

A Kriyatamaka basis of Prana Vayu in Swasa-Praswasa Prakriya w.s.r. to Respiration


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The primary element in the Tridosha, which governs all motions, is Vata. The Sutra Sthana of the Charaka Samhita contains a chapter on Vata Kalakaliya that discusses Vata in detail. The Sharira Vata (biological Vata) and the Loka Vayu (physical Vayu) have been compared here. These two came from the Panchmahabhoota i.e., Vayu and Akash Mahabhoota's dominance. One of the five Vata Doshas, Prana Vayu originates in the Murdha and spreads over the throat and thoracic area. The Prana Vayu is located in the thorax, tongue, mouth and nose. It is responsible for various bodily activities including respiration, spitting, sneezing, swallowing and belching. It is essential for all living things to breathe in order to supply oxygen for metabolic processes and removal of harmful substances from the body. In Ayurveda, the entire idea is explained through Swasa-Praswasa Kriya, which involves Prana Vayu and Pranavaha Strotas. The Swasa-Praswasa Kriya includes Nichwasa (inspiration) which is breathing air into the body through the nose and Uchhwasa (expiration) which is breathing air outside the body through nose. Pranavaha Strotas serve the motivation for Prana Vayu.

Keywords: Pran Vayu, Respiration, Pranvaha Strotas, Swas-Praswas

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Introduction

Vata Dosha has got very important role in the maintenance of the body as well as life. The *Vata Dosha* has been divided into five types and *Prana Vayu* is one of these. It resides in head, thorax, ear, tongue, mouth and nose.[1] The Sanskrit root "AN" with the prefix "PRA" is the source of the term "*Prana*". AN means "to breathe" or "to live". Thus, all critical processes that are necessary for human survival, such as breathing, heartbeat, and other vegetative activities, are controlled by the *Prana Vata*. The connection between *Pranavaha Srotas* and the respiratory system is further indicated by the word "*Pranyati its Prana*." *Prana Vayu* is one of main type of *Vata Dosha* among all five types. Generally, *Prana* term has been used in the sense of life and represents respiration, vital air, energy.[2] According to *Acharya Sushruta*, the movement of *Prana Vayu* in the body is performed through channels called *Pranavaha Srotas*. The *Hridaya* and *Rasavahi Dhamani* are accepted as the origin of these sources. *Acharya Charaka*, although has considered the number of *Pranvaha Srotas* to be one, however, has mentioned the *Mahastrotas* along with the *Hridaya* in the context of origin. *Prana Vayu* is the one who performs the function of breathing in all living beings. Due to this important function, it has given the name *Jiva*. [3] All these functions are performed in the head, throat, chest area etc., yet their controller is *Murdha*(head) which is called brain. This is the main place of *Pran Vayu*.

Comprehensive Text of *Pran Vayu*

Functions Of *Prana Vayu*[4]

Prana Vata conduct both sensory and motor functions. In terms of the senses, it keeps the sense organs functioning by controlling sensory input and consciousness, or initiating and maintaining awake. *Prana Vata* is therefore associated with the activation of the entire body, choosing the individual who maintains focus.

Prana Vayu is also responsible for these activities:

Swasa-Praswasa (Respiration), *Sthivana* (spitting), *Kshavthu* (sneezing), *Udgara* (belching), *Aanpravesh* (swallowing of food).

In addition, the *Pran Vayu Karmas* also includes *Buddhi Karma*, *Indriya Karma* and *Dhamani Dharan Karma*.

- *Buddhi Karma* - *Buddhi Karma* is to maintain the decisive discretion of what is acceptable and what is not acceptable. This work is accomplished by the *Pran Vata* present in head.
- *Indriya Karma* - The proper perception of objects by the sense organs and the correct control of their actions by the motor organs is done by the *Pran Vayu* present in the *Murdha*(head).
- *Dhamani Dharna Karma* - The blood containing *Pran Vayu* reaching the heart and flowing through the arteries to the entire body and maintaining control of pulse rate is included in this work.

Prana Vayu mainly remains in the following spaces in the body:

According to *Acharya Charaka* and *Vagbhatta*, the *Prana Vata* is located in the areas of the neck, nose, chest, and oral cavity for the appropriate regulation and discharge of its function. *Acharya Sharangdhara* identified *Hridya* and *Nabhi* as the two locations where *Prana Vata* is located. The three Sanskrit roots "*Hri*", "*The*", or "*Ya*" combine to produce the *Hridya*. Receiving, giving away, moving, or continuing an ongoing activity of the two previous functions are the meanings of these phrases, respectively. The word *Hridya* simply denotes the function of an organ that continuously receives and gives out a substance acting as a path or conductor, for the movement of that substance, because the word *Ayan* also denotes a path or opening. The meaning of word *Nabhi* is the Nave of The Wheel, Focus, Centre, Leader, Head. The first interpretation is, the junction of the wheel's spokes and hub is known as the nave. The spokes might be regarded as either departing from it or conversing with it. *Nabhi* can therefore be seen as the head of a flat organ, precisely resembling the nave of a wheel with spokes. The second one is, as a result, the *Nabhi*, the seat of *Prana Vata*, is thought to have been situated in *Bramhandra*, a strategically valuable *Marma* in the central nervous system, where the manufacturing of nerve impulses is precisely graded.[5]

Brain and head (*Murdha*), chest and heart (*Urah*), neck and trachea (*Kantha*), tongue (*Jihva*), mouth (*Mukha*) nose (*Nasika*).[6] Descriptions of places and actions show that its main place is *Pranavah Srotas* and the main action is related to respiration.

As the cardiac region (*Urah*) has also been accepted as the site of *Prana Vayu*, the actions regarding the heart should also be understood to be governed by *Prana Vayu*. The control of the nervous system is also maintained by *Murdha* (head and brain),

And *Prana Vayu* governs it. Blood circulation in the body depends on the activity of the heart which acts as the pump house of the blood. The presence of oxygen (*Prana Vayu*) makes blood useful for the nourishment of the body.

SN		Charaka Samhita[7]	Sushruta Samhita[8]	Ashtang Sangrah[9]	Ashtang Hridya[10]
1.	Sites	Murdha (head), Urah (chest), Kantha (throat), Jihwa (tongue), Aasya (mouth), Nasika (nose)	Vatra (Mukha-Urah- Kantha) Sanchran.	Murdha, Kantha, Urah Vichran.	Murdha (head region), Urah, Kantha.
2.	Functions	Sthivana (spitting), Kshavthu (sneezing) Udgara (eructation) Swasa (respiration) Aaharkarma (deglutition)	Deha Dharna, Anna Pravesh, Pran Ablamban	Buddhi, Indriya, Mana, Hridya, Dhamni Dharan, Sthivana, Ksavthu, Udgara, Swas- Ucchwas & Anna Pravesh.	Buddhi (intelligence), Hridya (heart), Indriya (sense organs), Chitta (mind), Sthivna, Ksavthu, Udgara, Nichwas, Anna Pravesh.

Swasa-Praswasa Kriya[11]

Sharangdhara has described the place of *Prana Vayu* in *Hridya* (heart) & *Nabhi* and compared it with the process of *Swas-Praswas Kriya* which delights (*Prinayti*) and maintains (*Jivayana*) the digestive fire where it is essential for life. It is *Prana Vayu* which controls the activities of intelligence, *Manas*, organs of actions and senses, with the help of sensory and motor nervous system while it remains in *Murdha*(head).

According to *Sharangdhara's* description regarding respiration presents a very logical and attractive picture of this activity. *Samhita* describes that the *Prana Vayu* residing in naval region touching (passing through) cardiac space outcomes through *Kantha* for drinking the *Vishnu Padaamrita* (the holy water flowing from *Lord Vishnu's* feet). After drinking the *Piyush*, it again enters the body with force. The *Prana Vayu* provides strength to the whole of the body (*Prinayam Deha Makhilam*) and provokes the digestive fire (*Jivayam Jathar Anilam*).

प्राण वायु (from the umbilical region) → Through heart (हृदय) → Thorax (उरः) → Goes out through (कण्ठ प्रदेश) → Reach the Vishnupaad (विष्णुपादः) Drinking → अम्बरपीयूष (O₂) → Coming back and rejoice the life (प्रीणयन्देहम्).

The above statement is also supported by *Acharya Sushruta* by concept of *Bahya Prana* & *Abhayantra Prana* i.e., external respiration & internal respiration. Term "*Nabhi*" describes how diaphragm and abdominal muscles contribute to ventilation.

The direction of expiration from the abdomen is upward, passing through the neck and chest. All of the muscles involved in the respiration process are stimulated by the inspiration of *Prana Vayu*, which is located in *Murdha* (the head and respiratory centers). Additionally, it strengthens the muscles of the abdomen and diaphragm. The chest cavity widens as a result of its activity. According to *Chakarpani*, In the ten *Dhamanis*, *Prana Vata* has *Ucchvasa* (expiration) activity that originates from the heart and their action.

According to *Sharangdhara*, *Udana Vayu* resides in the lungs. In addition to *Vaka Pravriti* and *Pratayana*, *Udana* is in charge of expiration. The gaseous exchange that occurs at the level of the lungs' alveoli is referred to as *Sprastvahrtakamalantaram* i.e. the impure air exits the body through the *Kantha*. The location in the thoracic cavity (lungs, heart) is indicated by the word *Kritakamlanatram*, while oxygen, which is utilized for gaseous exchange, is indicated by *Amber Piyush*.

In this process, the air from the outside passes through the mouth, throat and windpipe to the lungs. The waste air (CO₂) collected in the lungs is brought through the same route and released into the external environment. The pure air reaches the lungs goes to the heart through the blood systems located there and from the heart it is transmitted to every cell of the entire body. Acc. to *Acharya Charaka*, the red colour of red blood cells is actually due to *Prana* that follows them.[12]

Acc. to *Acharya Sushruta*, the inner *Prana* of humans, along with the outer *Prana*, holds this body. This makes clear that the portion of air that reaches inside through the breath, becomes *Satmya* with the body and takes the form of the body. In this way, the qualities of both the inner and the outer *Prana* are the same. *Sharangdhara* has shown the specialty of the outer *Prana* by calling it *Amber Piyush*.

Respiration: Respiration is classified into two types

1. External Respiration: It includes exchange of respiratory gases i.e., oxygen and carbon dioxide between blood and lungs.
2. Internal Respiration: It includes exchange of gases between the blood and tissues.

Phases of Respiration: Respiration occurs in two phases:

1. Inspiration during which air enters the lungs from atmosphere.
2. Expiration during which air leaves the lungs.[13]

Control of Respiration[14]

Respiration is mainly controlled by the nervous system. There are many centres in the brain that regulate the respiratory function. The role of regulatory centres is to control both the rate and depth of respiration to maintain normal level of oxygen and carbon- dioxide in the blood.

Respiratory centres in the brain:

1. Respiratory centre in the medulla oblongata:

Dorsal respiratory neurons: Associated with inspiration.

Ventral groups of neurons: Associated with forceful expiration.

2. Respiratory centers in the Pons:

A. Apneustic Centre: It is located in the lower pons. The nerve impulses from the apneustic centre stimulate the inspiratory centre.

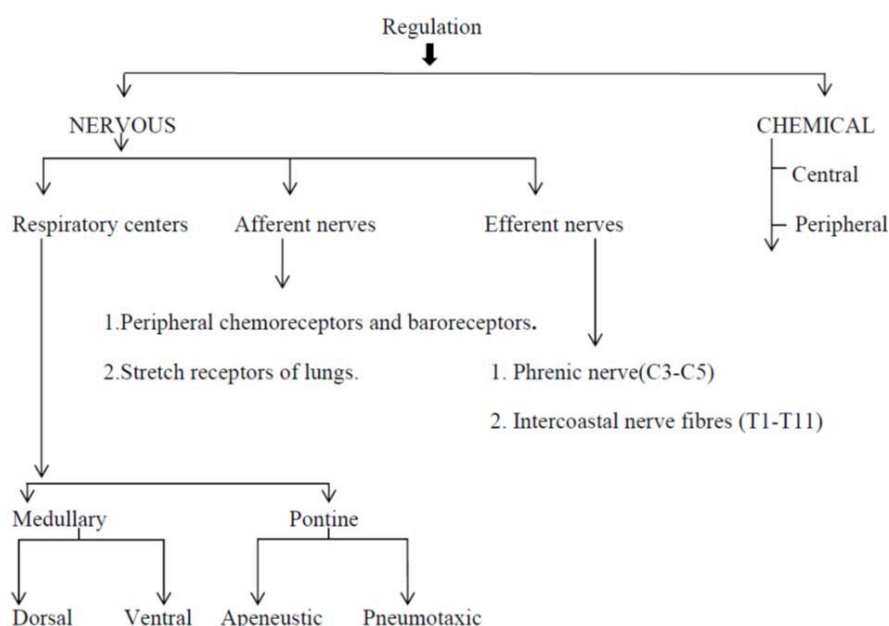
B. Pneumotaxic centre: It is located in the upper pons. This centre is a group of neurons that have an inhibitory effect on the both inspiratory and apneustic centres. It is usually responsible for the termination of inspiration by inhibiting the activity of the dorsal medullary neurons. It regulates the volume and the rate of the respiration.

3. Sensors:

A. Mechanoreceptors: These receptors are placed in the walls of bronchi and bronchioles of the lung and the main function of these receptors is to prevent the over inflation of the lungs. Inflation of the lungs activates these receptors and activation of the stretch receptors in turn inhibits the neurons in inspiratory centre via vagus nerve.

B. Chemoreceptors:

- Peripheral chemoreceptors are located at the bifurcation of the carotid artery in the neck and the aortic arch.
- Central chemoreceptors are situated bilaterally in the chemo sensitive area of the medulla oblongata and exposed to the cerebrospinal fluid (CSF), local metabolism and local blood flow.



Main Functions of Respiration:

1. Elimination of waste products and drugs such as carbon dioxide and ammonia etc.[15]
2. Thermoregulation.
3. Maintenance of all body tissues by regularizing circulation.[16]
4. Production of speech and other modifications like cry, hiccups etc.[17]
5. Resonance of voice.[18]

Importance of Prana Vayu and Respiration

Respiratory system eliminates carbon dioxide from the blood which is generated by cellular respiration, while it replenishes the oxygen in the body. In a healthy person carbon dioxide is expelled from lungs at the same rate at which it is formed in the tissue.

Prana Vayu is responsible for respiration. The normal air having excess quantity of oxygen is inhaled while the so-called impure air is excreted. The *Prana Vayu* is inhaled through lungs is circulated in all the tissues of the body through the process of blood circulation. *Gangadhara* has explained *Prana* as inspiration and *Apana* as expiration. The group activities which provide the supply of oxygen to the body tissues and excretes carbon dioxide which is eliminated from external and internal activities of the body can be understood as respiration.

Discussion

According to *Ayurveda*, the primary location of *Pran Vayu*, is *Murdha* because all *pranas* are located there, and all motor and sensory functions are managed from there. For this reason, the head is regarded as the most important organ in the body. *Acharyas* described the *Pran Vayu* present in the head for controlling the respiratory process. Respiration occurs in two phases namely inspiration and expiration. Muscles involved in inspiration are the diaphragm supplied by phrenic nerve (C3- C5) and external intercostal muscles, supplied by intercostal nerves(T1-T11). Muscles involved in expiration are internal intercostal muscles, innervated by intercostal nerves and abdominal muscles. Change in size of thoracic cavity occurs because of the movements of thoracic lid. Movement of upper coastal series is of two type- Pump handle movement and bucket handle movement.

Movement of lower coastal series increases the transverse diameter of thoracic cage by bucket handle movement. Movement of diaphragm increases the vertical diameter of thoracic cage.

Conclusion

In this article, we concluded that *Prana Vata* and the central nervous system are partially connected. *Prana Vayu's* functions are linked to the abilities needed to maintain life, such as breathing, swallowing, functioning of sense organs, and intellect, which in turn governs higher intelligence. The involuntary phase of the *Swasa Kriya* is controlled by the *Prana Vata* and voluntary phase by *Udana Vata*. The organs of respiratory system include nose, nasal cavity, pharynx, larynx, trachea, bronchi and their smaller branches and lungs which contain terminal air sacs or alveoli. The places of *Pran Vayu* is also described as *Murdha* (head), *Nasika* (nose and nasal cavity), *Kantha* (trachea and larynx) and *Uras* (thorax). The air is absorbed in heart and carried by blood and then is dispersed throughout body by *Vyan Vayu*. The aggravated air due to factors which are responsible for manifestation of *Hicca* and *Swasa* goes to *Pranvaha Strotas* and become more aggravated. Going to chest, that air aggravates *Kapha Dosha* and causes five types of *Hicca* and *Swasa* diseases which obstruct breathing. There is a need of further research in detail of all other varieties of *Vata* as well as *Vata Karma*, location, *Vridhhi*, *Kshaya* and its connection with *Swas Praswas Kriya* etc. for transparent study of for scholars.

References

1. Tripathi R. Astanga Sangrah. 1st ed. Varanasi: Chaukhambha Prakashan; 2021. *Sutra Sthana, Chapter 20, Shloka 4* [Crossref][PubMed][Google Scholar]
2. Shastri A. Sushruta Samhita. 12th ed. Varanasi: Chaukhambha Prakashan; 1997. *Sharir Sthana, Chapter 4, Shloka 3* [Crossref][PubMed][Google Scholar]
3. Bhel Samhita. Sutra Sthana. Chapter 16, Shloka 19. . [Crossref][PubMed][Google Scholar]
4. Shastri A. Sushruta Samhita. 12th ed. Varanasi: Chaukhambha Prakashan; 1997. *Sharir Sthana, Chapter 4, Shloka 2* [Crossref][PubMed][Google Scholar]

5. Sharma V. A review article on Prana Vata in Ayurveda and modern aspect. World J Pharm Res. 2025. [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
6. Tripathi B. Charaka Samhita. 5th ed. Varanasi: Chaukhambha Prakashan; 1998. *Chikitsa Sthana, Chapter 28, Shloka 6* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
7. Tripathi B. Charaka Samhita. 5th ed. Varanasi: Chaukhambha Prakashan; 1998. *Sutra Sthana, Chapter 30, Shloka 2* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
8. Shastri A. Sushruta Samhita. 12th ed. Varanasi: Chaukhambha Prakashan; 1997. *Nidana Sthana, Chapter 1, Shloka 13* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
9. Tripathi R. Astanga Sangrah. 1st ed. Varanasi: Chaukhambha Prakashan; 2021. *Sutra Sthana, Chapter 20, Shloka 4* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
10. Tripathi B. Astanga Hridayam. Varanasi: Chaukhambha Prakashan; 2019. *Sutra Sthana, Chapter 12, Shloka 4*. [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
11. Murthy KRS. Sharangdhar Samhita. Reprint ed. Varanasi: Chaukhambha Prakashan; 2008. *Purvakhanda Chapter 5, Shlokas 48–49* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
12. Tripathi B. Charaka Samhita. 5th ed. Varanasi: Chaukhambha Prakashan; 1998. *Sutra Sthana, Chapter 24, Shloka 4* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
13. Sembulingam K. Essentials of Medical Physiology. 6th ed. New Delhi: Jaypee Publications; 2013. p.673–4 [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
14. Sembulingam K. Essentials of Medical Physiology. 6th ed. New Delhi: Jaypee Publications; 2013. p.717–8 [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
15. Shastri A. Sushruta Samhita. 12th ed. Varanasi: Chaukhambha Prakashan; 1997. *Nidana Sthana, Chapter 1, Shloka 20* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
16. Tripathi B. Charaka Samhita. 5th ed. Varanasi: Chaukhambha Prakashan; 1998. *Chikitsa Sthana, Chapter 15, Shloka 36* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
17. Tripathi B. Charaka Samhita. 5th ed. Varanasi: Chaukhambha Prakashan; 1998. *Chikitsa Sthana, Chapter 28, Shloka 6* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)
18. Shastri A. Sushruta Samhita. 12th ed. Varanasi: Chaukhambha Prakashan; 1997. *Sutra Sthana, Chapter 15, Shloka 7* [\[Crossref\]](#)[\[PubMed\]](#)[\[Google Scholar\]](#)

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