysfunction remain highly relevant today.<sup>14</sup>

Additionally, *Ayurveda* offers a broader perspective by associating *Rasa* with mental well-being. Emotional nourishment, satisfaction, and clarity of mind are considered outcomes of healthy *Rasa Dhatu*. Modern disciplines like psychoneuroimmunology and nutritional psychiatry are beginning to explore similar links between nutrition, mood, and immunity—validating the holistic vision of *Ayurveda*.<sup>15</sup>

Thus, the study of *Rasa Dhatu* bridges traditional and modern medical understanding. Recognizing its integrative role encourages a more holistic approach to diagnosis and treatment. By combining the depth of *Ayurvedic* insight with contemporary physiological knowledge, practitioners can offer more comprehensive care aimed at total body–mind well-being.<sup>16</sup>

## CONCLUSION

In *Ayurveda*, *Rasa Dhatu* is considered the foundational tissue that nourishes and sustains all other *Dhatus*, while also supporting hydration, immunity, emotional stability, and lactation. Its close correlation with plasma, lymph, and interstitial fluid in modern physiology highlights its vital role in circulation and systemic nourishment. However, *Ayurveda* uniquely extends its significance to mental and emotional well-being, offering a holistic understanding of health. Recognizing the multifaceted role of *Rasa Dhatu* bridges traditional wisdom with modern medical science and reinforces its importance in both preventive and therapeutic care.

## CONFLICT OF INTEREST – NIL



## SOURCE OF SUPPORT -NONE

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