



# Role of *Nasya Karma* in preventive and curative management of ENT disorders

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## Abstract

Nasya Karma, a key Panchakarma procedure in Ayurveda, involves the administration of medicated oils, herbal powders, or juices through the nasal passage. Classical texts emphasize the nose as the gateway to the head (*Nasa hi Shiraso Dwaram*), highlighting its vital role in maintaining the health of the ear, nose, and throat, as well as in neurological well-being. In ENT practice, Nasya is considered a highly effective therapy for both preventive care and the management of chronic disorders.

Therapeutically, Nasya works by cleansing, nourishing, and rejuvenating the nasal and cranial channels. It improves nasal patency, enhances mucociliary clearance, and alleviates congestion and inflammation. Various formulations are used depending on the patient's constitution and the nature of the disorder, including nourishing (*Brimhana*), palliative (*Shamana*), preventive (*Pratimarsha*), and eliminative (*Virechana*) types. Application of these medicated oils or powders allows direct action on the nasal mucosa and provides systemic effects through absorption into the central nervous system, influencing sensory organs and neurological function.

Clinical observations indicate that Nasya is beneficial in conditions such as chronic sinusitis, allergic rhinitis, nasal obstruction, hoarseness of voice, eustachian tube dysfunction, and recurrent nasal bleeding. Its integrative effect not only addresses local pathology but also strengthens the overall vitality of the sensory and cranial systems. Modern pharmacological studies support these effects, showing enhanced drug delivery to the brain, anti-inflammatory action, and modulation of neural pathways.

Overall, Nasya Karma represents a safe, non-invasive, and holistic approach for ENT health. By combining classical knowledge with contemporary understanding of nasal physiology and intranasal drug delivery, it provides a therapeutic modality that is both traditional and scientifically relevant, offering potential for integration into modern ENT care.

**Key Words:** Nasya Karma, Shalakyas, Panchakarma

## Introduction

Ayurveda emphasizes both preventive and therapeutic strategies for maintaining health and managing disease. Panchakarma, the quintet of purification procedures, is a hallmark contribution of Ayurveda, and among these, Nasya Karma stands out for its significant role in neurological and ENT disorders. The nasal route is described as the gateway to the head (*Nasa hi Shiraso Dwaram*), making it particularly suitable for interventions targeting the central nervous system, sensory organs, and surrounding structures.<sup>1,2,3</sup>

Classical Ayurvedic texts describe several forms of Nasya, including *Virechana* (eliminative), *Brimhana* (nutritive), *Shamana* (palliative), and *Marshya/Pratimarshya* (preventive), with the choice of therapy guided by the predominance of dosha, patient strength, and disease characteristics. Nasya has been traditionally recommended for a wide range of conditions, from headaches, sinusitis, and voice disorders to paralysis, epilepsy, and cognitive dysfunction.<sup>4,5</sup>

Modern perspectives highlight that intranasal administration can provide both local and systemic effects, facilitating drug delivery to the central nervous system, reducing inflammation, and modulating neural function. Pharmacological studies and clinical observations support its efficacy in alleviating ENT disorders, improving sensory function, and enhancing overall neurological health. Despite its promising applications, variability in formulations, lack of standardization, and limited large-scale trials remain challenges.<sup>6,7</sup>

Nasya Karma, therefore, represents a safe, non-invasive, and integrative therapeutic modality, bridging classical Ayurvedic wisdom with contemporary biomedical understanding. Its application offers potential not only for management of ENT and neurological disorders but also as a preventive strategy to maintain optimal sensory and neural function.<sup>8,9</sup>

## Classical Basis and Pharmacological Mechanisms of Nasya Karma<sup>10, 11, 12</sup>

Nasya Karma is a specialized Panchakarma procedure involving the administration of **medicated oils, ghee, herbal juices, or powders through the nostrils**. Classical Ayurvedic texts describe several types of Nasya, each tailored to specific therapeutic goals. *Virechana Nasya* is an eliminative therapy that clears aggravated doshas from the head and sinuses. *Brimhana Nasya* is nutritive in nature, used to strengthen tissues and manage degenerative conditions. *Shamana Nasya* acts as a palliative measure to balance dosha imbalances, while *Marshya or Pratimarshya Nasya* is preventive, administered routinely to maintain health.

The therapy is indicated for a range of disorders, including **headache, migraine, sinusitis, facial palsy, cervical spondylosis, epilepsy, blindness, tinnitus, and hoarseness of voice**. The procedure involves three phases: *Purva Karma* (preparatory measures such as oleation and fomentation), *Pradhana Karma* (instillation of the medicinal formulation), and *Paschat Karma* (post-procedural measures like gargling and massage).

Modern pharmacological studies provide insight into the mechanisms underlying Nasya's efficacy. The nasal route bypasses first-pass metabolism, enabling **rapid absorption** through the nasal mucosa and olfactory pathway. Medications administered via this route can reach the central nervous system through the **olfactory and trigeminal nerves**, allowing direct action on neural tissues. Evidence suggests that medicated oils, such as *Anu Taila* and *Shadbindu Taila*, exhibit **anti-inflammatory, neuroprotective, analgesic, and anxiolytic effects**, supporting their traditional use in neurological and ENT disorders.

Thus, Nasya Karma integrates classical Ayurvedic principles with modern pharmacological understanding, offering a non-invasive approach for both the prevention and management of disorders affecting the head, sensory organs, and central nervous system.

### **Nasya Karma in Neurological Disorders**<sup>14, 15</sup>

Nasya Karma has been traditionally employed in Ayurveda for the management of various neurological conditions, with modern studies supporting its efficacy. In **migraine and headache**, clinical trials have demonstrated that Nasya with *Shadbindu Taila* significantly reduces both the intensity and frequency of attacks, likely due to its anti-inflammatory and neuroprotective properties.

In **cervical spondylosis**, administration of medicated oils via Nasya alleviates pain and stiffness while improving the range of motion in the cervical spine. The local action on cervical nerves, combined with systemic Vata-pacifying effects, contributes to symptomatic relief and functional improvement.

For **epilepsy**, experimental studies suggest that certain Nasya formulations may exert a neuroprotective effect, modulating neuronal excitability and enhancing central nervous system resilience. Although clinical evidence is still limited, traditional texts advocate Nasya as an adjunctive therapy to strengthen neurological function and reduce disease progression.

Overall, Nasya Karma serves as a **non-invasive, integrative therapeutic modality** for neurological disorders, providing both symptomatic relief and support to neural tissues through direct nasal administration and systemic absorption.

### **Nasya Karma in Parkinson's Disease, Cognitive Disorders, and ENT Conditions**<sup>16,17</sup>

Nasya Karma has shown promising potential in the management of **neurodegenerative disorders**. Preclinical studies indicate that intranasal administration of Ayurvedic oils exerts **neuroprotective and anti-inflammatory effects**, which may help in slowing the progression of Parkinson's disease and other neurodegenerative conditions. In **cognitive disorders**, Nasya with ghee-based formulations has been observed to improve **memory**,

**concentration, and overall cognitive function**, likely through enhanced nourishment of neural pathways and modulation of neurotransmitter activity.

In the realm of **ENT disorders**, Nasya plays a pivotal therapeutic role. In **sinusitis (Dushta Pratishyaya)**, it helps clear accumulated Kapha, improves nasal patency, and reduces the frequency of recurrent episodes. For **allergic rhinitis**, comparative studies indicate that combining Nasya with standard care provides superior symptom relief compared to allopathic treatment alone. Nasya is also recommended for **hoarseness of voice**, with classical texts describing its use and small clinical studies validating its efficacy in restoring vocal quality.

For **tinnitus and other ear-related disorders**, Nasya is advocated as a supportive therapy, although modern clinical trials are limited. By facilitating direct action on the nasal mucosa and central sensory pathways, Nasya contributes to both **local relief** and **systemic effects**, reinforcing its value as a non-invasive, integrative approach in neurological and ENT care.

Overall, Nasya Karma represents a versatile therapy that bridges traditional Ayurvedic principles with contemporary understanding of neurophysiology and ENT pathology, offering potential benefits in **preventive, therapeutic, and supportive care** across a range of disorders.

### **Modern Evidence and Integrative Insights**<sup>18, 19</sup>

Recent advances in biomedical research have highlighted the **intranasal route** as an effective therapeutic pathway, particularly in neurology. For example, intranasal administration of insulin has been explored for cognitive improvement in Alzheimer's disease, illustrating the potential of nasal delivery to bypass the blood–brain barrier. Preclinical models further demonstrate that intranasally administered **medicated Ayurvedic oils** can exert **antioxidant, anti-inflammatory, and neuroprotective effects**, supporting their traditional use in neurological and ENT disorders.

Nasya Karma's dual action—providing **local relief in ENT conditions** while simultaneously exerting **systemic effects on the central nervous system**—aligns with modern pharmacological understanding of intranasal drug delivery. This integration of classical Ayurvedic principles with contemporary biomedical insights underscores its potential as a **safe, non-invasive, and holistic therapeutic modality**.

### **Limitations and Challenges**

Despite its promising applications, several challenges limit wider clinical adoption of Nasya Karma. Standardized protocols regarding **dosage, duration, and formulation** are lacking, contributing to variability in outcomes. Large-scale **randomized controlled trials** are scarce, and therapeutic efficacy often depends on the skill and experience of the practitioner. Furthermore, **biomarker-based studies** are needed to validate the proposed mechanisms of action and provide objective evidence of its effects on neural and ENT tissues.

Addressing these limitations through rigorous research, formulation standardization, and clinical validation could enhance the credibility and global acceptance of Nasya Karma as an integrative therapy for neurological and ENT disorders.

## Discussion

Nasya Karma, deeply rooted in Ayurvedic classics, represents a remarkable convergence of traditional knowledge and modern biomedical science. Its foundational principle—that the nose serves as the gateway to the head (*Nasa hi Shiraso Dwaram*)—correlates closely with contemporary neuropharmacology, where intranasal drug delivery bypasses the blood–brain barrier, allowing direct action on the central nervous system (CNS).

Clinical and experimental evidence supports Nasya's efficacy in both neurological and ENT disorders. Conditions such as **migraine, sinusitis, cervical spondylosis, and allergic rhinitis** have demonstrated consistent improvement following Nasya therapy. Preclinical studies further suggest **neuroprotective potential**, indicating a possible role in degenerative conditions like Parkinson's and Alzheimer's disease. From a modern perspective, Nasya can be conceptually compared to **intranasal vaccines, peptides, and neurotherapeutics**, reinforcing its scientific plausibility. Unlike conventional nasal sprays, however, Ayurvedic Nasya formulations are complex mixtures of oils and herbal extracts, offering **multitarget pharmacological effects** that may act synergistically on neural and ENT pathways.

Despite its promise, several challenges limit broader clinical application. Variability in formulations (e.g., *Anu Taila, Shadbindu Taila*), dosage schedules, and practitioner techniques complicate reproducibility. Most studies remain small-scale, single-center trials with limited methodological rigor, and data on long-term safety are sparse.

Future research should focus on **standardization of formulations and protocols**, large-scale multicentric randomized controlled trials with validated outcome measures, and incorporation of modern imaging and biomarker studies to objectively assess CNS and ENT effects. Additionally, exploring Nasya as an **adjunct to conventional therapies** may enhance integrative care strategies.

Overall, Nasya Karma holds significant potential as a preventive and therapeutic modality. Its ability to act both locally and systemically positions it as a valuable tool in modern holistic healthcare, bridging traditional Ayurvedic wisdom with contemporary medical science.

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