

## LITERATURE REVIEW ON MODE OF ADMINISTRATION AND ACTION OF NASAL MEDICATION – AN AYURVEDIC APPROACH

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### Abstract

As per the Ayurveda compendia, introduction of pharmaceuticals through the nasal route is called NASYA. The procedure of Nasya must be carried out with disciplines. Nasa is considered as one of the Bahirmukha Srotas. Nasya therapy is effective therapy in Siroroga, Urdhvajatrugataroga and other systemic diseases. In this article great effort has been taken for review on Mode of administration and action of nasal medication from Ayurveda classics. The indications and contraindications of Nasya therapy mentioned in Ayurved compendia are also matches the ‘nasal drug delivery’ concept of modern science. As per Charaka Samhita Siddhithana in 9<sup>th</sup> chapter Nasa is the route for drug administration in Nasya karma, which cures the diseases of the Jatrurdhvapradesha, and gives strength to various parts of the same Pradesha (region). As nasal drugs administration have an great importance because, it is not an invasive or erosive procedure, the pharmaceuticals used in nasal drug administration are get directly absorbed into the blood stream so it acts more quickly. Pharmaceuticals is first bypass liver, hence the metabolism is modified. It connects with different organs which are also situated in the Uttamanga, Hence Nasya plays an important role in diseased as well as healthy conditions.

**Keywords:** Nasya; Urdhvajatrugata Roga; Mode of administration.

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## INTRODUCTION

As per the Ayurveda compendia, introduction of pharmaceuticals through the nasal route is called NASYA.<sup>[1]</sup> The procedure of Nasya must be carried out with disciplines. The technician must follow all the laws and regulations of the Nasya karma mentioned in the Ayurveda compendia. Before going to start the actual karma i.e. administration of pharmaceutical through nose, the patient should be properly assessed for his Bala i.e. power to bear the Nasya because, Nasya is a Sodhan karma, so age, physical and psychological status should be assessed.

As in the Ayurveda mentioned that, the Nasa is the door of the Sira, this statement is justified, the pharmaceuticals introduced through the nose, they will reach to the target and useful in fighting the diseases.

The detailed pharmaceutical actions, i.e. the pharmacodynamics of the drug and pharmacokinetics of the drugs are not mentioned directly or in details, in Ayurveda compendia. However the path of the drug administered through the nose, can be understood with the help of, the way of drug action mentioned in Ayurved compendia and the functions of the Nasya pharmaceuticals inevitably dictate the ultimate path of the drugs. (Table 1)

### Basic indications of the nasya

Nasya karma is particularly indicated in Jatroordhwa Vikaras i.e. in ENT diseases;<sup>[4]</sup>

After considering the age of the patient, it is necessary to think about the season, the timing of the 2011 and the time of day or night. Always think whether the patient does require, go through the Nasya karma or not, then proceed for the Nasya Vidhi.

If Nasya karma is doing on the healthy person, it is performed at morning in Sharada Ritu

and Vasant Ritu. In winter it is performed in the noon. Nasya karma should be done at evening in the summer and in the rainy season the procedure should be performed when the sun shines.<sup>[5]</sup>

### Kala (timing) of the nasya karma procedure

Different Kalas (timings) of the Nasya is advised as per the requisite as follows;<sup>[6]</sup>

For maintenance of health- In Sharada and Vasanta Ritu at early morning. In Grishma Ritu at evening and in Varsha Ritu when bright sunshines.

Kapha diseases- At early morning. At afternoon (Acharya Vagbhat).

Pitta diseases- At afternoon.

Vata diseases- At evening.

### Place of nasya karma

Place should be separate, calm and quiet, well lighted and well ventilated (always indirect). The light inside the room should be adequate.

The patient lying down in supine position, raising the legs side and elevating the head, closing one nostril each time introduce warm medicated Nasya pharmaceuticals alternatively into each nostril.<sup>[7]</sup>

### Sthivan patra

After Nasya karma, secretion must be spitted out, for this receptacle is necessary. This is made up of plastic or stainless still.

## MATERIAL AND METHODS

Nasya pharmaceutical in adequate quantity, dropper, small pieces of towel with absorbent materials for the patient, soap, towel, hot and cold water, burning cylinder or charcoals,

glass bottles for caring the excreted material to the pathological laboratories, test tubes, hot water bottle and ice bags with ice etc.

### Abhyanga material

Oils, hot water for bathing and towels etc. are the most essential things

### Nasya karma- main vidhi

Before going to main Vidhi firstly he/she should evacuate bowel and urinate. Then the massage should be given to the Sira(head) and the head should be fomented.<sup>[8]</sup>

Clean the mouth and teeth of the patient. Patient should also take some medicated smoke. Then the cheeks and frontal region of the patient should be massaged lightly with medicated oil. Then the forehead should be fomented with a hot water bottle or Nadi swedan yentra.

The tip of nose of the patient should be lifted upwards, so as to dilate the nostrils with the index finger of left hand of the person who is administering Nasya pharmaceuticals, to release the drops with the fingers of the right hand the index and the middle finger should be dipped in the warmed medicated oil or the fats, up to the second phalanx and the desired number of drops should be released, centrally in the nasal passages, taking care that the drop should not fall outside the nostrils or do not soil the margins at the nostrils.<sup>[9]</sup>

Instead of fingers, cotton ball soaked in the medicated oil or in the fatty substance is also useful; one can take the use of glass dropper with pre-measured quantity of oil too.

Do not administer the Nasya pharmaceutical in a trickle. Nasya must be administered always in drops (Bindu) and not as a continuous trickle, also take care of that, the drops are not fall accidentally in the eyes. During the main procedure of Nasya karma,

the head does not move at all. Ask the patient to hold the head steady, and ask the assistant to hold it firmly.

During Nasya procedure kapha secretes, which may lead to 'Shiroroga' so, Acharya Vagbhata has advised to undertake smoking, after the actual Nasya vidhi. After the Nasya drops are being administered to the patients.<sup>[10]</sup>

After Nasya procedure patients forehead, head, neck region, shoulders, palms and soles of the foot should be rubbed or massages lightly and the patient should be asked to breathe slowly not with a force.<sup>[11]</sup>

### Functions of the nasya<sup>[12]</sup>

1. One who regularly practices Nasya karma, he/she may never suffer from any eye diseases.
2. Because of regular practice of Nasya, person does not suffer from any ear diseases.
3. With the help of regular Nasya karma, we prevent the nasal diseases too.
4. The scalp, hair, eyelashes, beard and the mustaches do not become white, they may remain black.
5. Hair does not fall, instead of this growth of hair occurs.
6. Diseases like Pinasa, Ardhavabedhaka, Manyastambha, Shirshul, Hanugraha are cured or controlled by the use of Nasya.
7. Bones in the head and neck region, joints in the head region and the muscles in the head region are strengthened.
8. The face looks fresh and full of enthusiasm and happiness.
9. There is the considerable improvement, in the voice; it becomes stable, deep and soft.
10. The sense organs, becomes more alert and sensitive.

11. The diseases above the clavicle (ENT diseases) are prevented.
12. The aging process is delayed.
13. The oral cavity remains fresh and fragrant.
14. The Joints of the teeth, mandible and other joints in the head region becomes firm and strong.
15. Wrinkling of the skin is avoided; pigmentation of the skin is also prevented.
16. Nasya treatment is useful for the preservation of the body.
17. On the whole Nasya improves the health.

### Classification of the nasya

Nasya is classified in different ways in the various texts of Ayurveda. So we consider one by separately for better understanding. (Table 2 and Table 3)

#### Navana nasya

The substance used in this kind of Nasya is Sneha. By using 'karpas Pichu' dipping in sneha and applied to the surface inside the nasal cavities is known as Navana Nasya.

This type of Nasya is safely used daily. It contains medicated fats and oils.

Navana Nasya is useful in many conditions or diseases such as follows;<sup>[17]</sup>

Vataja siroroga, Falling of hair, Falling of teeth, Acute Earache (Karnashula), Tinnitus, Blackouts, Sudden loss of vision, Breaking and splitting of voice, Diseases of the nasal cavity, Dryness of the mouth, Stiff shoulder, Wasting of shoulder muscles, Graying of hair, Difficulty in opening of the eyes, Vataja oral diseases.

Depending on the main action of the pharmaceuticals, used in Navana Nasya, it is further classified into;

#### Shodhana Navana

#### Shamana Navana

#### Brahana Navana

Depending on the quantity of the fat substances, two major types of Navana Nasya are described;<sup>[18]</sup>

Marsa Nasya.

#### Pratimarsa Nasya

In the Marsa Nasya, the quantity of fat substance is more. When two fingers near to the thumb are dipped, in fatty or oily substances or in a liquefied ghee and held vertically, then the drops produced are said to be standard drops. (Table 4)

#### Avapidana nasya

When the medicinal plants are crushed and made into paste, this paste when squeezed, then the drops come out, these drops directly instilled into the nostrils. This type of Nasya is called as Avapidana Nasya.

According to Acharya Sushruta and Acharya chakrapani Avapidana Nasya is of two types, it is narrated in Table 5.

Avapidana Nasya can be effectively used in;<sup>[19]</sup>

The poisoning cases, Fainting, Unconsciousness, Disorientation, Stupor, Convulsive disorder, Extreme headache, anger, losing temper, fear and horror, mental conditions.

In fact, Avapidana Nasya is type of Sirovirechana Nasya and it is made up of fresh plant juice, decoctions or the animal blood.

**Table 1: Patients those are contraindicated for the nasya karma procedure<sup>[2][3]</sup>**

Astang Hrudaya Sutrasthana	Charak Samhita Siddhistana
Person having age, below the seven 2011 and patient having age, more than eighty 2011s also contraindicated for Nasya karma and the Because of Dhatu's are not fully matured, before seven 2011 and Dhatukshya is started due to Vataprakopa, after the age of eighty 2011s.	The patients suffering from indigestion, after tacking meal, one who has drunk plenty of water ,after consuming medicated or other oils, and consumed alcohol should be contraindicated for Nasya karma, by the same way the hungry or thirsty person, injured person, unconscious persons, the person already on the Panchakarma procedure, the person having high temperature and pregnant woman are contraindicated for Nasya karma because these persons are not fulfilling the criteria of indications of Nasya karma.

**Table 2: Classification of Nasya**

Charak Samhita	Sushrut Samhita	Ashtang Hrudaya
Type of Nasya <sup>[13]</sup>		
1. Navana.		
a). Shodhana.		
b). Snehana.		
2. Avapidana Nasya.	five types <sup>[15]</sup>	
a). Shodhana.	1. Nasya.	
b). Stambhana.	2. sirovirechana.	
3. Dhumapana.	3. Pratimarsa Nasya.	
4. Dhuma.	4. Avapidana Nasya.	
a).Experimental.	5. Pradhamana Nasya.	
b). Virechanik.		
c). Snehik.		
5. Pratimarsa Nasya.		
a). Snehana.		
b). Virechana.		
According to type of work of Nasya pharmaceuticals in Nasya therapy <sup>[13]</sup>	According to the action of the Nasya <sup>[15]</sup>	Related to the actions of different pharmaceuticals. These three types are as follows <sup>[16]</sup>
B). 1. Rechana.	A). 1. Sirovirechana.	Virechna Nasya
2. Tarpana.	2. Snehana	Bruhana Nasya
3. Samana.		Shamana Nasya
As per the Nasya pharmaceutical takes from which part of the plants <sup>[14]</sup>		
C) 1. Phala Nasya.		
2. Patra Nasya.		
3. Mula Nasya.		
4. Kanda Nasya.		
5. Puspa Nasya.		
6. Niriyasa Nasya.		
7. Twaka Nasya		

**Table 3: Classification of Nasya**

Kasyap Samhita	Sharangdhara Samhita	Bhoja
1.Brahana (puran).	1. Rechana.	1.Prayogika.
2.Karsana(sodhana).	a). Avapidana Nasya.	2.Snehika.
	b). Pradhamana Nasya.	
	2. Snehana.	
	a). Marsa.	
	b). Pratimasa	

**Table 4: Doses of the Navana Nasya according to the Acharya Vagbhata and Acharya Sushruta**

Acharya Vagbhata		Acharya Sushruta	
1.	Minimum- 6 drops.	1.	Kanistha- 8 drops.
2.	Medium- 8 drops.	2.	Madhyama-32 drops.
3.	Maximum- 10 drops.	3.	Uttama- 64 drops.

Acharya Dalhana states that, these doses are for one nostril only.

**Table 5: Types of Avapidaka Nasya**

Acharya Sushruta		Acharya Chakrapani	
1.	Stambhana Avapidana Nasya.	1.	Shodhana Avapidana Nasya.
2.	Shodhan Avapidana Nasya.	2.	Samana Avapidana Nasya.
		3.	Bruhana Avapidana Nasya.

This is squeezed into the patient's nostrils, considering the age of the patients, sex of the patients, condition of the diseases of the patient, strength of the patient, geographical location of the residence of the patient, Season of the complaint of the patient. It is also Saudnya Probodhana in function.

### Pradhamana nasya

Dhmapana Nasya is called as Pradhamana Nasya. It is the type of the Sodhan Nasya in which Churna (powder) is used. Fine powder is loaded to the tip of a hollow tube, which is called Nadi. That Nadi is six Angula in length. The powder is forcefully blown into the nasal cavities. The dose is three Muchiti.

### Pratimarsa nasya

In Pratimarsa Nasya the fatty, oily substance of medicament reaches the throat. But the quantity should be such that, it should not cause 'Srava' (secretion of throat mucosa).

Pratimarsa Nasya is safely used in children, young, very old & delicate ones too. There are no any strict rules regarding the diet or for the routine activity of the persons, during Pratimarsa Nasya treatment. Pratimarsa Nasya can be advocated at any time of the day, nevertheless Acharya Vagbhata advises special timing for the introduction of the Pratimarsa Nasya.

Acharya Sushruta has described 14 events, for this kind of Nasya, they are as follows,<sup>[20]</sup>

Early morning, At evening, After food, After emesis (Vamana), After waking up, After Walking, After physical exercise, After sexual act, After Snana and Head bath, After gargles, After urination, After defecation, After brushing the teeth, After laughing.

The healthy man should always make use of Pratimarsa Nasya, with the help of Til oil. Due to its Ushna, Tikshna, Yogvahi Guna, it does not allow Kapha and Vata Vriddi. The neck and head regions are predominantly Kapha region, therefore use of any other substances other than oil shall create Kapha vriddhi.

### Duration of the nasya karma

Acharya Dalhana states that Nasya Karma should be carried out at an interval of one or two days.

One other Acharyas says that, it should be administered for 3, 5, 7 or upto 9 days. Ordinarily it is carried out at day time.

### DISCUSSION

After considering the reference, found in the Astang Hridaya, Sutrasthan, 20/39, it is confirmed that, Nasya pharmaceuticals nourishes the body skin, shoulder, neck,



provides strength to the Indriyas and prevents hair loss, Nasya pharmaceuticals are used to increase the weight of underweight and also used in the old age people too, so it must have an systemic effect. There must be having the hormonal, enzymatic and anabolic effects used in the particular formulation and the way of the absorption of pharmaceutical in the nasal mucosa. In Nasya vidhi indications, it is strongly recommended that, the acceptance of the local path of the drug absorption and infiltration of by some means, towards the neighboring structures. Due to these reasons the Nasya karma procedure is strongly recommended, in almost all diseases of E.N.T. and a few diseases originated from the neurotransmitters or in the matter of the brain. All these discussed points strongly indicate towards the local and systemic effect of the Nasya pharmaceuticals.

The contraindications of the Nasya therapy, matches with the results of the modern investigations of the nasal drug delivery, which are going to discuss now. As per the Ayurved compendia, the person having infectious disease is contraindicated for Nasya therapy. As the results of research work done in modern science suggest that, the nasal absorption alters in the infection, as the mucosal histology alters in the infectious condition. It leads to alter the permeability of the epithelial layer (cells) of the mucous membrane of the nasal cavity for the Nasya pharmaceuticals.

In infectious conditions, alcohol consumption is also contraindicated in Nasya pharmaceutical administration, as lot of research work already had been done, to prove that, the alcohol consumption changes the blood circulation of the human body. On the basis of this we can say that blood circulation of the nasal mucosa also changes in alcohol consumption. The absorption of nasal pharmaceuticals is directly depending upon the blood circulation of nasal mucosa, whenever the blood circulation changes it

leads to change in drug absorption. Alcohol consumption is also responsible for temporary change in the pH value of the blood, and it is well known that the pH value of blood is also responsible for the alteration of nasal drug delivery. Due to this, the alcohol consummated person is contraindicated in Nasya karma.

## CONCLUSION

The pharmaceuticals administered through the Nasa, this process is known as Nasya therapy. And this therapy is effective in sisoroga and Urdhvajatrugata roga. The indications and contraindications of Nasya therapy mentioned in Ayurved compendia are also matches the 'nasal drug delivery' concept of modern science. As per charaka sidhi sthana in 9th chapter nasa is the route for drug administration in Nasya karma, which cures the diseases of the jatrurdhva pradesha and gives strength to various parts of the same pradesha (region). As nasal drugs administration have an great importance because, it is not an invasive or erosive procedure, the pharmaceuticals used in nasal drug administration are get directly absorbed into the blood stream so it acts more quickly. Pharmaceuticals is first bypass liver, hence the metabolism is modified.

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