

Nasya Karma and Nebulization: Bridging Ayurvedic Principles with Modern Drug Delivery.

Swarnkar Dikshit¹, Chandravanshi Lowkesh², Nayak Renuka³, Jagat Vinit singh⁴,
Verma Sanjay⁵, Prasad Khuleshwar⁶

¹MD Scholar, Dept of Kaumarbhritya, GAC Raipur, C.G dikshitswarnkar123@gmail.com

²Reader, Dept of Kaumarbhritya, GAC Raipur, C.G. lowkeshc@gmail.com

³MD Scholar, Dept of Kaumarbhritya, GAC Raipur, C.G. nayakrenuka18@gmail.com

⁴MD Scholar, Dept of Kaumarbhritya, GAC Raipur, C.G. vinitjagat@gmail.com

⁵MD Scholar, Dept of Kaumarbhritya, GAC Raipur, C.G.vaidyasanjayverma@gmail.com

⁶MD Scholar, Dept of Kaumarbhritya, GAC Raipur, C.G. koolrajwade1997@gmail.com

Corresponding author-

Chandravanshi Lowkesh

Email ID : lowkeshc@gmail.com

Cite this paper as: Swarnkar Dikshit, Chandravanshi Lowkesh, Nayak Renuka, Jagat Vinit singh, Verma Sanjay, Prasad Khuleshwar (2025) Nasya Karma and Nebulization: Bridging Ayurvedic Principles with Modern Drug Delivery... Journal of Neonatal Surgery, 14, (32s) 10767-10770

ABSTRACT

Ashtang Ayurveda, the foundational framework of Ayurveda, comprises eight key elements. The Bal-Roga branch specifically addresses paediatric ailments. Despite the concurrent evolution of other medical disciplines, this approach was already in widespread use. Nebulization and Nasya represent two therapeutic modalities within this system.

Both are used in medicine, although their administration and modes of action differ greatly. Medication can be administered via the nose via nasal insufflations, often known as Nasya. People typically use Nasya to eliminate doshas (disease-causing substances) that have accumulated or worsened in their heads and necks. Nebulization is a method of introducing aerosol—small, vaporized liquid droplets—into the lungs. This allows liquid medication, oxygen, and fluids to enter the lungs directly. The treatment of asthma has significantly changed thanks to inhalation therapy. (Aerosolized medication delivery or nebulization)..

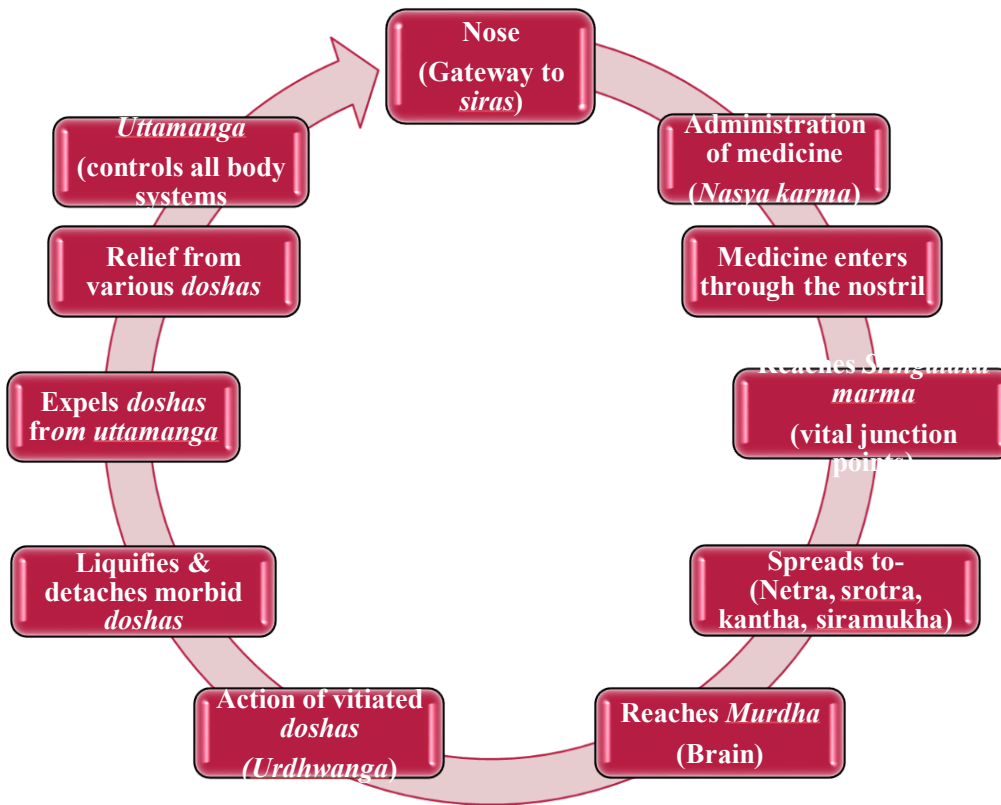
INTRODUCTION

Giving medication through the lungs has numerous advantages. Starting Nasya is an Ayurvedic treatment that uses liquids, powders, or oils in the nose to treat ailments¹. This is a component of the Panchakarma (detoxification) techniques used in Ayurveda. It is said to help balance the body's doshas, particularly in the lungs and brain. Herbal oils (such as medicinal ghee or sesame oil), extracts, or even powders are available to treat headaches, sinus issues, nasal congestion, and respiratory issues. Panchendriya Vardhan Taila, Dhanvantara Taila, Anu Taila, Shadbindu Taila, and Shunthi Churna are required to perform Pradhmana Nasya. Brihana (Purana) Nasya and Karshana (Shodhana) Nasya are the two types of Nasya that Kashyapa discussed².

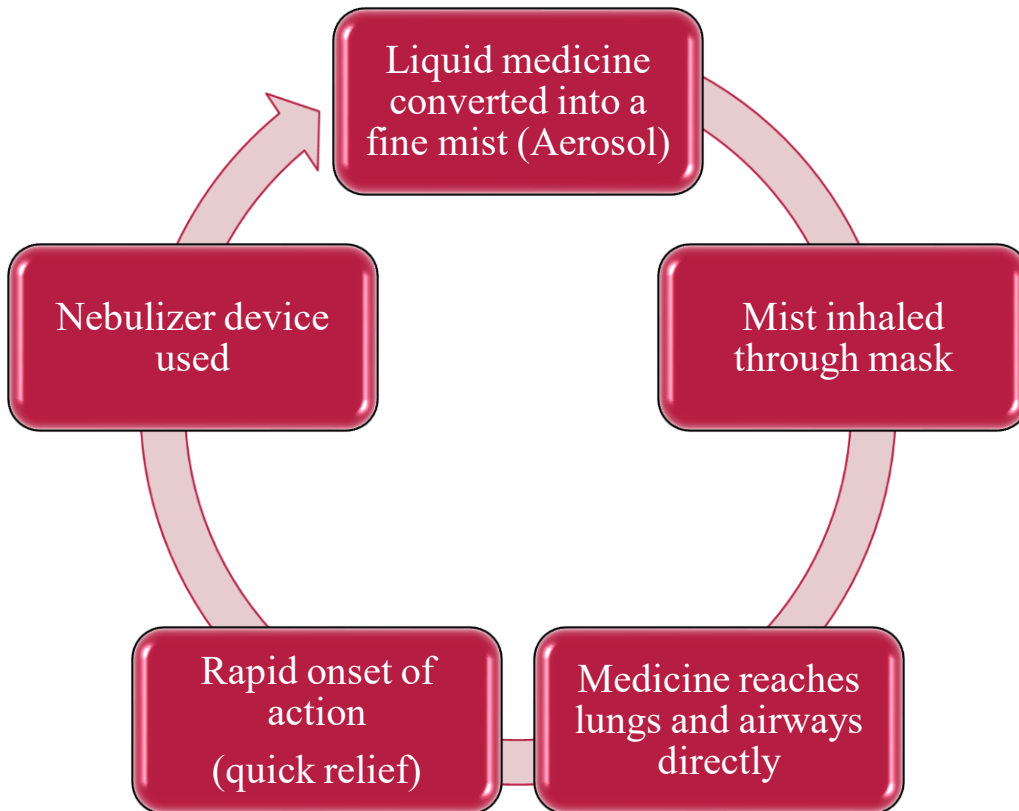
A nebulizer is a device that delivers medication as a fine mist or aerosol straight into the airways. Nebulization is the term for this. Allowing medications to enter the lungs directly is one method of treating lung conditions like asthma, chronic obstructive pulmonary disease (COPD), and others. Some of the most common drugs used in nebulization are bronchodilators (like albuterol), corticosteroids, saline solutions, and antibiotics (for diseases like pneumonia)³.

The main way that Nasya works is by sending healing ingredients straight to the nose, which is very close to the brain and lungs. It goes straight to the nasal mucosa, which makes it easy to absorb and start working in the sinuses and upper respiratory system right away. Many people think that introducing something into the nose can help clear congestion, eliminate excess mucus, and reduce inflammation in the nasal and respiratory tracts. This is believed to be achieved by balancing the doshas and enhancing prana, or vital life energy. Nasya's plant extracts and oils can help cleanse, calm, and soothe the mucous membranes⁴.

Nasya karma:^{7,8}



Nebulization^{7,8}:



The Nasya Marma Effect⁵

Administering oils, powders, or herbal extracts through the nose can significantly influence the marmas, particularly those located in the head and face.

- **Nose and Nasal Cavity (Marma Points):** Many of the Marma points on the head and face are very close to the nasal passages. Several important marmas are found in this area:
- **Brahmarandhra:** Located at the top of the head, this marma is linked to higher consciousness and the body's energy flow.
- **Shankha Marma:** This area is around the ears and temples and has an effect on the head and the senses.
- **Hridaya Marma:** located in the chest, is responsible for regulating respiration and maintaining the health of the heart and circulatory system. Nebulization, a form of inhalation therapy, could potentially influence this Marma indirectly. This is achieved by facilitating airflow and, consequently, enhancing the delivery of oxygen throughout the body.
- **Vishuddhi Marma:** This Marma is in the throat and affects your voice and breathing. Nebulization affects this Marma and helps the flow of prana by opening the airways, like in asthma or COPD.
- **Sthapani Marma:** This point is on your forehead and affects how well your whole nervous system works and how clear your mind is. You can change this Marma point by nebulization. The process can help you breathe better and get more oxygen, which will make you feel better overall.

DISCUSSION:

In sinusitis, the components of Nasya help reduce swelling in the nasal lining, a common problem that often leads to blockage. This treatment helps clear the nasal passages by reducing swelling, which then allows air and mucus to pass through without obstruction. Chronic inflammation, often seen in conditions like rhinitis and sinusitis, can cause mucus to thicken, which might block the nasal passages. Nasya therapy offers a solution by adding moisture and thinning the mucus, which helps the body get rid of it.

Although nebulization represents a relatively new therapeutic approach, it significantly influences key physiological processes related to breathing and lung function, even though it doesn't directly connect to traditional Marma theory. Identifying the Marma points that control these systems can help us understand how nebulized medications might affect prana and overall health.

1. Drug Absorption Phase⁹-

Begins after the drug is administered intranasally, and it proceeds through several pathways.

Specifically, olfactory mucosa receptors allow drugs to bypass other areas and go directly to the brain via olfactory neurons. Sensory receptors linked to the trigeminal nerve facilitate drug absorption and subsequent transmission via sensory pathways. The vascular pathway, particularly the cavernous sinus, facilitates the systemic absorption of substances via the venous system.

Ayurvedic Connection: This stage is the Shringataka Marma, which is the most important point where the channels that supply the sense organs meet.

2. Distribution Phase: After being absorbed, the drug moves through two main pathways:

(A) Pathway of Neurons

1. Olfactory pathway- sends information directly to brain structures.
2. Trigeminal pathway- then spreads to sensory areas.

(B) Pathway of Circulation

The cavernous sinus is where the drug gets into the systemic and cerebral circulation.

Ayurvedic Connection: Prana Vayu is what controls how things move and where they go. Sira Marma is the system of channels that moves things.

3. Target sites- The limbic system is very important for controlling memory, emotions, and other mental functions. The sensory part of the trigeminal nerve controls how we see things.

The circulatory system helps drugs move through the body.

4. Levels of Action that Work-

Nasya Karma works on three levels of Prana:

1. The Manasika level- which is psychic in nature, affects thoughts, emotions, and higher mental functions.

2. The Indriya (sensory level)- focuses on the sense organs, like the eyes, ears, and nose.
3. Sharirika, (physical aspect)- focuses on the body's systems and the elimination of harmful doshas.

CONCLUSION-

Nasya Karma presents a unique pharmacokinetic profile. The medications target both central and peripheral sites, entering through the nasal passages and then spreading through neuronal and circulatory routes. In Ayurveda, Prana Vayu, Sira Marma, and Shringataka Marma govern this entire system, ensuring its therapeutic effects reach all three levels: mental, sensory, and physical.

REFERENCES

1. Vagbhata. Ashtanga Hridaya with Sarvangasundari commentary by Arunadatta. Edited by Paradakara HS. Varanasi: Chaukhambha Surbharati Prakashan; 2014. Sutrasthana, Chapter 20.
2. Vriddhajeekava. Kashyapa Samhita. Edited by Sharma H, Bhishagacharya SP. Varanasi: Chaukhambha Sanskrita Sansthan; 2016. Siddhi Sthana, Chapter 2.
3. Kajaria DK, Tripathi JS, Tiwari SK. Nebulization therapy: A novel approach to drug delivery system in Ayurveda. *Int Res J Pharm.* 2011;2(11). ISSN: 2230-8407.
4. Chopra C, Bharadwaj V, Katna L, Kumar N. Concept of Nasya according to Ayurveda and modern science. *World J Pharm Med Res.* 2018;4(9). ISSN: 2455-3301.
5. Sushruta. Sushruta Samhita with Ayurveda Tatva Sandipika Hindi commentary by Shastri AD. Varanasi: Chaukhambha Sanskrit Sansthan; 2021. Sharira Sthana, Chapter 6.
6. Ramteke RS, Patil PD, Thakar AB. Efficacy of Nasya (nasal medication) in coma: A case study. *Anc Sci Life.* 2016;35(4):232–235. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4995859/>
7. Gänger S, Schindowski K. Tailoring formulations for intranasal nose-to-brain delivery: A review on architecture, physico-chemical characteristics and mucociliary clearance of the nasal olfactory mucosa. *Pharmaceutics.* 2018;10(3):116. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6161189/>
8. Selvaraj K, Gowthamarajan K, Karri VVSR. Nose-to-brain transport pathways: An overview. *Artif Cells Nanomed Biotechnol.* 2018;46(8):2088–2095. Available from: <https://pubmed.ncbi.nlm.nih.gov/29282995/>
9. Crowe TP, Greenlee MHW, Kanthasamy AG, Hsu WH. Mechanism of intranasal drug delivery directly to the brain. *Life Sci.* 2018. Available from: <https://pubmed.ncbi.nlm.nih.gov/29277310/>
10. Sushruta. Sushruta Samhita with Ayurveda Tatva Sandipika commentary by Shastri AD. Varanasi: Chaukhambha Surbharati Academy; 2012. Chikitsa Sthana, Chapter 40.
11. Agnivesha. Charaka Samhita revised by Dridhabala with Vidhyotini Hindi commentary by Shastri KN, Chaturvedi GN. Varanasi: Chaukhambha Surbharati Academy; 2011. Sutrasthana, Chapter 5