

**PHYSIOLOGICAL ASPECT OF PANCHMAHABHUTA THEORY IN AYURVEDA:  
A REVIEW****Babita Sharma<sup>1</sup>, A.P.S. Chauhan<sup>2</sup>, Sunil Mewade<sup>3</sup>**

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**ABSTRACT**

The doctrine of *Panchmahabhuta* is one of the fundamental principles of Indian philosophy. In *Ayurveda*, the applied aspect of *Panchamahabhuta* is accepted, according to which every matter whether it is living or non-living is composed of these five basic elements - *Akasha*, *Vayu*, *Teja*, *Jal*, and *Prithvi*. These five basic elements together with the *Atma* (*Chetana* principle) are the basis of life also called *Sharira/ Purusha* (*Sad-Dhatwatmaka*) and is the *Adhikarana* of *Chikitsa* and is also known as *Chikitsya Purusha*. *Ayurveda* physiology is also based on this theory, which believes that these five fundamental elements together form three biological entities in the living body named *Dosha*, *Dhatu* & *Mala* together responsible for all bodily activities. In *Ayurveda*, the doctrine of *Panchmahabhuta* is applied in various aspects like the evolution of *Tridosha*, *Dhatu*, *Mala*, *Indriyas*, body parts, embryonic development, and digestion and metabolism as five *Bhutagnis*, etc. The present article is an effort to review the physiological aspect of *Panchamahabhuta* theory in *Ayurveda*.

**Keywords:** *Ayurveda*, *Panchamahabhuta*, *Dosha*, *Dhatu*, *Mala*.

## INTRODUCTION

*Ayurveda* is the science of life that guides all the aspects of life & shows a holistic approach toward health including the prevention of health & cure of diseases.<sup>1</sup> Term *Ayurveda* means the science of life. *Ayu* represents a combination of the psyche (*Manas*), soul (*Atma*), physical bodies & sense organs (*Indriyan*). *Charaka* defines *Ayurveda* which deals with four aspects of life: *Hitayu* (beneficial, attained by right adaptations of diet and lifestyles), *Ahitayu* (harmful, attained by wrong adaptations regarding diet & lifestyles), *Sukhayu* (pleasurable life with comfortable conditions of body & mind) & *Dukhayu* (unpleasurable life with uncomfortable conditions of body & mind).<sup>2</sup> The aim of life is to fulfill all four objects of life called as *Purusharth*: *Dharma* (way to attain happiness, satisfaction & peace of mind) *Artha* (to attain wealth/materialistic fulfillment), *Kama* (fulfillment of desire especially sexual desires) & *Moksha* (salvation/freedom from rebirth or world).<sup>3</sup> *Ayurveda* has some of its fundamental principles, which are universal, intact & invariant, and form the backbone of this system of science e.g. Some are the theory of *Panchabhuta*, *Triguna*, *Tridosha*, *Sapta Dhatu*, *Trimala*, *Trayodasha Agni*, etc. Human being the part of the universe perceives the environmental changes with the help of sense organs, called *Indriya* in *Ayurveda*. There are five *Gyanendriyan*. Each perceives one sense which represents one *Bhuta*. The doctrine of *Panchamahabhuta* is one of the fundamental principles of Indian philosophy. In *Ayurveda* also the applied aspect of *Panchamahabhuta* is accepted. According to which every matter whether it is living, or non-living is composed of these five basic elements - *Akasha*, *Vayu*, *Tej*, *Jala*, and *Prithvi*.<sup>4</sup> This doctrine is applied in various references in our classical texts, fulfilling both the objects of *Ayurveda*, that is prevention and cure, e.g., the evolution of *Tridosha*, *Dhatus*, *Mala*, *Indriyas*, body parts, embryonic development, digestion, and metabolism as five *Bhutagnis*, etc. When these five are in balanced proportion body is healthy, but due to day-to-day activity bodily matter gets deficient & this equi-

librium gets disturbed to maintain it, so for maintaining growth replenishment is required. The body requires to compensate for the deficiencies in the food, which is also *Panchabhautika* in the constitution, thus according to *Ayurveda* the *Panchabhautika* diet, which nourishes the body and mind is considered a balanced diet, maintaining the state of *Dhatusamyā* (a balanced condition of body elements) resulting in ease, happiness and sense of well-being.<sup>5</sup>

*Panchamahabhuta* is considered the basic unit of the body & also the cell structure may be compared with the *Panchamahabhuta* so *Panchamahabhuta* in its subtle form is present in every cell of the body.

- Space in vacuoles represents *Akasha Mahabhuta*.
- O<sub>2</sub> & CO<sub>2</sub> present in the cell represents *Vayu Mahabhuta*.
- The metabolism occurring in the cell as in mitochondria & other intracellular organelles is due to *Agni Mahabhuta*.
- Intracellular fluid /protoplasm represents *Jala Mahabhuta*.
- The structure of the plasma membrane and other solid contents present in the cell represents *Prithvi Mahabhuta*.

*Dosha*, *Dhatu* & *Mala* are the representatives of *Panchamahabhuta* in the body.<sup>6</sup>

As stated by *Ashtang Sangriha Vata* is constituted by the predominance of *Akasha* and *Vayu Mahabhuta*, *Pitta* is from *Agni Mahabhuta* while *Kapha Dosha* is made up of predominance of *Ap* and *Prithvi Mahabhuta*. *Charaka* explains the physical composition of *Sapta Dhatu* as follows:

*Rasa Dhatu* exhibits predominance of *Jala mahabhuta*, *Rakta Dhatu* has *Agni Mahabhuta*, *Mamsa Dhatu* has *Vayu*, *Agni*, and *Ap Mahabhuta*, *Meda Dhatu* has *Agni* and *Ap mahabhuta*, *Asthi Dhatu* is made up of *Vayu*, *Agni*, and *Prithvi Mahabhuta* while *Majja* and *Shukra Dhatu* exhibit predominance of *Ap Mahabhuta*. *Purisha* has a predominance of *Ap* and *Prithvi*, *Mutra* has *Ap* and *Agni* while *Sweda* is made up of *Agni* and *Ap Mahabhuta*.<sup>7</sup>

**Table 1:** Mutual Relation between *Rasa*, *Panchamahabhuta* & *Dosha*<sup>8</sup>

S. No.	Rasa	Panchabhautika Composition	Dosha Alleviation	Dosha Aggravation
1	Madhura	Ap & Prithvi	Vata & Pitta	Kapha
2	Amla	Prithvi & Agni	Vata	Pitta & Kapha
3	Lavana	Ap & Agni	Vata	Pitta & Kapha
4	Katu	Vayu & Agni	Kapha	Vata & Pitta
5	Tikta	Vayu & Akasha	Pitta & Kapha	Vata
6	Kashaya	Vayu & Prithvi	Pitta & Kapha	Vata

The factor which cannot be destroyed & remain always existed & is unified with their attributes. So are neither destroyable nor creatable & are originated from five. Each *Tanmatra* exhibits one *Guna* (property). The *Prakriti* from which all the factors are required to originate exhibits *Triguna*. *Panchamahabhuta* being evolved from *Prakriti* is also attributed *Triguna*.

**Table 2:** *Panchamahabhuta* & *Triguna* (Inter-relation)<sup>9</sup>

S. No.	Mahabhuta	Predominant Triguna
1	Akasha	Satva
2	Vayu	Raja
3	Agni	Satva & Raja
4	Jala/Ap	Satva & Tama
5	Prithvi	Tama

These five basic elements together with the *Atma* (*Chetana* Principle) constitute *Sharira/ Purusha* (*Sad - Dhatwatmaka*), serving as *Adhikarana* of *Chikitsa* so is also known as *Chikitsiya Purusha*.<sup>10</sup> exhibiting three basic characteristics:

- The embodiment of *Chetana* (*Atma*)
- Body entities composed of *Panchamahabhuta Vikara* (*Dosha, Dhātu and Mala*, etc.)
- Coordination between different body constituents.<sup>11</sup>

The living body is produced from *Panchamahabhuta*. It'll entities are also produced from *Panchamahabhuta Vikara* including *Dosha, Dhātu & Mala*. All are coordinated & are connected through proper channels & are maintained within physiological limits.

*Tridosha* theory is a unique feature of *Ayurveda* philosophy. All three *Doshas* have all the five *Mahabhutas* in their composition, showing predominance of one or two *Mahabhuta* in each.<sup>12</sup>

*Sharira* (living body) is made up of *Dosha, Dhātu & Mala*, which are considered the root of a living body. As roots are important to plants, all these three are important for life. *Dosha* originated first in embryo & work for organizing *Sapta Dhatus* in a very proper manner in intrauterine life. *Dosha* moves in the entire body to maintain homeostasis & to keep the body healthy. That's why *Tridosha* are called supporters (*Tristana*) of the body but when *Tridosha* is not in equilibrium may cause diseases.<sup>13</sup> According to *Lok Purush Samya* theory of *Charaka* whatever presents in the universe, is present in the living body. Out of five basic elements, Three *Vayu, Agni & Ap* represent *Vata, Pitta & Kapha* in the living body while the remaining two *Mahabhuta Akasha & Prithvi* remain inactive.<sup>14</sup>

**Table 3: Importance of Tridosha**

S. No.	Functions	Universe	Living body
1	Visarga (union & structure)	Soma (moon)	Kapha
2	Adana (digestion & metabolism)	Surya (sun)	Pitta
3	Vikshepa (movements & circulation)	Anila (Vayu)	Vata

**Table 4: Panchabhautika Constitution of Tridosha**

S. No.	Dosha	As described by Sushruta	As described by Vagbhata
1	Vata	Vayu	Vayu, Aakasha
2	Pitta	Agni	Agni
3	Kapha	Ap	Prithvi, Ap

**Panchabhautika Constitution of Indriyan:**

The theory of Panchamahabhuta is based on the hypothesis that there are only five senses (Indriyas) evolved in the human body so far to perceive the external world and also to absorb it in the form of energy, all five senses (Indriyas) are Panchabhautika in constitution<sup>15</sup>. Each sense is designed in such a way that

it shows the predominance of one Mahabhuta and so it responds to only one particular type of stimulus. Acharya Charaka mentions the inter-relation of five senses with Panchamahabhuta in the form of Panch Panchaka (five pentads) hypothesis.<sup>16</sup>

**Table 5: Indriya Panch Panchaka (Five Pentads)**

S. No.	Sense Faculty	Sense Materials	Sense Organs	Sense Objects	Sense Perceptions
1	Hearing	Akasha	Ears	Sound	Auditory
2	Touch	Vayu	Skin	Touch	Tactile
3	Vision	Tejas	Eyes	Color	Visual
4	Taste	Ap	Tongue	Taste	Gustatory
5	Olfaction	Prithivi	Nose	Smell	Olfactory

**Panchabhautika Constitution of Body Entities:**

The human body and its part evolved from a combination of Panchamahabhuta. Each of them shows the dominance of a Mahabhuta in its evolution (law of

dominance/Vyapade Shastu Bhuyasa). So, the body parts are grouped into five categories based on the predominance of Mahabhuta.<sup>17</sup>

**Table 6: Panchabhautika Constitution of Body Entities**

Aakashiya	Vayaviya	Tejas	Apya	Prithvi
Ear	Skin	Pitta	Rasa	Bones
		Agni	Rakta	Teeth
			Vasa	Tooth enamel
			Kapha	Muscles
			Pitta	Skin
			Mutra	Stool
			Sweda	Hair
			Rasanindriya	Beard
			Kleda	Tendons
				Nose

### Role of Panchamahabhuta in Embryonic Development:

Panchamahabhuta plays important role in the development of the embryo by influencing the body constitution of the fetus (*Bhautik Prakriti*). During embryonic development, cells are divided under the influence of *Vayu Mahabhuta*, cellular metabolism is operated by *Agni*, *Ap* is responsible for wetness, *Prithvi* for solidity, and *Akasha* for expansion.<sup>18</sup>

### Role of Panchamahabhuta in Digestion:

*Panchamahabhuta* plays important role in the conversion of exogenous *Mahabhutas* into endogenous *Mahabhutas* in the form of five *Bhutagnis*.<sup>19</sup>

### Functions of Panchamahabhuta in Body:

All body entities exhibit the dominance of one *Mahabhuta* in each showing the characteristics and performing the functions of its dominant *Mahabhuta* in the body.<sup>20</sup>

**Table 7:** Functions of *Panchamahabhuta* in the Body

S. No.	Panchamahabhuta	Functions / Characteristics
1	<i>Aakasha</i>	Open spaces (porosity)
		Channels of nutrients ( <i>Srotas</i> )
		<i>Shabda</i> (sense of hearing)
2	<i>Vayu</i>	All bodily movements
		Locomotion
		Initiation, stimulation, lightness
3	<i>Tej</i>	Sense of touch
		Radiance
		Good complexion
		Bodily heat
		Velour
		Digestive power
4	<i>Ap</i>	Mental sharpness
		Good grasping power
		Fluidity
		Free-flowing and moisture
		Tenderness
		Sense of taste
5	<i>Prithvi</i>	Laxity
		Affection
		Density
		Stability
		Endowed
		Solidity
		Heaviness
		Roughness
		Hardness

## DISCUSSION

As the *Lok-Purusha Samya* theory of *Charaka* states that whatever constitutes the external world may also constitute the living body. Materialistically *Panchabhautika* is the connecting link between the universe

& living body. These are the principal factors responsible for the creation of *Purusha* within the universe, where *Akasha* represents spaces, *Vayu* represents movements, *Agni* represents temperature, *Jala* liquidity & *Prithvi* solidity. According to modern science,

the atom is considered the unit of all elements, its composition is also explained in terms of *Panchamahabhuta* theory as atomic weight is correlated with *Prithvi Mahabhuta*, cohesive force responsible for holding electrons, protons and neutrons together correlates with *Ap*, the energy of atom correlates with *Agni Mahabhuta*, moving force responsible for movements of electrons correlates with *Vayu Mahabhuta* & the space in which electron move correlates with *Akasha Mahabhuta*.<sup>21</sup>

According to genetic basis, the human genome may correlate with the *Shatdhaut Purusha*, serving as the subject of *Chikitsa* & is composed of *Panchamahabhuta* (physical body) along with the *Chetna Tatva* residing in the physical body. It is also termed as *Chikitsya Purusha* or *Karmapurusha*.<sup>22</sup> *Manas* is also influenced by the psychological attributes of these elements as *Mahabhutas* are the derivatives of *Triguna* (*Satva, Raja & Tamoguna*), therefore a manifestation of these five basic elements together form the connecting link between the evolution of body & mind both.<sup>23</sup> Alike the external world, in the living body these five elements combine differently under specific settings to evolve the structural & functional entities named *Dosha, Dhatu & Mala*, working together to maintain body activities. *Tridosha* the biological entities govern all bodily activities in accordance with its unique *Panchabhautika* composition. *Vata* represents the dynamic energy principle & is responsible for movements & transports in the form of the locomotor system, breathing, beating of heart, blood flow, gut peristalsis, elimination of wastes, nerve impulse conduction, transport across the membranes, cell division, etc. Furthermore, by controlling the other two *Doshas* (*Pitta and Kapha*), *Vata* maintains homeostasis of the body. While *Pitta Dosha* governs activities related to energy and metabolism, regulating digestion, secretory activities of glands, etc. *Kapha* by its binding & connecting property maintains form, structure, strength, integrity & various types of chemical binding both at structural & functional levels such as the intracellular matrix & cell connections, cell membrane & other biological membranes. Embryonic development

is also governed by the *Panchamahabhuta*. The embryo itself is defined as the sum of modifications carrying five basic elements along with consciousness.<sup>24</sup> All body organs are evolved from these five elements reflecting their attributes. Our compendia classify bodily parts on the basis of the dominance of *Mahabhuta*. The sense organs are also evolved from *Panchamahabhuta* exhibiting *Panchabhautika* composition. So are nourished & replenished by the *Panchabhautika* food as the food nourishes the *Panchabhautika* body is also composed of five basic elements. *Bhutagni* transforms heterogeneous (*Vijatiya*) basic elements of food into homogenous (*Sajatiya*) form to nourish the attributes of *Panchabhautika* bodily elements.<sup>25</sup>

After death, the body is attain this physical composition of these elements only. *Panchamahabhuta* also influences the genesis of *Prakriti* according to their attributes which may be termed as *Panchamahabhuta Vikara Prakriti* (prenatal/preconception factors). Furthermore, *Sushruta* classifies 5 types of *Bhautik Prakriti* on the basis of the predominance of *Panchamahabhuta*. Health depends on the balanced state of these basic elements. Their imbalance can be corrected by preventive & therapeutic measures according to *Samanya & Vishesh Siddhanta. Rasa, Guna, Veerya, & Vipaka*, the pharmacological properties of *Aushadh Dravya* represent manifestations of five *Mahābhūtas* showing their actions accordingly. Although *Panchamahabhuta* theory fulfills twofold objects of *Ayurveda*, in a practical aspect it is not so easy to assess the balance & imbalance of these five elements as there is an infinite variety of *Panchabhautika* matters showing diversity in their proportions, so to ascertain the causes of imbalance & method to correct them is quite difficult. That's why *Ayurveda* physiology adopts a simpler concept based on *Dosha, Dhatu & Mala*. So, the physiological aspect of *Panchamahabhuta* theory is better explained by the concept of *Dosha, Dhatu & Mala*.<sup>26</sup>

## CONCLUSION

*Panchamahabhuta* being five different species of the matter is proved to be the material basis of life. These elements play role in the development of the fetus, influence body constitution (*Prakriti*), and constituted

body parts including sense organs (*Indria*), as *Bhutagni* controls metabolism & forms the fundamental principle of drug action as a manifestation of six *Rasa* is the result of *Mahabhuta* dominance itself. The physiological aspect of *Panchmahabhuta* reflects in the form of the principle of *Dosha, Dhatu & Mala*, one of the fundamental & original concepts, proposed by *Ayurveda* making it unique among other concepts of Indian schools of philosophy. Finally, it is concluded that the theory of *Panchmahabhuta* is very significant to fulfill both the objects of *Ayurveda*, which are prevention and cure.

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