

**PRANAVAHA SROTAS: A COMPREHENSIVE AYURVEDIC UNDERSTANDING WITH
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DOI: <https://doi.org/10.5281/zenodo.22254573>**How to cite this Article:** Dr. Keerthi B. S.¹, Dr. Ananta S. Desai² (2026). Pranavaha Srotas: A Comprehensive Ayurvedic Understanding With Special Reference To The Cardiopulmonary System. World Journal of Pharmaceutical and Medical Research, 12(9), 299–302.This work is licensed under [Creative Commons Attribution 4.0 International license](https://creativecommons.org/licenses/by/4.0/).

Article Received on 05/08/2026

Article Revised on 25/08/2026

Article Published on 03/09/2026

ABSTRACT

Pranavaha Srotas is one of the most vital Srotas described in Ayurveda and is fundamentally associated with the maintenance and continuity of life. The term Prāṇa denotes the vital principle responsible for sustaining physiological functions, and Pranavaha Srotas represents the pathway through which Prāṇa is maintained and conveyed. Acharya Charaka identifies Hṛdaya and Mahāsrotas as the mūlasthāna of Pranavaha Srotas, whereas Acharya Suśruta identifies Hṛdaya and Rasavāhinī Dhamanī. The inclusion of Hṛdaya, which is not anatomically a part of the respiratory system, provides an important basis for understanding Pranavaha Srotas beyond an isolated respiratory tract. In contemporary physiology, respiration and circulation function as an interdependent cardiopulmonary unit. The respiratory system facilitates oxygenation of blood, while the cardiovascular system transports oxygenated blood to tissues and returns carbon dioxide to the lungs. This functional relationship provides a possible contemporary framework for understanding the Ayurvedic description of Pranavaha Srotas. The present review therefore explores Pranavaha Srotas as an integrated functional concept involving respiration, circulation, oxygen transport and maintenance of Prāṇa.^[1,6,7]

KEYWORDS: Pranavaha Srotas, Prāṇa, Hṛdaya, Mahāsrotas, Rasavāhinī Dhamanī, Phupphusa, cardiopulmonary system, Ayurveda.**1. INTRODUCTION**

“Life starts with breath and ends with breathlessness” illustrates the fundamental importance of respiration for the maintenance of life. According to the supplied material, Pranavaha Srotas is the vital channel responsible for respiration and maintenance of Prāṇa. Proper functioning of this Srotas facilitates continuation of life processes.

Ayurveda explains the human body through the concept of Srotas, which are pathways involved in the movement and transportation of physiological substances and functional processes. Acharya Charaka emphasizes that various nutritive and waste substances involved in metabolism are transported through Srotas. Therefore, knowledge of Srotas and their mūlasthāna is important for understanding physiology.

Conventionally, Pranavaha Srotas has been correlated predominantly with the respiratory system, because

several manifestations of Pranavaha Sroto Duṣṭi resemble respiratory disturbances. However, the classical description presents an important point: Hṛdaya is included as a mūla of Pranavaha Srotas by both Charaka and Suśruta. Since the heart is not anatomically a part of the respiratory system, this raises the possibility that Pranavaha Srotas represents a broader physiological concept involving the intimate relationship between respiration and circulation.

Thus, the present article attempts to understand Pranavaha Srotas primarily as an Ayurvedic vital functional concept and, in relation to contemporary physiology, as an integrated cardiopulmonary system.

2. Etymological and Conceptual Understanding

Prāṇa + Vaha + Srotas: Prāṇa denotes the vital principle or life-sustaining force; Vaha denotes carrying,

function is gas exchange during external and internal respiration. It also filters, warms and humidifies inhaled air, participates in phonation, contributes to regulation of body pH and provides the sense of smell.^[6,7]

The respiratory tract can be considered as an upper respiratory component consisting of the nose, pharynx and larynx, and a lower component consisting of the trachea, bronchi, bronchioles and lungs. The respiratory

zone includes respiratory bronchioles, alveolar ducts, alveolar sacs and alveoli, where gas exchange occurs.^[6,7]

8.2 Pulmonary Circulation

The lungs receive blood through pulmonary and bronchial circulations. Pulmonary arteries carry venous blood towards alveolar capillaries for oxygenation, while pulmonary veins carry oxygenated blood back towards the heart.^[6,7]

9. Ayurvedic–Modern Functional Correlation

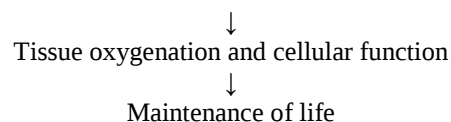
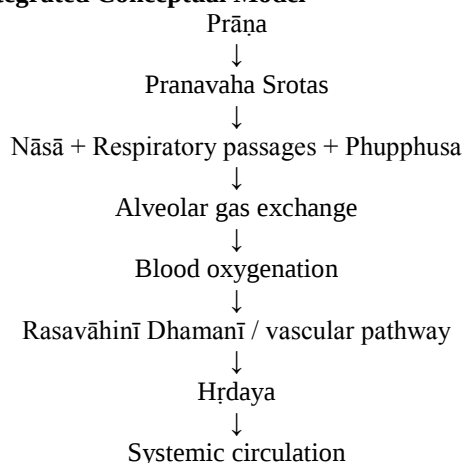
Ayurvedic concept	Possible contemporary functional correlation
Prāṇa	Vital physiological processes / oxygen-dependent life
Pranavaha Srotas	Integrated cardiopulmonary functional system
Hṛdaya	Central cardiovascular pump
Phupphusa	Lungs
Pranavāhi Dhamanī	Functional respiratory/pulmonary vascular pathway
Rasavāhinī Dhamanī	Circulatory vascular component
Ucchvāsa	Respiratory process
Prāṇa Vāta	Initiation/regulation of respiration and vital functions
Udāna Vāta	Expiratory and voice-related functions
Avalambaka Kapha	Supportive/protective thoracic respiratory functions
Mahāsrotas	Major central internal pathway

10. Prāṇa, Respiration and Circulation: Integrated Interpretation

The respiratory and cardiovascular systems operate as a single functional unit for maintaining tissue oxygenation. The lungs provide the interface between atmospheric air and blood, while the heart and vascular system distribute oxygenated blood to tissues. At the tissue level, oxygen is utilized for cellular metabolism and carbon dioxide is generated as a metabolic product. Venous blood subsequently returns carbon dioxide to the lungs for elimination.^[6,7]

This sequence offers a contemporary physiological framework for interpreting the classical association of Pranavaha Srotas with Hṛdaya, Mahāsrotas and Rasavāhinī Dhamanī. The concept is therefore better appreciated as a functional continuum rather than as a direct anatomical equivalent of one modern organ or system.

11. Integrated Conceptual Model



12. DISCUSSION

The conventional understanding of Pranavaha Srotas as the respiratory system is supported by the functional similarity between its description and respiratory physiology. However, the presence of Hṛdaya as mūla in both Charaka and Suśruta introduces an important additional dimension. Modern physiology demonstrates that oxygenation cannot be separated from circulation: the lungs introduce oxygen into blood, while the heart and vascular system transport that oxygen to tissues.

Accordingly, the two perspectives can be reconciled. Pranavaha Srotas may be understood as a functional cardiopulmonary concept, with the respiratory system constituting its major air-conducting and gas-exchanging component and the cardiovascular system participating in the transportation and distribution of oxygenated blood.

This should not be interpreted as stating that Pranavaha Srotas is anatomically identical to the entire cardiovascular system. Rather, the cardiovascular component is included on the basis of its functional relationship with Prāṇa transport and the classical inclusion of Hṛdaya and Rasavāhinī Dhamanī.

13. CONCLUSION

Pranavaha Srotas is one of the fundamental life-sustaining concepts of Ayurveda. Its classical description encompasses Hṛdaya, Mahāsrotas and Rasavāhinī Dhamanī, while its functional manifestations

predominantly relate to respiration. The inclusion of Hṛdaya as its mūla and the description of Rasavāhinī Dhamanī support an expanded physiological interpretation.

Modern physiology demonstrates that respiration and circulation constitute an inseparable cardiopulmonary unit in maintaining oxygen delivery and carbon dioxide elimination. Therefore, Pranavaha Srotas may be interpreted as an integrated functional system connecting respiration, circulation, tissue oxygenation and maintenance of Prāṇa, while avoiding an overly literal one-to-one anatomical correlation.^[6,7]

The understanding of Pranavaha Srotas thus provides an important bridge between classical Ayurvedic physiology and contemporary cardiopulmonary physiology.

REFERENCES

1. Sharma PV. *Charaka Samhita of Agnivesha* (text with English translation). Reprint ed. Varanasi: Chaukhambha Orientalia; 2014. Vimāna Sthāna 5/8, with Chakrapāṇi commentary.
2. Murthy KRS. *Sushruta Samhita* (English translation). Vol. 1–3. Varanasi: Chaukhambha Orientalia, 2012; Sharira Sthana 9/12.
3. Murthy KRS. *Sushruta Samhita* (English translation). Vol. 1–3. Varanasi: Chaukhambha Orientalia, 2012; Sharira Sthana Śārīra 4/25.
4. Murthy KRS. *Sushruta Samhita* (English translation). Vol. 1–3. Varanasi: Chaukhambha Orientalia, 2012; Sharira Sthana 4/31.
5. Shastri Pandit Parashurama, Vidyasagar, Sharangadhara Samhita by Pandit Sharangadharacharya, Commentry by Adhamallas Dipika and Kashirama's Gudārtha dipika Published by Chaukhamba Publication; New Delhi Reprint Edition, 2013; Pūrvakhaṇḍa 5/48.
6. Hall JE, Hall ME. Guyton and Hall Textbook of Medical Physiology. 14th ed. Philadelphia: Elsevier, 2021.
7. Barrett KE, Barman SM, Brooks HL, Yuan JXJ. Ganong's Review of Medical Physiology. 27th ed. New York: McGraw Hill, 2025.