

AYURVEDIC AND MODERN REVIEW OF NASYA KARMA

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ABSTRACT

Human body has five sense organs viz. nose, tongue, ear, eye and skin. The olfactory mucous membrane is the place in the body where the nervous system is closest to the external environment. Nose is one of the important sense organ which is the pathway of air entering and exiting your lungs. According to *Ayurveda Nasa* (nose) is the gateway of head. The Medicines administered through nose is known as *Nasya Karma*. This review article explores the concept and mechanism of *Nasya Karma* by *Ayurvedic* and modern perspective. For this study *Ayurveda Samhitas*, internet and modern medical literature have been reviewed. *Nasya Karma* is therapeutic measure by which we can treat ear, nose, throat and neurological diseases. There is need to know more about *Nasya Karma* for maintaining health of healthy persons and to cure disorder in the diseased.

KEYWORDS: *Nasya Karma, Ayurveda, Shirovirechana, Nasa.*

INTRODUCTION

The *Nasya Karma* is a therapeutic measure where the medicated oil, decoction and powder etc. are administered through nose to eliminate the vitiated humors in head for the treatment of ear, nose, throat and neurological diseases. In *Ayurvedic* texts, *Acharya Charaka* has used the term “*Nastah Pracchardana*”. Which denotes *Shodhana* done by *Nasya*. As stated by *Acharya Sushruta* the medicines are administered through the nose is known as *Nasya*. *Nasa Dhatu* is used in sense of nose (*Nasa Nasikayam*).

Etymology of Nasya

The word *Nasya* is derived from “*Nasa*” *Dhatu*. *Vachaspatyam* derives word “*Nastaha*” which means beneficial for the nose. It conveys the sense of Gati-motion (*Nasa Gatau*) and *Vyapti* means pervasion (*Nasa Vyaptau*). The literal meaning of the word ‘*Nasya*’ is being in nose or all the things which are beneficial to the nose.

Synonyms of Nasya Karma

Sirovirecana, Sirovireka, Murdhavirechana, Nastah Pracchardana, Nastah Karma, Navana

CLASSIFICATION OF NASYA

Table No. 1

No.	Acharyas	No.	Classification	Reference
1	<i>Charaka</i>	3	According to mode of action- <i>Recana, Tarpana, Samana</i>	<i>Ca.Si.9/92</i>
		5	According to the method of administration- <i>Navana, Avapidana, Dhamapana, Dhuma, Pratimarsa</i>	<i>Ca.Si.9/89</i>
		7	According to various parts of drugs utilized – <i>Phala, Patra, Mula, Kanda, Pushpa, Nirayasa, Tvak</i>	<i>Ca.Vi.8/151</i>
2	<i>Susruta</i>	5	<i>Sirovirecana, Pradhamana, Avapida, Nasya, Patimarsha</i>	<i>Su. Ci.40/21</i>
3	<i>Vagabhatta</i>	3	<i>Virechana, Brimhana, Samana</i>	<i>A.H.Su.20/2</i>
4	<i>Kasyapa</i>	2	<i>Brimhana, Karshana</i>	<i>Ka.Si.2 & 4</i>
5	<i>Sarangadhara</i>	2	<i>Recana, Snehana</i>	<i>Sa.Ut.8/2, 11, 24</i>
6	<i>Bhoja</i>	2	<i>Prayogika, Snaihika</i>	<i>Dalhana Su.Ci.40/31</i>
7	<i>Videha</i>	2	<i>Sanjna Prabodhaka, Stambhana</i>	

DESCRIPTION OF VARIOUS TYPES OF NASYA

On the basis of *Acharya Charaka* classification the types of *Nasya* as below:

- **NAVANA NASYA**

Navana is one of the important and well applicable therapies of *Nasya Karma*. It can be mainly classified into *Snehana* and *Shodhana*. *Navana* is administered by instilling the drops of a medicated oil or *Ghrta* in the nose.

Dosage schedule for Snehana Nasya**Table No. 2**According to *Acharya Sushruta*.

Type of dose	Dose
<i>Hina Matra</i>	8 drops in each nostril (In total 16 <i>Bindus</i>).
<i>Madhyama matra</i>	<i>Sukti Pramana</i> (In total 32 <i>Bindus</i>)- 16 drops in each nostril
<i>Uttama Matra</i>	<i>Panisukti Pramana</i> (In total 64 <i>Bindus</i>)- 32 drops in each nostril.

Table No. 3According to *Gayadasa & Bhoja*

<i>Prayogika Snehana Nasya, Nasya</i>	8 drops in each nostril.
<i>Snaihika Nasya</i>	16 drops in each nostril.

Types – According to *Vagbhata*, *Snehana Nasya* is further classified into 2 types based on dose:

- i) *Marsha* ii) *Pratimarsha*

B) Shodhana

Shirovirechana, which is mentioned by *Sushruta*, can be categorized in *Shodhana* type of *Navana Nasya*. In this type of *Nasya*, oil prepared by *Shirovirechana Dravyas* like *Pippali*, *Shigru* etc. can be used.

Dose**Table No. 4**According to *Sushruta (Su.Chi.40/36)*.

<i>Uttama</i>	8 drops
<i>Madhyama</i>	6drops
<i>Hina</i>	4 drops.

AVAPIDA NASYA:

It is a type of *Shodhana Nasya*. The word *Avapida Nasya* means *Nasya* given by extracted juice of leaves or pest (*Kalk*) of required medicine (Sha.U.8/12).

Types

It is mainly of two types.

Stambhana Nasya

Shodhana Nasya.

Chakrapani has mentioned three type

- 1) *Sodhana* 2) *Stambhana* 3) *Shamana*

Videha has mentioned two type;

- 1) *Sanjna Prabodhana* 2) *Stambhana*

Drugs

For *Shodhana* purpose *Kalka* of *Tikshna dravyas* like *Saindhava*, *Pippali* etc. have been mentioned as

A) SNEHANA NASYA

It gives strength to all the *Dhatu* and is used as *Dhatuposhaka*.

Drug

Sarpi, *Taila*, *Vasa* and *Majja* processed either singly and in combination with appropriate drugs. Generally, *Sneha* should be processed in *Vata Pittahara Dravyas*.

Avapida Nasya and for *Stambhana* purpose *Stambhana* drugs have been described.

Dose**Table No. 5**

<i>Hina Matra</i>	4 drops
<i>Madhyama Matra</i>	6 drops
<i>Uttama Matra</i>	8 drops

DHMAPANA NASYA

Dhmāpana or *Pradhmana* is a specific *Shodhana Nasya*.

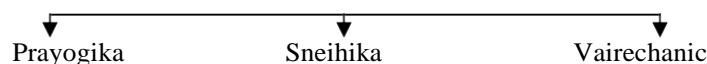
Here according to reference stated the fine powder of drugs is blown into the nostrils with the help of *Naadi Yantra*, which is six *Anguli* in length. The fine powder of drugs is taken at one end and air is blown from the other end, so that the medicine enters into the nostrils (*Sha.Sa.Ut.8/13*).

Dose

According to *Videha* the dose of *Dhmāpana Nasya* is three *Mucuti* (3 pinch)

DHUMA NASYA

Medicated smoke taken by nasal route and Exhaled by oral route.

Types:

Drugs: For *Prayogika Dhuma* drugs like *Priyangu*, *Ushira* etc. should be used.

For *Sneihika Dhuma Vasa*, *Ghritha* etc. and for *Vairechanic Dhuma*, drugs like *Aparajita*, *Apamarga* etc. should be used.

MARSA NASYA

According to *Vagbhata* 6, 8, 10 drops of *Sneha* is instilled to each nostril this is known as *Marsha*. That it gives quick result and more effective than *Pratimarsa Nasya* but *Marsha Nasya* gives more side effects (*Vyapada*).

Dose**Table No. 6**According to *Vagbhata*

<i>Hina Matra</i>	6 Bindu in each nostril.
<i>Madhyama Matra</i>	8 Bindu in each nostril.
<i>Uttama Matra</i>	10 Bindu in each nostril.

Table No. 8*Nasya Karma Yogya*

Sl.No.	<i>NasyaKarma Yogya</i>	<i>Ch.</i>	<i>Su.</i>	<i>Va.</i>
1	<i>Shiroroga</i>	+	+	+
2	<i>Dantaroga</i>	+	+	
3	<i>Manyastambha</i>	+		
4	<i>Galagraha</i>	+		
5	<i>Hanugraha</i>	+		
6	<i>Peenasa</i>	+	+	+
7	<i>Galasundika</i>	+		
8	<i>Galashaluka</i>	+		
9	<i>Sukra</i>	+		
10	<i>Timira</i>	+	+	
11	<i>Vartmaroga</i>	+		
12	<i>Vyanga</i>	+		+
13	<i>Upajihwika</i>	+		
14	<i>Ardhavabhedaka</i>	+	+	
15	<i>GreevaSkandaRoga</i>	+		
16	<i>Amsaroga</i>	+		
17	<i>Asyaroga</i>	+		
18	<i>Nasikaroga</i>	+	+	
19	<i>Karnaroga</i>	+		
20	<i>Akshiroga</i>	+		+
21	<i>Murdharoga</i>	+		
22	<i>Kaphalaroga</i>	+		
23	<i>Shirahkampa</i>	+		
24	<i>Ardita</i>	+		
25	<i>Apatantraka</i>	+		
26	<i>Apatanaka</i>	+		
27	<i>Galaganda</i>	+		
28	<i>Dantashula</i>	+		
29	<i>Dantaharsha</i>	+		

Table No. 7According to *Sharangadhara*

<i>Hina Matra</i>	1 Shaana (8 Bindu)
<i>Madhyama Matra</i>	4 Shaana (32 Bindu)
<i>Uttama Matra</i>	8 Shaana (64 Bindu)

PRATIMARSA NASYA

Medicated *Sneha* when administered into the nostrils in a small and specific dose is known as *Pratimarsha Nasya*. It is described as the most convenient form of *Nasya* as it does not has any complications.

Dose

Two drops morning and two drops evening.

30	<i>Dantachala</i>	+		
31	<i>Akshiraaji</i>	+	+	+
32	<i>Akshiarbuda</i>	+		
33	<i>Swarabheda</i>	+	+	+
34	<i>Vakgraha</i>	+		+
35	<i>GadgadaKathanadi</i>	+	+	+
36	<i>UrdwajatrugataVatadiRoga</i>	+		
37	<i>Vatabhibhutashiras</i>		+	
38	<i>Kesha smashruprapata</i>		+	
39	<i>DarunaKarnashoola</i>		+	
40	<i>Karnakshweda</i>		+	
41	<i>Asyashosha</i>		+	+
42	<i>Avabahuka</i>		+	+
43	<i>Akalajavalipalita</i>		+	
44	<i>Vatapittaja Shiroroga</i>		+	
45	<i>GreevaskandaUrasamcha Balajananartha</i>		+	
46	<i>Drushtiprasadajananartha</i>		+	
47	<i>SleshmanabhivyaptaTaal</i>		+	
48	<i>SleshmanabhivyaptaKanta</i>		+	
49	<i>SleshmanabhivyaptaShiras</i>		+	
50	<i>Arochaka</i>		+	
51	<i>Shirogourava</i>		+	
52	<i>Krumi</i>		+	+
53	<i>Pratishyaya</i>		+	
54	<i>Apasmara</i>		+	+
55	<i>Gandha Ajnana</i>		+	
56	<i>Shunyashirasa</i>			+
57	<i>ShiraJaadya</i>			+
58	<i>Galamaya</i>			+
59	<i>Shopha</i>			+
60	<i>Ganda</i>			+
61	<i>Suryavarta</i>			+
62	<i>Nasashosha</i>			+
63	<i>Keshadosha</i>			+

Table No. 9

CONTRAINDICATIONS OF NASYA MENTIONED IN *BRIHATTRAYI*

S.No.	<i>Anasyarha</i>	<i>Ca.</i>	<i>Su.</i>	<i>Va.</i>
1.	<i>Bhuktabhakta</i> (who has taken meal)	+	+	+
2.	<i>Ajirna</i> (indigestion)	+	+	-
3.	<i>Pita Sneha</i> (who has drunken oil or ghee)	+	+	+
4.	<i>Pita Madhya</i> (who has taken alcohol)	+	+	+
5.	<i>Pita Toya</i> (who has taken water)	+	+	+
6.	<i>Snehadi Patukama</i> (who wants to take Sneha etc.)	+	-	+
7.	<i>Snata Sira</i> (who did head bath)	+	-	+
8.	<i>Snatukama</i> (who want to have head bath)	+	+	+
9.	<i>Ksudharta</i> (having hunger)	+	-	+
10.	<i>Sramarta</i> (tired)	+	+	-
11.	<i>Matta</i>	+	-	-
12.	<i>Murcchita</i> (fainted)	+	-	-
13.	<i>Sastradand 'ahata</i> (injured from weapons)	+	-	-
14.	<i>Vyavaya klanta</i> (fatigued due to coitus)	+	-	-
15.	<i>Vyayama klanta</i> (fatigued due to exercise)	+	+	-
16.	<i>Pana klanta</i> (fatigued due to alcohol)	+	-	-

17.	<i>Navajwara Pidita</i> (affected with acute fever)	+	-	-
18.	<i>Sokabhitapta</i> (suffering with anxiety)	+	-	-
19.	<i>Virikta</i> (who has undergone <i>Virechana</i>)	+	-	+
20.	<i>Anuvasita</i> (who has undergone oil enema)	+	+	+
21.	<i>Garbhini</i>	+	+	+
22.	<i>Nava pratisyaya</i> (acute rhinitis)	+	-	-
23.	<i>Apatarpita</i> (fasted)	-	+	+
24.	<i>Pita Drava</i> (who has drunk liquid)	-	+	+
25.	<i>Trushna</i> (suffering from thirstiness)	+	+	-
26.	<i>Gararta</i> (suffering from chronic poisoning)	-	+	+
27.	<i>Kruddha</i> (Angry)	-	+	-
28.	<i>Bala</i> (child)	-	+	-
29.	<i>Vriddha</i> (elder)	-	+	-
30.	<i>Vegavarodhita</i> (suppressed natural urges)	-	+	+
31.	<i>Raktasravita</i> (who has undergone blood letting)	-	-	+
32.	<i>Sutika</i>	-	-	+
33.	<i>Svasa</i> (dyspnoea)	-	-	+
34.	<i>Kasa</i> (cough)	-	-	+
35.	<i>Durdina</i> (bad day)	+	+	+
36.	<i>Anrtu</i> (bad season)	+	+	+

Table No.10

Time schedule in different seasons

Ritu (season)	Time of Nasya
<i>Grishma Ritu</i>	Before noon(morning)
<i>Sita Ritu</i>	Noon
<i>Varsha Ritu</i>	Day should be clear
<i>Sarada + Vasanta</i>	In the morning
<i>Sisira + Hemanta</i>	Noon
<i>Grishma + Varsha</i>	Evening

Table No. 11

Time schedule in *Doshaja Vikara*

Disease	Time of Nasya
<i>Kaphaja Vikara</i>	Morning
<i>Pittaja Vikara</i>	Noon
<i>Vataja vikara</i>	Evening

Table No. 12

DURATION/COURSE OF NASYA KARMA

No.	Name of Acharya	Days
1	<i>Susruta</i>	1, 2, 7, 21
2	<i>Bhoja</i>	9
3	<i>Vagabhatta</i>	3,5,7,8

Administration of Nasya Karma:-

The procedure of giving *Nasya* therapy may be classified into the following three headings:

A) *Poorva karma* B) *Pradhan karma* C) *Paschat karma*

A) Poorva Karma:

Before giving *Nasya*, arrangement of the essential material and equipments should be done.

1. Nasya Bhavan: There should be a special room “*Nasya Bhavana*” free from atmospheric effects like direct blow of air and dust etc.

2. Nasya Yantra: For *Snehan*, *Avpidan*, *Marsha*, and *PratiMarsha Nasya*, a dropper or *Suktika* should be used. For *Pradhanan Nasya Shadangula Nadi* and *Dhoom Yantra* is required for *Dhoom Nasya*.

3. **Nasya Aushadhies:** The prepared drugs in appropriate forms and sufficient quantity should be kept.

4. **Miscellaneous material:** Big pot for expelled materials and towels should be kept for cleaning purpose.

Preparation of the Patient:

Like any *Shodhana Karma* the preparation of the patient consists of the *Snehan* and *Swedana Karma*.

1. **Snehana Karma:** Only *Shiroabhyanga* is advised before the *Nasya Karma*. Various medicated oils should be selected as per the constitution of the patient.

2. **Swedana Karma:** According to Ayurvedic texts *Swedana* should not be given to the head. *Mrudu Swedana* may be given for elimination of *Doshas* and liquification of *Doshas*. *Tapa Sweda* may be given on *Shira*, *Mukha*, *Nasa*, *Manya*, *Griva* and *Kantha* region. Cloth dipped in hot water may be useful for *Mrudu Sweda*.

B) Pradhana Karma

As described by *Acharya Charaka* *Acharya Sushruta* and *Vagbhatta* the following procedure should be adopted for performing the *Nasya Karma*.

- Patient should lie down in supine position with ease on *Nasya* table.
- Down position approximately about 45° Angle.
- *Shirah* (head) should be “*Pralambita*” (lowered i.e. hanging down) and foot part is to be slightly raised.
- Head should not be excessively flexed or extended.
- If the head is not lowered, the nasal medication may not reach to the desired distinction and if it is lowered too much, there may be the danger of getting the medication to be lodged in brain.
- After covering the eyes with clean cotton cloth, the physician should raise the tip of the patient’s nose with his left thumb and with the right hand the Lukewarm medicine (*Sukhoshna* drug) should be dropped in both the nostrils alternately in proper way.
- The drug should be neither less or hot and cold in the dose i.e. it should be lukewarm and in the proper quantity.
- The patient should remain relaxed while taking *Nasya*. He should avoid speech, anger, sneezing, laughing and head shaking during *Nasya Karma*.

C) Paschat Karma

Paschat Karma includes the procedures to be followed after the administration of the *Nasya*. The *Paschat Karma* has been described in various *Ayurvedic* classics as mentioned below:

- After administration of medication through nasal passage patient should lie supine (*Uttana*) and ask him to count numbers upto 100(*Vakasatam*).

- After an administration of *Nasya* feets, shoulders, palms and ears should be massaged.
- The head cheek and neck should be again subjected to sudation.
- The patient should avoid swallowing of *Nasya Aaushadhi* and morbid *Dosha*.
- Patient should spit out the excessive medicine which has come into the oropharynx.
- Medicated *Dhumpana* and *Gandusha* are advocated to expel out the residue mucous lodged in *Kantha* and *Shringataka*.
- Patient should stay at windless place. Light meal (*Laghu Aahara*) and Luke warm water (*Sukhoshna Jala*) is allowed.
- One should avoid dust, smoke, sunshine, alcohol, hot bath, riding, anger, excess fat and liquid diet.
- Day sleeping and cold water for any purpose like *Pana*, *Snana* etc. should be avoided after *Nasya Karma*.

MODE OF ACTION OF NASYA KARMA

- The detailed description regarding the mode of action of the *Nasya Karma* is not available in *Ayurvedic* classics.
- Nose connected to brain via vascular system, nerve plexus of olfactory nerve, ophthalmic and maxillary branches of Trigeminal nerve.
- The direct nerve supply from CNS and the rich vascular supply to nasal cavity help to understand probable mode of action of *Nasya Karma*.

In Ayurveda

- *Nasa* is the gateway to *Shira*.
- The drug administered through nostrils reaches *Srungataka* (a *Sira Marma* by *Nasa Srota*), distributed in the *murdha* (brain), *Shiramukhas* (opening of the vessels etc.) of *Netra* (eye), *Karna* (ear), *Kantha* (throat) etc. Scratches the morbid *Dosha* from supra clavicular region completely just like the removing *munja grass* from its stem.
- Under the complications of *Nasya Karma* *Sushruta* noted that the excessive *Shodhana Nasya* (eliminative errhine) may cause *Mastulunga* (cerebro sinal fluid) to flow out through the nose²⁵. So it can be concluded that, there is a very close relation between nose and brain.
- “*Nasa Hi Shirso Dvaram*” it doesn’t make sense, that some channels connect directly to the brain, but they might be connected through blood vessels, lymphatics or nerve supply.
- It is an experimentally proved fact that, wherever any type of irritation takes place in any part of body the local blood circulation increases, Because of the result of natural defense mechanism of the body.
- When provocation of *Dosha* takes place in head due to irritating effect of administered drug resulting in increase of the blood circulation of brain.
- So extra accumulated morbid *Dosha* are expelled out from small blood vessels. Ultimately these

morbid *Dosha* are thrown out as nasal discharge, tear and salivation.

In modern

- There is no such direct Pharmacodynamic consideration between nose and cranial organs.
- Moreover blood, brain barrier is a strict security system in human brain.
- The nose is used as a route of administration for inhalation anaesthetic materials.
- Nasal administration of leutinizing hormone (Fink G. et. Al.1973) and calcitonin (Potiroli E.A. et.al.1983) are found to be equally effective as intravenous infusions in maintaining blood concentrations.
- It was claimed that the concentration of drug in C.S.F. was very high to that when administered intravenously.
- Scientists of the Institute of Medical Sciences Delhi have proved after experiments that drug administered through nose shows effective action in the brain. So it can be concluded that there is a very close relation between Brain and Nose.

Benefits of intranasal drug delivery:-

- Dose reduction.
- Rapid attainment of therapeutic blood vessels.
- Quicker onset of pharmacological activity.
- Fewer side effects.

DISCUSSION

The drug transport can be occurring in three different pathways such as vascular pathway, *Lymphatic Path* and Olfactory pathway.

Effect on Neurovascular Junction

- The lowering of the head
- Elevation of lower extremities
- Fomentation of face
- These procedures seem to have an impact on blood circulation to the head.
- As the efferent vasodilator nerves are spread out on the superficial surface of the face which after stimulation at surface of the face, by fomentation may be there is increased blood flow to the brain, i.e. momentary hyperemia.
- It has been approximately calculated as 22% of total dilatation of cerebral capillaries, caused by the facial efferent stimulation, will lead to 150% of blood inflow.
- This act convinces more of “Slush” created in intracranial space, probably forcing more transfusion of fluids into the brain tissue.

Effect on Neuro-Endocrine level

- The peripheral olfactory nerves are chemoreceptor in nature. There are adjacent nerves called terminal

nerves which run along the olfactory nerves and their functions are unidentified. However it is well known that these nerves are connected with limbic system of the brain including Hypothalamus. Moreover, hypothalamus is considered to be responsible for integrating the functions of the endocrine system and nervous system.

- Abraham and colleagues (1979) in their experimental studies have noticed that a mere exposure to the smell of the jasmine flowers reduces the activity of mammary gland. If the fragrance could have the effect, it may be acting through impulse travelling via the olfactory pathway influencing hypothalamus which in turn, causes the inhibitory effect through the pituitary.

Effect on Neuro-Psychological levels

- The adjacent nerves called terminal nerves which run along the olfactory are connected with limbic system of brain including hypothalamus. Limbic system is also concerned with behavioral aspect of human being, also has control over endocrine secretions.
- Thus certain drugs administered through nose may have an impact on immediate psychological functions by acting on limbic system through olfactory nerves such a phenomena has been revealed in the work of Cowley et, al.(1975).

CONCLUSION

On the basis of the above discussions, it can be concluded that the procedures, postures and conducts explained for *Nasya Karma* are of vital importance in drug absorption and transportation. The facts discussed here also convincing us about the definite effect of *Nasya Karma* in the disorders of central nervous system, mental and some endocrinal disturbances also. From these evidences it can be stated that the *Nasya Karma* has a definite impact on central neurovascular system and likely to decrease the blood brain barrier to enable certain drug absorption in the brain tissues.

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