

SAPTADHATU CONCEPT IN AYURVEDA- A RESEARCH STUDY**Dr. Vikram Vir Bhushan*¹ and Dr. Muneesh Sharma²**

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ABSTRACT

If we look at the word “Saptadhatu” Dhatu is that which bears or supports, while sapta indicates seven. Seven essential tissues are recognized by Ayurveda as giving the body structure, growth, and nourishment. These tissues, known as dhatus, resemble the primary tissues recognized by contemporary science in many respects. They are reserved inside the limitations of the mucous membrane on the privileged and the skin on the outside. The form grows strong because each Dhatu has an Updhatu, or subunit. They give the body stability, power, and form. One of the three biological humors (Doshas) governs each dhatu. Although they strengthen and sustain the body, Updhatu are not careful Dhatus because they do not nourish the body tissues like Dhatus do. Once food is fully digested, the building of tissues commences. The first tissue that gets strength is plasma and then sequentially other tissues are fed. As per Ayurveda, appropriate. An

imbalance within any tissue will, therefore, affect all subsequent tissues. Plasma is rich in digestive nutrients and vigorously transfers these nutrients to subsequent tissue layers. In this way, even the deepest and most complex tissues are nourished by the foods we eat. Dhatu means body constituents which build the basic structure and carry various physiological functions. They work as body tissues, stabilize, and sustain body. The term “Dhatu” generally refers to the seven structural components of the body. The structural and functional integrity of body depends upon dhatu.^[1] Therefore, it is important to comprehend the idea of dhatu. Hence, this article will cite about dhatus and its importance.

KEYWORDS: *Saptadhatu, Ayurveda, importance.*

INTRODUCTION

The suffix "Tun" is added to the word root "Dha" to create the word "dhatu." The word has the following origin. denoting that which is nourished and bears. The Sanskrit word generally conveys the sense of a metal, verbal, grammatical root, essential, elementary substance, or module. Fertilization occurs^[1] when healthy Purush Beeja (spermatozoa) and Stree Beeja (ovum) combine in the presence of Jeeva (soul, a life factor), and a new life takes shape. According to Ayurveda, the fetus, or Garbha, reaches maturity in the mother's womb through multiple interactions under the guidance of Pancha Mahabhuta (the five basic elements)^[2], after which it differentiates into various cell lineages. As a result, one fertilized human egg, or ovum, separates and grows.^[3] To sustain an individual's health, cell differentiation and development continue throughout the prenatal and postnatal stages of life. Through the reaction of an undifferentiated and unspecific mother cell known as a stem cell, the cell achieves differentiation and specification of cell type. Adult stem cells and embryonic stem cells (ES cells) are the two different origins of stem cells. For a long time, scientists studying biology and medicine have been interested in stem cells. These offer resources for the field of regenerative medicine.^[4] US researchers discovered a method in 1998 for removing stem cells, or primitive cells, from embryos and sustaining their growth in a lab setting. This led to the era of stem cell researches.^[5] The current trend in the life sciences is the introduction of stem cell theory. This appears to be more in line with the ancient wisdom of Dhatu Siddhanta, which is the philosophy of tissue development and differentiation. A cell's ability to function normally is always impacted by a number of things, including stress, chemicals, illnesses, and environmental dangers. Nevertheless, the cell adapts to live and carry out its purpose.^[6] Age brings with it a host of alterations at every level of the cell. An exclusive method of Ayurveda is Rasayana (rejuvenation) therapy, which aims to prevent aging. The Seven Bodily Tissues, or Saptadhatu Dhatu is that which bears or supports, while sapta indicates seven. Seven essential tissues are recognized by Ayurveda as giving the body structure, growth, and nourishment. Dhatus, the name for these tissues, inside. They provide support, strength and structure to the body. Ojas is the ultimate "essence" of each dhatu. The most effective way to improve the health of the dhatus is to increase ojas. Improper diet and digestion, on the other hand, will lead to ama formation in each tissue layer.

The Seven Dhatus & their function

RASA DHATU

1. Made up of water element.
2. Rasa means to move.
3. It can be compared with plasma and extra cellular fluid in the body.
4. When rasa dhatu is depleted skin becomes dry, and hard, person is dull, lean, tired, and intolerant to loud speech and noise.
5. When rasa dhatu is in excess loss of appetite, excessive salivation, nausea laziness, feeling of heaviness, coldness, cough and excess of sleep is felt. Functions It makes the person cheerful, happy and leaves the skin glowing and nourishes Rakta dhatu.

RAKTA DHATU

1. Made up of fire element.
2. It can be compared with formed elements of blood like Red Blood Cells(RBC), White Blood Cells(WBC), and Platelets etc.

FUNCTIONS

It takes care of our complexion, nourishes Mamsa dhatu and is governed by pitta dosha. When rakta dhatu is depleted, the qualities of pitta dosha and fire diminish. A person feels cold, the skin loses its luster becoming pale or dusty gray, and coldness causes the body to hold on to heat by becoming constipated and by reducing urination and sweat. In the mind, depletion of the rakta dhatu leads to dullness, and difficulty processing and understanding new information. This often leads to confusion and misunderstandings. Person has desire for sour and cold things. When the rakta dhatu is in excess, the qualities of pitta dosha and fire increase. A person feels warmer. As heat builds up in the body, the body tries to release the heat. The body tries to release the excess heat along with the malas of the body. The frequency of bowel movements increases and the stools may become loose. The frequency of urination also increases.^[7]

MAMSA DHATU

Made up of earth element. Functions Strengthens the body, builds good muscle tissue in neck shoulder and thigh area. Nourishes meda dhatu and is governed by kapha dosha and earth element. When mamsa dhatu is depleted then it causes debility of sense organs, emaciation of cheeks, buttocks, pain in joints. When mamsa dhatu is in excess then product. Bones and teeth are developed over one another (extra bone, extra teeth).

MEDA DHATU

Made up of earth and water elements. Functions Well lubricates system, with oily and soft hair, skin, and efficient eyes. Nourishes Asthi dhatu and is governed by Kapha. When medas dhatu is depleted then it leads to spleen enlargement, difficult joint movements, emaciation at abdomen, desire to consume fatty food. When medas dhatu is in excess then person gets tired, fat increases at abdomen, thighs, neck etc, and foul smell in sweat, shortness of breath etc.

ASTHI DHATU

Made up of air and space elements.it help in nourishing vitals.

MAJJA DHATU

Made up of water element. Functions Imparts sharp, clear mind with good intellect and memory. Strong joints. Govern by kapha dosha. When majja dhatu is depleted then bones get weak, joint pain, vertigo, giddiness occur and shukra dhatu is also depleted.

When majja dhatu is in excess then heaviness in eyes, and whole body occurs.

SHUKRA DHATU

Functions Has patience, enjoys life and body strength. Reproductive needs are concern. Govern by kapha dosha. In case of shukra dhatu depletion ejaculation is delayed, bloody ejaculation occurs, pain in testicles, body is weak and thirst occurs. When there is excess of shukra dhatu desire of excess coitus is there and stone in the shukravaha strotas may occur with pain. *Ayurveda's* special method of healing blends medicinal treatment with *Rasayana* (rejuvenation) therapy to keep people healthy and treat illnesses.^[1] A functioning cell is always an essential component of a living organism. *Sharira Dharana* and *Poshana* are *Dhatu's* two main responsibilities.

Dhatu translates to "bears" or "supports," whereas *Sapta* signifies "seven." According to *Ayurveda*, the body's seven main tissues provide structure, growth, and nourishment to the whole.^[3] *Dhatu's* are a type of tissue that has many similarities with the primary tissue that have been found by current science. The mucous membrane's borders hold them in place from the inside, and the skin's boundaries enclose them from the outside. Each *Dhatu* has a subunit, or *Updhatu*, that works in concert with the other *Dhatu's* to strengthen the body. The three biological humours, or *doshas*, control the *dhatu's*. *Updhatu* sustain and strengthen the body, in contrast to *Dhatu's*, which feed the tissues.^[5] According to *Ayurveda*, proper eating

and digesting practices guarantee maximum tissue regeneration. After food has been fully digested, tissue formation begins. "Dhatu-Kshaya" refers to the loss or thinning of body tissues.^[6] Knowing *Dhatu* and *Dhatu-Kshaya* is as important to learning about disease processes as knowing *Tridosha*. This review will highlight, evaluate, expound upon, and discuss *Dhatu-Kshaya*.

DISCUSSION

Dhatu Siddhanta (Theory of tissues formation and differentiation)

The central idea of *Ayurveda* is based on the equilibrium of *Tridosha*, *Saptadhatu*, and *Trimala*. Each of these is suitably nourished following a meal by the influence of their own *Jatharagni* (digestive energy) potency.^[7] Then, each level of *Dhatu* (bodily tissues) receives the productive nutrients (*Ahara Rasa*) for sustenance. Ultimately, all the nutrients needed for the synthesis and growth of every tissue come from a single pool. Their assistance is transported to the *Dhatu's* location. Every *Dhatvagni's* function affects every *Dhatu's* feeding (the metabolic energy of every tissue). Promoting the growth of self-clones of the corresponding tissue and dependent tissues (*Upadhatu*) is the primary responsibility of each *Dhatvagni*. The primary function of each *Dhatvagni* is to promote the development of comparable tissue and dependent tissue self-clones (*Upadhatu*). Furthermore, every *Dhatu's* *Dhatvagni* provides the vitamins that subsequent tissues require, hence augmenting their capacity for cloning. Consequently, other *Dhatu*s are fed and grew by the *Dhatu*s of *Rasa*, *Rakta*, *Mamsa*, *Meda*, *Asthi*, *Majja*, and *Shukra*. For example, *Rasadhatvagni* is essential for the growth of *Rakta Dhatu* from *Rasa Dhatu*, and the *Mamsa Dhatu* is further nourished by the effect of *Raktadhatvagni*. The process of forming the next *Dhatu* may be affected if the potency of any degree of *Dhatvagni* changes. Certain metabolic byproducts known as tissue excreta, or *Dhatumala*, are formed during this process. Everybody experiences the same *Dhatu* differentiation and development phenomenon throughout their lives. Tissue deterioration may result from *Ayurveda* explains some theories of tissue genesis and development (*Dhatu Pushti Nyaya*). The four primary theories are *Khale Kapota Nyaya*, *Ksheera Dadhi Nyaya*, *Kedara Kulya Nyaya*, and *Ek Kala Dhatu Pushti Nyaya*. During feeding from *Rasa* to *Shukra Dhatu*, the *Dhatvagni* of each *Dhatu* essentially divide essential materials into three divisions: *Sukshma*, *Sthula*, and *Mala Bhaga*. Organs can survive a lifetime because tissue-specific stem cells can self-renew and produce differentiated progeny.

1. Rasa Dhatu Kshaya or depletion of Plasma: The *Rasa* is the first tissue to form after food is broken down. Once the food has been digested, the substance is known as *Rasa Dhatu*. It is likened by some to blood plasma. The *Kapha Dosha* and *Rasa Dhatu* are closely related. *Rasa Dhatu* is directly impacted by variations in *Kapha Dosha*. A decrease in *Rasa Dhatu* signifies malnourishment and dehydration.^[8-10]

The following are the symptoms

Ghattate: the patient gets agitated Sahate Shabdham Na: Individual who cannot tolerate loud noises and grows intolerance Palpitations caused by Hrudrava.

The symptoms of Rudayam Tamyati

1. Alpa Cheshtasya
2. Api includes heart palpitations
3. Fatigue even at low levels of activity.

2. Rakta Dhatu Kshaya or depletion of Blood: *Rasa Dhatu* is the source of nourishment for blood tissue; *Pitta* and *Rakta* are inseparably connected. Blood tissue is directly impacted by an increase or decrease in *Pitta Dosha*.^[10] Anaemia symptoms, which include:

- *Parusha* (roughness)
- *Sphutita* (cracks)
- *Mlana* (dullness)
- *Tvakrukshata* (dry skin)

These are brought on by the depletion of blood tissue.

3. Mamsa Dhatu Kshaya or depletion of Muscle tissue: *Rakta Dhatu* provides nutrition to muscle tissue. Limb weakness is directly caused by the depletion of muscle tissue which is caused by:-

- *Sphik, Greeva Udara Shushkata* - emaciation of the buttocks, neck and abdomen.
- *Glani* - Exhaustion even without any work
- *Sandhi Sphotana* - Cracking sound in the joints
- *Akshno-Ayasa* - Tired eyes

4. Medo Dhatu Kshaya or depletion of Fat tissue: Fat tissue receives nourishment from *Mamsa Dhatu*. Absence of this leads to thinness of the body.

- *Udara Tanutva* - Thinness of the abdomen.

5. *Asthi Dhatu Kshaya* or depletion of Bone tissue: Bone tissue has an inverse relationship with *Vata Dosha*. This implies that bone tissue loss is caused by an increase in *Vata Dosha* and vice versa.

Ayurveda says that bone tissue is related to the teeth, nails, and moustache. Therefore, the following signs of bone tissue loss are present:

- *Kesha, Loma, Nakha, Shmashru, Dvijaprapatana* - falling of hair, nails hair of the beard including moustaches and teeth
- *Shrama* - tiredness
- *Sandhi Shaithilya* - looseness of joints.

6. *Majja Dhatu Kshaya* or depletion of Bone marrow: According to *Ayurveda*, *Asthi Dhatu* provides nourishment for the marrow. The symptoms of *Majja* depletion as follows:-

- *Asthi Sheeryata* - Emptiness of bones
- *Durbala, Laghu Asthi* - Thinness, weakness, and lightness of the bones
- *Vata Roga* - Frequent affliction with *Vata* imbalance disorders.

7. *Shukra Dhatu Kshaya* or depletion of Semen / Female reproductive tissues: According to *Ayurveda*, the reproductive systems of men and women make up *Shukra Dhatu*. It receives nutrition from *Majja Dhatu*. Its depletion causes the following symptoms:-

- *Daurbalya* - Weakness
- *Mukha-Shosha* - Dryness of mouth
- *Pandutva* - Pallor
- *Sadana* - Lassitude
- *Shrama* - Tiredness
- *Klaibya* - Impotency
- *Shukra-Avisarga* - Non-ejaculation of semen, nonovulation.

CONCLUSION

Doshas are the energy forms, whereas Dhatus and Malas are the structural components. Asrayaas and Asrayees are the terms used to refer to the Dhatus and Doshas, respectively. "Sharira Dharanat Dhatvah," or the things that give the body support and nourishment, is the definition of dhatu. "Panchamahabhuta Vikaara Samudayatmakam," or the construction of the body's various organs and tissues, is attributed to the Dosha, Dhatus, and Malas. Their unity as Panchabhutas has earned them the title "Panchamahabhuta Vikara." It may be

beneficial for future medical researchers to reciprocally integrate concepts from Ayurvedic Dhatu-Kshya (depletion) Siddhanta.

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