

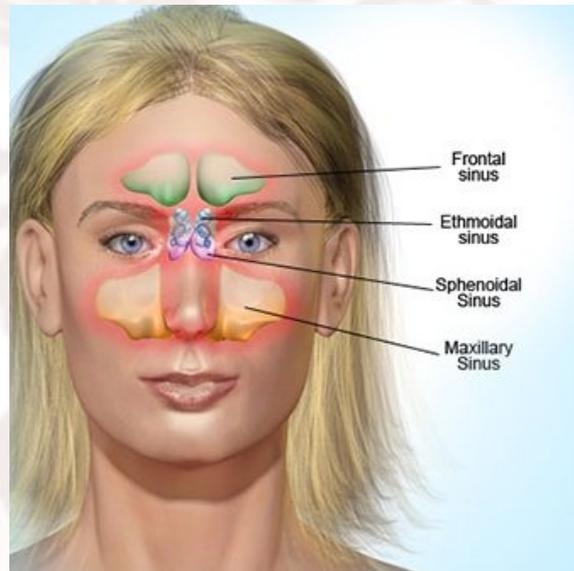
SINUSITIS

Sinusitis also known as rhinosinusitis is an inflammation of the mucous membrane lining the nasal passages and sinuses, usually caused by an infection.

The sinuses are hollow air filled cavity in the skull. They help to maintain pressure, air circulation and serve as a shock absorber for the internal organs of the skull. Sinuses are lined with membrane which secretes mucus that traps any germs or bacteria and drains out, in exchange air is filled. But when the sinuses opening into the nose are blocked, excess mucus is produced which leads to inflammation.

There are four sinuses located within the skull:

1. **Frontal sinuses** - above the eyes in the eyebrows
2. **Ethmoid sinuses** - between the eyes and behind the nose bridges
3. **Maxillary sinuses** - in both cheekbones
4. **Sphenoid sinuses** - behind the ethmoid in the upper nose and behind the eyes



Causes for sinusitis

Exposure to environment pollution, dust, chemical irritant, etc.

Recent upper respiratory tract infection like common cold

Exposure to allergens like pollens

Sudden changes in environment temperature

Low physical exertion

Any structural change in the nasal passage due to nasal polyp, deviated nasal septum, etc.

Recent contact with mould or fungus

Tobacco smoking

Weak immune system

Cystic fibrosis

Dental infection

Blockage in Eustachian tube

Genetic factor

Obesity

Increased antibiotic resistance

In children

- Contact with other children with the illness in day care centre
- Pacifiers
- Allergies to soft toys with fur
- Environmental smoke

Types

Based on chronological

1. Acute sinusitis: most common type and lasts up to 1 to 4 weeks
2. Recurrent acute sinusitis: repeated attack at smaller intervals
3. Sub-acute sinusitis: symptoms longer than the normal acute period for between 4 and 12 weeks
4. Chronic sinusitis: symptoms may persist or continually return after 12 weeks

Based on location

1. Maxillary sinusitis: pain or pressure in the cheek area e.g. toothache
2. Frontal sinusitis: pain or pressure above the eyes, headache particularly in the forehead
3. Ethmoidal sinusitis: can cause pain between/behind the eyes, sides or upper part of the nose, headache
4. Sphenoid sinusitis: pain or pressure behind the eyes, often felt at the top of the head, over the mastoid process (behind the ear) or back of the head.

Signs and Symptoms

- Pain or pressure on the sinuses
- Nasal congestion or blocked nose
- Post nasal drip i.e. overproduction of the mucous that flows to the throat that leads to Irritated or sore throat
- Thick whitish or yellowish mucous or watery nasal discharge
- Irritated or throat
- Cough, sneezing
- aggravated headache whenever the head is tilted forward
- Reduced sense of smell

- Halitosis or bad breath
- Itching in the eyes which is similar to allergies
- Fatigue
- Toothache
- Ear ache
- Mild fever

Complication

- Abscess
- Meningitis
- Vision problems
- Deafness
- Coma

Diagnosis

- **Physical examination**- by taking the proper case history and palpating the sinuses, examining the nasal passage, etc.
- X ray of the sinuses
- Ct scan or MRI
- Rhinoscopy

Treatment

- Antibiotics for bacterial infections
- Antifungal for fungal infections
- Nasal decongestant sprays
- Analgesics
- Surgery

Prevention

- Wash the hands regularly
- Avoid exposure to allergens, pollens etc.
- Avoid smoking and passive smoke
- Keep vaccination up to date
- Stay away from people with cold and other respiratory tract infection
- Keep the air-condition filter clean to prevent the mould build up

SINUSITIS IN AYURVEDA

According to Ayurveda the main site of *kapha dosha* is head and the nose is the gateway of the head. Hence similar symptoms of sinusitis are mentioned under *Nasa roga* (disease of nose) and *Shiro roga* (disease of head). It can be correlated as *Kaphaja siroroga* and *Suryaavartha* under *Siroroga* and also as *Dushtapratishyaya* in *Nasa roga*.

Nidana (Causative Factors)

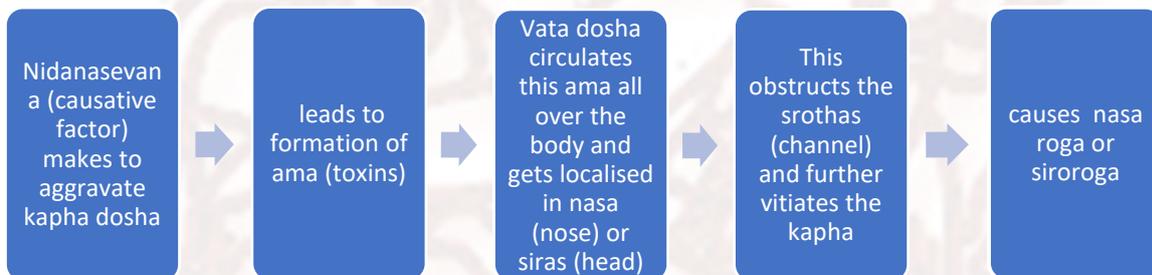
➤ Ahara Nidana

- **Atibhojana** (excessive intake of food)
- **Guru bhojana** (excessive intake of food taking long time to digest)
- **Ati snigda bhojana** (excessive intake of oily food)
- **Atyambupaana/sheethambupaana** (excessive drinking of cold water)

➤ Vihara Nidana

- **Aasya sukham** (sedentary lifestyle)
- **Svapna sukham** (excessive sleep/daytime sleeping)
- **Rajo, dhooma, sheetha vayu sevana** (exposure to dust, smoke, cold breeze)
- **Ritu vaishamya** (sudden climate change)
- **Vegodharana** (suppression of urges especially *chardi* (vomiting) or tears)
- Use of too high or too low pillow

Samprapthi (Etiopathogenesis)



Poorvaroopa (Premonitory symptoms)

- Nasal and eye irritation
- Sneezing

Lakshanas (Symptoms)

➤ Kaphaja Siroroga

- Kapha predominant disease
- Feeling of heaviness in head, headache
- Puffy face and eyelids
- Severe headache at night and minimum at daytime
- Postnasal drip
- Thick sputum

➤ Suryaavartha

- Tridoshaja/pitta predominant disease
- Pain in eyes, root of nose, frontal and sides of head
- Pain depends on intensity of the sunrays (starts at morning, increases at noon and decreases at night)

➤ Dushtapratishyaya

- **Pratishyaya** (rhinitis) when untreated for long time leads to **Dushtapratishyaya**, a complication of rhinitis
- Thick white sputum
- Fever, severe headache, cough, breathing trouble, malaise
- Nasal mucosa moist and dry alternately
- Reduced sense of smell

Upasaya (Pacifying Factors)

- Hot fomentation over the sinus
- Warm food and liquids

Anupasaya (non-pacifying factors)

- Exposure to cold wind, mist, smoke, etc.
- Intake of cold items like ice-cream
- Cold water shower

Treatment

The principle line of treatment is **ama pachana** (to breakdown toxins) by giving medicines with **deepana pachana** (digestive) to increase **Agni** (digestive fire). Then to clear the obstruction of the **srothas** (channels) **teekshana Shodana** (strong expulsion of aggravated) to the nearest route i.e. nose by **Nasya** (one of the panchakarma) is given. Further to enhance the immunity of the individual **Rasayana** is advised.

In all types of **siroroga** and **nasaroga**, **nasya** is the prime treatment to remove the aggravated **doshas**. If the patient has more **bala** (strength) and aggravated **doshas**, **vamana** is also recommended

There are 2 modalities of treatment

1. **Shodana (Purificatory treatment)**
 - **Deepanapachana** (to increase Agni)
 - ✓ **Shadanga kashayam**
 - ✓ **Trikatuchoornam**
 - ✓ **Chitrakadi vati**
 - **Sirovirechana**

- **Poorvakarma** (pre-operative stage)

a) **Abhyangam** above shoulder region with **Asana vilwadi/kumkumadi tailam**

b) Followed by **Swedana kriya** (steam inhalation) with **Dasamoola kashayam/Rasnadi choornam and Karpooram (medicinal camphor)**

- **Pradhana karma** (operative stage)

Make the patient lie on the flat surface and tilt the head backwards. Then instil the medicinal drops (*ANU TAILAM*, *GUDA NAGARA*, etc.) and allow the medicine to flow into the nasal passage by slight massage on the sides of nose.

- Pashchat karma (post-operative stage)

- Patient is asked to spit out the accumulated sputum
- *Kavalagraha/Gandoosham*: Lukewarm salt water is prepared and instruct the patient to hold and gargle for 2-5 minutes and spit it out.
- *Dhomananam*: Inhalation of smoke with medicine. Powders like *Haridra* (curcuma), *Ela* (cardamom) powder, etc. is mixed with ghee and smeared on the cotton cloth and is lit.

Dosage and the days of the *nasya karma* depend upon the severity of the disease and *bala* of the person.

2. Shamana (Palliative treatment)

Herbal Formulations

- Decoctions: *Dashamoolakatutrayam/Vyagradi kashayam/Dashamoolam kashayam/ Pathyashadangam kashayam/Khadira and asana kashayam*
- Tablets: *Sudarshanamgulika/Laxmivilasarasam/Dushivishari gulika/Shirashoolavajrarasa/Mahadhanwanthara gulika*
- *Chooranam*: *Hinguvachadi choornam/Sitopaladi choornam/Talisapatradi choornam*
- *Arishtam*: *Amruthaarishtam/Dashamoolarishtam*
- *Lepanam* (External application): *Rasnadi choornam* with lime
- *Pratimarsha Nasyam* (daily instillation of 2 drops in each nostril) *Shatbindhu tailam/Anutailam*

3. Rasayanam

Vyaagriharitaki Avaleha/Agastaya rasyanam/Haridrakhandam

KEYDRUGS

- *Kantakari* (Solanum xanthocarpum)
- *Tulsi* (Ocimum sanctum)
- *Haridra* (Curcuma longa)
- *Haritaki* (Terminalia chebula)
- *Amalaki* (Emblica officinalis)
- *Sunthi* (Zingiber officinale)
- *Maricha* (Piper nigrum)
- *Pippali* (Piper longum)

- Yashtimadhu (Glycyrrhiza glabra)

HOME REMEDIES

- Mix 1 tsp. Ginger juice with honey and take it 3-5 times daily
- Lime juice with honey
- 1tsp. cinnamon powder with honey
- Wheatgrass juice
- Tulasi tea
- Boil 4 glass of water with tulsi, 2 cloves, a few mint leaves, and a piece of ginger and sip it throughout the day.
- Steam inhalation morning and evening with fresh tulasi leaves or camphor.

COMPLEMENTARY TREATMENT

Aromatherapy: A few drops of essential oils like *Tea tree oil, Peppermint oil, Eucalyptus oil, Lavender oil* can be added to hot water for inhalation or bath. It can also be used directly to the cloth or as in diffuser.

YOGA ASANAS

- Setubandhasanam
- Sarvaangasanam
- Janusheershasanam
- Haalasanam
- Pranayama

PATHYA APAHYA

Pathya (do`s)	Apathya (don'ts)
<ul style="list-style-type: none">• Warm food and hot water• Easily digestible food like soups/porridge• Buckwheat soup• Orange• Papaya• Pears• Green leafy vegetables• Garlic, onion and ginger• Legumes• Spices (turmeric, cinnamon, black pepper, clove, cumin seeds, mint)• Light exercise	<ul style="list-style-type: none">• Cold food items like ice-cream, juices, etc.• Sour and salty food• Dairy products• Heavy, deep fried, processed or junk food• Excess sweets/sugar• Refined flour• Aubergine, tomato, banana• coffee• Day or excessive sleep• Cold water shower• Frequent head bath• Exposure to cold climate, air-condition• Cigarette smoking• Swimming in chlorinated pool

CLINICAL EXPERIENCE

A female patient aged 35 years came to our centre with occasional headache associated with blocked nose and loss of smell since 1 year. The condition worsens especially after seasonal change and air travel.

Physical examination

Prakrithi (body constitution): *Pittakapha*

Vikrithi: *Vatakapa*

Agni (digestion): *Mandagni* (weak)

Diagnosis: *Kaphaja Siroroga*

Clinical Examination

Examination of nose: Nasal mucosa-inflamed, inferior turbinate-Hypertrophied, Septum slightly deviated.

Examination of paranasal sinuses: Tenderness in bilateral frontal, ethmoidal and maxillary sinuses.

Treatment

The treatment procedures for 14 days are given below:

Internal medication

- 1tsp *Shadharana choornam* in half glass of hot water in the afternoon before food for 3 days
- *Mahadhanwanthara gulika* thrice daily after meals
- After 3 days *Dashamoolakatutraya kashayam* 20 ml in 40 ml luke warm water

External medication

- *Udhwarthanam* (powder massage) for 3 days to reduce body weight
- *Shodana Nasya* for 7 days
- *Mukha abhyanga* with *Kumkumadi tailam*
- *Swedana*-steam inhalation with *Rasnadi choornam* and *Karpooram*
- *Nasyam* with *Anutailam* 8 drops each nostril
- *Gandoosham*-with lukewarm salt water
- *Dhoomapanam*- *Haridraadi choornam*

Then on 11th day *Virechanam* with *Avipathi choornam* (20 g in 60 ml hot water)

Then till 12-14 days *Pratimarsha Nasyam* (2 drops in each nostril) after *mukhabhyangam* and *swedana*.

During the whole treatment course patient was asked to avoid morning walks and to follow pathya.

Observation

- After *udhwarthana* patient lost 1Kg and felt lightness of body
- During *shodhana nasya*, for the first few days nose was completely blocked and it was difficult for the drops to enter inside. Then after proper massage to nose bridge the patient felt slightly relieved after spitting sputum
- After *virechanam*, the patient shed 3 more kilograms of body weight
- No tenderness over the sinuses by palpating as well as sense of smell was attained after clearing the nasal passage.

Result

There was marked relief over the symptoms and patient gained normal appetite.

Advice given to patient on discharge

- Internal medication:
- *Haridrakhanda*- 10g with 30 ml hot water before bed
- *Pathyashadanga kashaya*-30 ml in 60 ml hot water before breakfast
- *Nasyam* with *Anu tailam* 2 drops in each nostril continuously for 7 days with an interval of 7 days for 3 months
- Follow the *pathya*.

CONCLUSION

Even though sinusitis is categorized as *kruchrasadhya/yapya* (difficult to treat/control/cure completely), Ayurveda medicines give a significant relief to the symptoms without any side effects. Recurrence can occur due to unavoidable causes like climate change, exposure to dusts, smoke, pollens etc. cause. However, in our clinical experience we observed that those who have done regular panchakarma and followed the *Rasayana* properly had a reduced recurrence.

References

1. The *Shalaky Tantra* by Dr Dingari Laxmanacharya
2. *Charaka Samhita*, Chaukhamba Bharati Academy
3. *Susruta Samhita Ayurveda Tatva Sandipika*, Chaukhamba Bharati Academy
4. www.ayurveda-journal.com
5. *Ashtangahridayam*
6. Mednet.com
7. *Sahasrayogam*
8. *Chikitsa Manjari*

