



## Full Length Research Article

### NASYA – HOW IT WORKS: AN AYURVEDIC CONCEPT

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#### ABSTRACT

In Samhitas Nasyakarma has been described in detail. Charaka in Sutrasthana first chapter has given the synonyms of Nasyakarma, in Siddhisthana has classified Nasyakarma depending on the medicines used and on the pharmacological action and also has stated indications and contraindications for Nasyakarma. He has explained the procedure along with complications and samyak and asamyak yoga features. In Vimanasthana he mentions different types of Nasyakarma depending on the parts of a plant used. Sushruta has defined Nasyakarma as instillation of medicine through Nose in Chikitsasthana. He has given the classification of Nasyakarma, even the timing of administration based on rutu and doshas. He has also given the indications and contraindications, procedure, samyak, heena and atiyoga features, complications and the things to be followed after Nasyakarma is being stated by him.

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## INTRODUCTION

*Nasya* is one of the *Panchakarma* mentioned in Ayurveda. It is a process wherein the drug herbalized oil or liquid medicine is administered through the nos- trils. Since nose is the gateway of the head (Ashtang Hridaya Sutrasthana, 2005), the therapy is highly effective in curing a number of diseases pertaining to the head, if it is performed systematically. The therapy cleanses and opens the channels of the head, thereby improving the process of oxygenation (*Prana*), which has a direct influence on the functioning of brain (Charaka Samhita, 2004). Drug administered through nose mainly acts on olfactory receptors present in superior concha. This therapy is beneficial if done on a regular basis. It keeps the eyes, nose and ear healthy & it also prevents the early graying of hair and bear. Our classical texts have been mentioned various types of *Nasya* according to different aspects like depending upon drug used, functions, dose etc. Time and dose of drug for administration are important things.

### Types of Nasya

### According to Functions

**Virechana Nasya (Cleansing Nasya):** Usually strong drugs are used in the *Virechananasya karma*.

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It is also called as *Shirovirechananasya*. In *Virechan Nasya*, forms of drug used are *Kwatha*, *Choor- na*, *Swarasa*, *Sneha*, *Madhu*, *Saindhva*, *Aasava*, *Pitta*, *Mootra* (Sushrut Samhita, 1997)etc. These are mixed with the *Shirovirechana* drugs. *Choorna* create Vegas simply by keeping it near the nostril. *Virechana Nasya* is mainly used to treat *Kapha* type of diseases such as headaches, heaviness in the head, cold, na- sal congestion, inflammation of the nasal mucosa, sinusitis, loss of smell, sticky eyes and hoarseness of voice due to sticky *Kapha*, Chronic diseases such as cervical lymph adenitis and tumors can also be treated by *Pradhaman Nasya* (Charaksamhita, 2004). Some skin dis- eases like ring worm infestation,itching, blebs are easily treated by this type of *Nasya karma*. Epilepsy, drowsiness, Parkin- sonism, greed and lust can be effectively treated by the therapy. Powders such as *Brahmi* are used in this therapy.

### Snehana Nasya/ Brihmana- Nasya/(Nutrition Nasya)

In this type form of *Nasya* drug used is *Sneha i.e. Shatavari ghee*, medicated milk, *niryas* , *mamsa rasa* etc. This treatment is mainly given in *Vata* type of disorders. It is beneficial to cure migraine head- ache,hemicranias, and dryness of voice, constriction of the eyes, defects of the vision, toothache, earache, tinnitus, and diffi- culty in speech, nervousness, anxiety, fear, dizziness and emptiness (Sushrut Samhita, 1997). Negative thoughts can be banished by undergoing this treat- ment. In case of the person is suffering

from bursitis, stiffness in the neck, frozen shoul- ders, dry sinuses and loss of sense of smell, dry nose, *BruhanaNasya* would be the best bet. It imparts strength to Neck, Shoulder, and Chest (Sushrut Samhita, 1997).

**Shaman Nasya (Sedative Nasya):** In this type of *Nasya*, form of the drugs used are *Sneha*, *Swarasa*, *Ksheera*, *Udaka*, *Kwath*, tail etc. *ShamanNasya* is used according to *Dosha* which is aggravated in the human body. It is mainly administered to treat *Pittaj* and *Raktaj*-type disorders such as thinning of hair, conjunctivitis, ringing in the ears, premature wrinkles, premature graying of hairs, hair fall, blackish discoloration of face, psoriasis of scalp, bleeding from nose etc (Sushrut Samhita, 1997).

#### According to quantity of drug used

##### *MarshyaNasya (Ghee or Oil Nasya) (SushrutSamhita, 2004)*

This type of *MarshyaNasya* karma makes use of ghee/oil. The therapy is administered for a particular reason, which may not be disease, but a condition of uneasiness arising from particular diseases.

**Contraindications:** *Marsha nasya* is contraindicated before the age of 7 years & after age of 80 yrs.

##### **Quantity of the unctuous medicine in Marsha Nasya (Ashtang Hridaya Sutrasthana, 2005)**

- *Uttamamaatra* -----10 bindu,
- *Madhyamamaatra* ----- 8 bindu,
- *Hrswamaatra* ----- 6 bindu

##### *Pratimarshya (Daily Oil Nasya) (Charaksamhita, 2004)*

This type of therapy is administered by dipping the clean little finger in ghee or oil and inserting into each nostril. After inserting the clean finger (dipped in ghee or oil) into the nostril, the nasal passage is lubricated and given a gentle massage. By doing this, the deep nasal tissues are opened up. By doing *Pratimarshya* on a regular basis, stress can be released to a great extent. Generally it can be given in weak persons, in old age, child, in delicate persons, timid persons etc. It can be administered in unseasonable time. It is also given in persons who had injury to chest, dryness of oral cavity. *Pratimarsha* can be administered in unseasonable time, inauspicious day and rainy season and also from birth to death.

#### Contraindications (Charaksamhita, 2004)

*PratimarshaNasya* cannot be given in chronic catarrha, Worm infestation and diseases of head involving multiple doshas, One who drank alcohol (*madyapee-ta*), Weakness of the hearing organ and when *Doshas* are in highly aggravated state.

#### Dose of *Pratimarshanasya* medicine

Thaila is the best *Sneha* (unctuous substance) for the daily use as head is the main seat of *Kapha Dosha*. Administering the *Pratimarshanasya* daily gives us the effect same as that of *Marsha nasya*, but they are not the same.

**Dose (Charaksamhita, 2014): 1 – 2 bindu.**

#### Different types of the *Nasya karma* depending on the preparation of the drug

##### *Avapeedanasya (Sushrut Samhita, 1997): -Virechana or Shama-na nasya*

Where the paste of the drug is squeezed into the nostril is called *Avapeedanasya*. It is indicated in Vitiation of *Kapha* and *Meda*, A person who is unconscious due to snake bite. If person is weak i. e. *Ksheena purusha* and *Rakta-pitta rogi* - drugs like *Sharkara*, *Ikshurasa*, Milk, Ghee and *Mamsa rasa* are used for the *Avapeedanasya*. In case of *Krisha*, *durbala*, *bheeru*, *sukumara*, *stree*, - the unctuous substance processed with *Shiro-virechana* drugs or the *kalka* of the *Shiro-virechana* drug are used for the *Avapeedanasya*.

##### *Pradhamananasya (SushrutSamhitam, 1997)*

Sushruta stated that, *Shirovirechana* drug is powdered and sprayed into the nasal orifice with the help of a tube. *Pradhamananasya* is indicated in cases of derangement of the mind (*cheta-navikriti*), worm infestation (*krimi*), and poisoning (*vishapeedita*).

#### Dose of Pradhamana Nasya

The quantity of powder required to reach the throat when blown through a 6 angula long pipe is the quantity for *Pradhamananasya*. This can be repeated multiple times depending on the intensity of the drug snuffed in nasal passage (AshtangHridayaSutrasthana, 2005).

##### *Navana Nasya (Ashtang Hridaya Sutrasthana, 2005)*

Decoctions and medicated oils are used for *Nasya*. This type of therapy is used in *Vata-Pitta* or *Kapha-Pitta* disorders. The main purpose of all *Nasyas* is to expel the *Kapha Dosha* from the head. So all *Nasyas* are called as *VirechanaNasya*.

##### **The unctuous substance used for Nasya according to the Doshas (Charaksamhita, 2004)**

- *In Vatakaphaj -Thaila*
- *In kevalavata - Vasaa*
- *In pitta - Ghee*
- *In vaata pitta -Majja*

#### Contraindications for Nasya (Tortora Grabowski)

After taking food, unctuous substance, alcohol, water *nasya* is contraindicated. If there is *Garavisha* in his body, After taken and want to take head bath, after bloodletting, who has urge for passing urine, stools etc, who is suffering from injuries, Immediately after *vamana*, *virechana*, *basti*, In Pregnant lady, First 45days after delivery, in Acute coryza, In Breathing difficulty, cough, in Amenorrhea, on inauspicious day *nasya* karma is contra indicated.

#### Probable mode of action: Modernanatomical and physiological aspect of Nose (Medical physiology by Guyton)

The nose is connected through vascular system, nerve plexus of olfactory nerve and ophthalmic and maxillary branches of trigeminal nerves to the brain.

## **Neurological Pathway**

It is concerned with olfactory stimuli. The olfactory nerve differs from other cranial nerves in its close relation with the brain. The peripheral olfactory nerves are chemo- receptor in nature. The olfactory nerves are connected with the higher centers of brain i.e. limbic system, consisting mainly of amygdaloidal complex, hypothalamus, epi- theliums, anterior thalamic nuclei parts of basal ganglia etc. so the drugs administered through nose stimulate the higher centers of brain which shows action on regulation of endocrine and nervous system functions.

## **So Hypothalamus regulates**

- Regulates contraction of smooth and cardiac muscles secretions of many glands.
- It is a major regulator of visceral activities includes heart rate, movement of food through the gastrointestinal tract and contraction of bladder.

## **Regulation of hormone synthesis**

- Responsible for integrating the functions of the endocrine system and the nervous system.
- It is known to have direct nerve connection with the posterior lobe of pituitary.
- In addition hypothalamus is connected with anterior lobe of pituitary through portal vessels which supply blood to the gland conveying chemical messages through inhibitory and releasing hormone.

## **Regulation of emotional and behavioral patterns**

- Together with limbic system participate in expression of rage, aggression, pain, pleasure and behavioral pattern relating to sexual arousal etc.
- Regulation of eating and drinking through the arcuate and paraventricular nuclei and thirst centre thus regulating osmotic pressure.

## **Regulates body temperature**

- Regulation of circadian rhythm and states of consciousness
- Effects of stimulating the amygdaloidal-same as hypothalamus.
- Epitheliums consisting of pineal gland and habenular nuclei- Pineal gland is a part of endocrine system, secreting melatonin and also contributes to the setting of the body's biological clock.
- Habenular nuclei – involved in olfaction, especially emotional responses to odors.
- Sub thalamus – contain the sub thalamus nuclei and portions of the red nucleus and the substantianigra. These regions communicate with the basal ganglia help to control body movements.
- The drug administrated even enters into the systemic circulation and also direct pooling into the intracranial region by vascular path.

## **Diffusion of the Drug**

Lipid soluble substances have greater affinity for passive absorption through the cell walls of nasal mucosa. "The cilia

of the olfactory cells and perhaps the portions of the body of the olfactory cells contain relatively large quantities of lipid materials." Non-polar hydrophobic molecules diffuse through the lipid bilayer of the plasma membrane, into and out of cells. Such molecules include oxygen, carbon dioxide and nitrogen gases; fatty acids, steroids, and fat soluble vitamins. It is a route of absorption of some nutrients and excretion of waste by body cells which are lipid soluble. Further drug absorption can also be enhanced by local massage and fomentation.

## **Vascular Path**

Vascular path transportation is possible through the pooling of nasal venous blood into the facial vein, which naturally occurs, at the opposite entrance, the inferior ophthalmic vein also pool into the facial vein. "The facial vein has no valves. It communicates freely with the intracranial circulation, not only at its commencement but also by the supra orbital veins which are connected with the ophthalmic vein, a tributary of the deep facial vein, which communicates through the pterygoid plexus with the cavernous venous sinus." (Grays, 2005). Such a pooling of blood from nasal veins to venous sinuses of the brain is more likely to occur in head lowering position due to gravity, the absorption of drug into meanings and related intracranial organ is a point of consideration.

## **Conclusion**

*Nasya kala* i.e. proper time and duration of drug administration is important factor. Age, *Dosh avastha*, *vyadhiavastha*, Form of drug used is also important factor in *Nasya karma*. Keeping in the view of the above said facts, it can be concluded that either the essence of *Nasya* or *Nasyadravya* is reaching the brain and acting on important centers controlling different neurological, endocrine and circulatory functions and thus showing systemic effects. Following things should be considered in case of drug used. PH & osmolarity & concentration of drug used are important factors for absorption of drug through nasal passage. Bioavailability can be affected by concentration of drugs like Salt, honey etc. Various delivery systems affect the site of deposition, degree of absorption. Viscosity increases the contact time between nasal mucosa & drug, which enhances the potential of the drug action. In Mechanism of drug absorption, Transcellular passive diffusion, Drug diffuses through membrane. It is an active transport process. More suitable for lipophilic drug, *snehanasya* may absorb through this process. Paracellular passive diffusion- drug is transported between the cells and transcytosis by vesicle carrier. It is a suitable mechanism for hydrophilic drugs e.g. *avpeedak*, *dugdhs* and *kwathnasya*.

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