

# Ayurvedic Approaches to the Treatment of Sinus Infections

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## ETIOLOGY

If we look broadly at the field of Ayurveda, we can see that three general proximate causes of illness particularly apply to infections of the sinuses: 1) blockage of *srotas*, or body channels (in this case the sinus passages themselves, sometimes preceded or accompanied by disruption of the digestive channels, as in influenza), 2) imbalance of the doshas and/or vitiation of the *rakta* (generally taken to mean the non-serum portions of the blood) in the head, and 3) infectious agents, collectively dubbed "*krimi*."<sup>1,4</sup>

More specifically what we refer to as infections of the sinuses are grouped by the classical writers Sushruta (1: III: 118-130) and Vagbat (5: III: 173-183) under the larger category of *nasa roga*, diseases of the nose. Those diseases characterized by different forms of nasal discharge are called *pratishyaya* or *pinasa*, of which several subcategories are described. Although the symptomology of several of them are similar to allopathic diagnoses of colds, other types of sinus infections, and influenza, *krimi* are specifically mentioned in only a few cases, and thus do not serve as a means for differential diagnosis. Rather, *pratishyaya*/*pinasa* are differentiated according to dosha, seriousness of the condition, and for treatment purposes, whether they are chronic or acute cases.

In their various discussions of causes and treatments, the two above-mentioned

authors and Charaka (6: I: 312-313) note a variety of environmental and behavioral predisposing causes, among them exposure to fog, wind, dust, and smoke; heating of the head; excessive talking; insomnia or staying up at night; sleeping with the pillow too high or too low; excessive water intake; suppression of natural urges (e.g., urination, defecation, belching, or crying); excessive sexual intercourse; carrying of heavy loads or traveling; grief, anxiety, or excessive crying; poor diet; pungent drinks; swimming or diving; and local *krimi*.

Vagbat (5: III: 173) goes on to explain that "by these and other similar causes, the doshas dominated by vata become solidified in the nose and produce *pratishyaya*, which when advanced leads to *kshaya* [debilitation; diminution of tissue or of life force]." The vitiation of *udana vata* (the subdosha of vata located in the head), the blockage of the channels by various combinations of the doshas, and sometimes the weakening and concomitant involvement of the *rakta dhatu*, are all mentioned as factors in the etiology of sinus infections.

## DIFFERENTIATION OF VATA, PITTA, AND KAPHA

Because sinus infections can result from an imbalance of any of the three doshas, or a combination of them, it is first essential to determine which dosha is most at fault. Where stuffiness, raw or

dry throat, scanty clear mucous, excessive sneezing, hoarseness of voice, piercing pain in the temples are present, vata is the most likely culprit, especially if other vata symptoms, such as constipation, exhaustion, rapid or thin, weak pulse, and chills are also present. In vata sinus infection, chronic dryness of mucousal membranes causes stuffiness, spaciness, and susceptibility to frequent infection.

In the case of pitta, inflammation of sinuses, redness or yellowness of complexion, burning sensation, hot skin, sore, swollen throat, and heat or burning in the eyes or sinuses are key symptoms; mucous is green or yellow in color, with occasional bleeding and loss of sense of smell if the *rakta* dosha becomes involved. Other common pitta symptoms which may present are redness or yellowness of eyes or skin, ulcerations inside the nose, burning eyes, fever, loose stools, acidity of body secretions, and acid stomach. Inflammation of the sinuses blocks drainage and slows recovery.

Kapha sinus infections, however, are marked by copious secretion of thick or whitish mucous and may be accompanied by heaviness, dullness, pressure in the chest, facial swelling, paleness of complexion, tickling sensations, sleepiness, loss of appetite, and dull aches or pains. The mucous clogs the sinuses, and must be removed in order for healing to occur.

## AYURVEDA AND PATHOGENIC ORGANISMS

It is clear that the existence of infectious agents, both visible and invisible, were known to Ayurvedic practitioners in ancient times, however it is difficult for us today to know to what extent the twenty different classes of *krimi* were seen, suspected, or deduced. Although the visible ones were generally described, Charaka implies in several places that some are visible and some are not, which certainly explains the tendency of some of the translators to choose the term "microorganisms" over that of "parasites."

The existence of a pre-modern germ theory of disease in Ayurveda no doubt provided one of the several points of concordance between Ayurveda and Western Medicine which contributed to the theoretical and instructional overlap between Ayurveda and Allopathy observed in many contemporary Indian Ayurvedic medical schools. As a consequence, modern Ayurvedic physicians are well aware of antibacterial properties of herbs, and use this knowledge in treating conditions which they know or suspect arise from bacterial infection.

Nevertheless, *krimi* is rarely viewed as the single cause of illness in Ayurveda, and it would be unwise to assume that Ayurveda works merely by matching the correct herbal medicine to the appropriate pathogen. Rather, as Dash and Kashyap (3: XXXI-LVII) point out, Ayurveda takes a "field approach" rather than a "seed approach" to the treatment of infectious illness. It is the field, the patient's body, which must be rendered strong enough to throw off the illness, and in those cases where infectious agents are deemed to play a role, treatment plans must still pursue a course of opening the *srotansi*, or body channels, allowing the excess or diseased doshas to evacuate the body and strengthening the weakened doshas and tissues.

Although several herbs and herbal combinations in Ayurveda, for example mahasudarshan, neem, turmeric, berberis, and sandalwood, appear to have significant antibacterial activity, especially when combined, most of the Ayurvedic

physicians I have spoken with feel that few if any of the commonly used herbs have anti-viral properties. Nevertheless, even in the case of viral infections, treatments which balance the doshas while alleviating symptoms will enable the patient to recover more quickly and completely. My separation of "colds" from other types of "acute sinus infections" in the discussion which follows is therefore by allopathic rather than traditional Ayurvedic convention.

### COLDS

The sometime allopathic description of colds as a hyperacid condition parallels an Ayurvedic diagnosis of kapha-pitta or vata-pitta in Ayurveda, where in addition to mucous, raw and burning sensations are often present in the sinuses and the throat, and sneezing (a vata symptom) often occurs. Remedies to alleviate cold symptoms usually contain herbs to soothe mucous membranes, liquefy mucous, and decrease acidity. Thus turmeric and bala or licorice root can be used for colds of all three doshic predominances, and other herbs can be added to the individual formula as appropriate.

In my experience, it also seems quite beneficial to add a bit of garlic, though the proportion should be slight when the cold is more pitta in symptomology (no more than 10% of the total formula), and greatest (as much as 20% of the total formula) when vata symptoms are most in evidence. For the first three days, the diet should be light, preferably vegetable soups, vegetable juices, and teas; whereas dairy products, oily foods, heavy foods such as wheat, oatmeal, and brown rice, meat, and cold food and drinks should be avoided.

The Yogic practice of *jala neti*, gently pouring water through the nostrils one at a time, using  $\frac{3}{4}$  teaspoon of orsa salt and a pinch of baking soda per pint of filtered water, can be done once or twice per day if the nostrils are open enough for the water to pass though without forcing. In the west, the small inexpensive plastic watering cans with long narrow spouts are probably the most readily

available and practical method for administration. (See Das<sup>3</sup> for illustrated instructions.)

*Sitopaladi churna*, a combinational medicine (commercial preparations vary somewhat in terms of contents, but it usually contains jaggery, *pippali*, cinnamon, cardamom, and bamboo manna), is probably the most single effective cold remedy for colds where pitta is less influential and vata or kapha dominate colds, and it can be taken alone or combined with the above three herbs. It is excellent for drying up abundant clear or whitish mucous and returning energy to the body without aggravating the mucous membranes. In Ayurveda, it is sometimes spoken of as a children's remedy, because children, in the kapha stage of life, often have respiratory illnesses with abundant mucous, and also because children like the sweet and pungent taste of the powder and usually accept it readily.

Ginger or fenugreek combined with licorice root tea can also be helpful, and a person with a kapha cold should avoid all heavy or cold foods and drinks, and take a light diet of vegetable soups with a little trikatu and spicy herbal teas. Grains should be in the form of crackers or toast.

Pitta colds often begin with burning eyes and an inflamed and sore throat; an immediate first measure should be for the person to tilt back his/her head and sprinkle a powdered mixture of baking soda and turmeric over the sore area (or if preferred, gargle with a water solution) which after the initial sting is quite helpful in alleviating the pain and swelling. A few drops of ghee or warm castor oil and rose water can be placed in the eyes. Coriander, licorice root, and sandalwood, and/or lotus root can be added to the above turmeric-bala-garlic formula.

Sufficient intake of liquids is important in the treatment of pitta colds, and diluted non-acidic fruit juices such as pomegranate, organic grape, raspberry, pear, or blueberry served at room temperature are appropriate. A typical Ayurvedic tea for pitta colds contains sandalwood, *tulsi*, and coriander; but all cooling carminative spices such as fennel, carda-

mom, peppermint, coriander, and anise can be used.

*Tulsi* tea is often regarded as the most important herbal remedy for the treatment of vata colds, but any herbs which soothe and moisten mucous membranes, such as bala, licorice, and bamboo manna, can also be useful. Miso and lemon vegetable soup seasoned with mildly warming spices, and vegetable juices such as carrot, spinach, and beet, are recommended.

### OTHER ACUTE SINUS INFECTIONS

Acute, or recently contracted, sinus infections where there is any involvement of the digestive tract, as evidenced by fever, vomiting, aching muscles or joints, diarrhea, or loss of appetite, can be resolved more quickly when the Ayurvedic recommendations for fevers are followed. What we term “influenza” is described both in the discussions of *pinasa* (1: III: 127) and generally as vata-kapha *jwar* (fever) in texts on fevers. According to Ayurvedic theory, fevers result when the digestive fire is pushed into the periphery of the body, causing the body temperature to rise, while the digestive capacity is severely lessened. Heavy foods which are consumed at this time will thus not be properly digested, and result in the absorption of toxins and the worsening or prolongation of the illness.

Instead, Ayurveda recommends light sweating in the case of vata and kapha (which can include local application of hot herbal packs in the case of sinus infections), *vaman* in the case of strong influence of kapha, and fasting on boiled water, herbal teas appropriate to the *vikriti* of the disease, and light broths or soups, until the digestive capacity begins to return. Then specific medicines for symptoms should be given, such as those mentioned below, plus appropriate digestant herbs. Where no digestive involvement is noted, a general remedy mentioned by Sushruta (1: III: 126) is fresh ginger milk with Sucasat or jaggery.

The dehusked seeds of apamarga (*Achyranthes aspera* Linn.) are praised by

Charaka as the most important herb for treating all types of sinus infections (4: 63) because they are said to remove all of the excess doshas from the head, but apamarga is not always easy to obtain in the west. Nevertheless, there are several easily available and highly effective herbs and herbal preparations obtainable here which can be effectively used. Dosage is variable – vata prakriti people often require the lowest doses; kaphas often require quite a bit more – but is roughly ½-2 teaspoons. When a well-balanced formula for the individual patient has been arrived at, it should be given every 2 hours until symptoms are alleviated. Afterwards, in most cases, the formula should be continued 2 to 3 times per day for 5-7 additional days.

To alleviate pain caused by pressure in the sinuses, a paste of calamus root and water can be applied externally over the sinuses, left for 15 minutes, and then washed off with hot water. If the infection is more pitta than kapha, the calamus root should be mixed in equal parts with berberis, which is cooling. When the sinuses are open adequately for water to pass through without forcing, *jala neti*, where warm water the same saltiness as the body tissues is used to cleanse the nasal passages through gentle pouring, can be done twice per day on an empty stomach. After *jala neti* the patient should eat or drink something warm and light and remain sitting up or do whatever light exercise he or she is capable of to ensure drainage.

Pitta infections are characterized by yellow or green mucous and fever, and are often bacterially caused. They respond well to a mixture of neem, mahasudarshan churna, and turmeric, which have antibacterial properties, and some of the following pitta-alleviating herbs: licorice root, coriander, guduchi, jasmine, fennel, and sandalwood. Where the patient shows a mixture of vata and pitta symptoms, a mixture of turmeric, mahasudarshan, jasmine, bala, licorice, garlic, and amla, taken on an empty stomach with a little Sucasat or jaggery and warm (not hot) water or pomegranate juice every few hours can be effective. In vata sinus infections, some com-

bination of bala, bamboo manna, turmeric, neem, garlic or sitopaladi, licorice, fenugreek, chitrak, cardamom, and tulsi can be chosen, with the addition of mahasudarshan and trifala or haritaki if necessary.

For kapha or for kapha-pitta infections with copious mucous, sitopaladi churna or a combination of sitopaladi, mahasudarshan, and triphala is highly effective, and chitrak can be added if the patient complains of coldness. Ginger, ajwan, or trikatu with licorice root is usually an effective combination for a kapha sinus infection in the absence of bacterial complicity.

### CHRONIC SINUS INFECTIONS

Sushruta (1: III: 124) warns that “Neglected and not properly eradicated at the outset of the attack, any type of *pratishyaya* may give rise to more serious *pinasa*.” Vagbhat terms this condition *dushtapratishyaya*, meaning “hard to cure.” Although all of the forms of *pratishyaya* are considered curable, in the case of *dushtapratishyaya*, treatment may have to be prolonged for an extended period of time. Furthermore, the distinction between chronic and acute diseases is generally a matter of time (3, 7, 14, or 21 days, for example, depending on the doshas of the illness and the constitution of the patient).

In time, the doshas are said to “ripen” meaning that they adhere less tightly to the body channels. Pain and symptoms usually diminish during this phase of the illness and there is a partial recovery of energy. In *pratishyaya*, this can be indicated by a stopping of sneezing, a feeling of lightness of the body, loss of taste and smell, oiliness and thickness of mucous. In a chronic condition, however, the body is unable to recover beyond this stage, and a variety of symptoms such as continuous or recurrent low-grade fever, drying of the moisture in the nose, discharge of fluids of abnormal colors and consistencies, weakness of digestion, poor mental clarity, chronic cough or pain in the chest, and additional and more serious nasal infections may appear.

More than one dosha, and sometimes all three, are usually involved.

Thus it is not uncommon for chronic sinus patients to report a combination of feelings of stuffy dryness, inflammation, and mucous which is dried or copious, or of several different colors. The nostrils clog and unclog unpredictably, and the condition may worsen or improve without apparent reason.

Unlike the case of acute sinus infections where some of the *pancha karmas* are contraindicated, these practices can be enormously helpful in the resolution of chronic sinus infections. When the major seats of vata (colon/lower abdomen), pitta (small intestines/navel), and kapha (chest/stomach) are cleared of excess doshas through the practices of *pancha karma*, or the yogic *shat karma* system, then the secondary seats of the doshas in the head (*tarpak kapha*, *alochak pitta*, and *udana vata*) begin to clear.

Thus *vaman* (therapeutic vomiting) helps to reduce mucous throughout the body; *virechana* (purgation) helps to reduce inflammation generally in the body's mucous membranes and eliminate toxins; and oil *vasti* (enema) helps to lubricate all of the body's tissues. Both *vasti* and *virechan* help to evacuate excessive doshas downward and strengthen *apana prana*, so that excess doshas are not carried upward into the head, aggravating the condition.

While forbidden in the acute phase of the illness, especially where digestive involvement is present, a nurturing diet containing ghee, oils, eggs, and dairy products are indicated in chronic sinus conditions, because of the vitiated *udana vata*. Ghee, oil, and juice preparations of herbs dropped into the nose (*nasya*), rather than oral ingestion of herbal formulas, are the main course of treatment recommended by the classical texts. Nevertheless because of the difficulty of obtaining patient compliance for the regular application of *nasyas* in North America, it is often more effective for the Western practitioner to give internal herbal formulas accompanied by an appropriate medicated oil that can be simply massaged inside the nose once every day.

*Nasya*, the fifth *pancha karma*, can be prepared in a variety of ways, as fresh juices of plants, snuffs of dry herbs, medicinal decoctions, or oil preparations (see Lad and Frawley: 78, 82-85 for procedures to prepare decoctions and medicated oils and ghees). In cases where the dominant dosha is kapha, 1) *jala neti* followed by 2) a snuff of dry powder containing pippali, vacha, trifala, and licorice, followed by 3) a warm, light meal will stimulate drainage, dry mucous, and restore a sense of energy and motivation. For pitta, a ghee or coconut oil preparation (in the case of little mucous) or a physiological saline decoction preparation (if mucous is more abundant) of turmeric, licorice or Sucasat, neem, and sandalwood will decrease inflammation and encourage healing. For vata, a ghee preparation of vacha, bala, brahmi, and turmeric can be used.

The liquid and ghee *nasyas* should be administered warm on an empty stomach when the nasal passages are at least partially open. They are administered with the patient lying in a position such that the crown of the head is pointing downward, usually by having the patient simply lie on his or her back on a bed, with the neck and head extended comfortably over the edge of the bed. At the beginning, only one drop should be placed in each nostril at first, to ensure that clogging is not exacerbated. If there are no problems, the dosage can be increased at the next application. The person should be asked to sniff and massage the forehead for about three minutes, after which he or she may sit up. A warm, light meal and a brisk walk afterwards is recommended.

If *pancha karma* is not chosen as a treatment modality in the case of chronic sinus infections, then the internal formula which is given must also address any *ama* (digestive dysfunction) as well as any systemic doshic imbalances which are present at the time of treatment. The herbal choices are not markedly different from those used for acute formulas, however because of the longer time period during which complications have been present as well as the presence of more than one dosha, the formula should

contain a large proportion of rejuvenatives, like licorice root, bala, and brahmi, antiinflammatories like turmeric or sandalwood, and herbs or medicines which work well in the treatment of chronic conditions, like guggulu or trifala, because they open clogged channels.

Thus for chronic kapha sinus infections, one might select a combination of some of the following medicines: mahasudarshan churna, sitopaladi churna, licorice root, trikatu, purified borax, purified sulfur, ajwan, vacha, turmeric, ginger, or triphala guggulu. For pitta, one could choose as needed among neem, mahasudarshan, turmeric, licorice root, jaggery, sandalwood, kaishor guggulu, coriander, and bala. For vata, bala, turmeric, neem, licorice, bamboo manna, guggulu, brahmi, coriander, chitrak, cardamom, cinnamon, and abhrak basma are often recommended. If the person can easily digest milk, warm turmeric or pippali milk with honey taken on an empty stomach before bed or in place of an early breakfast is recommended.

*Jala neti* is recommended in all cases of chronic sinus infections, however it can be modified as needed. In cases of pitta, a little baking soda can be added, and for pitta-kapha, some aloe vera juice can be added as well. *Jala neti* should be followed by massaging an appropriate herbal preparation of warm ghee or sesame oil inside the nostrils in order to lubricate the mucous membranes. Pitta-caused chronic sinus infections usually involve the eyes, so a few drops of warm castor oil in the eyes before bed, and a few drops of preservative-free aloe vera juice in the morning are often important adjuncts for successful treatment.

Regular yoga practices are often quite helpful in the case of chronic sinus infections; a balanced series of poses is recommended, but chronic sinus patients also often comment that inverted poses, such as shoulder stand or headstand are the most beneficial. *Pranayama* (yogic breath practices) are also quite effective in the treatment of chronic sinus infections; *kappalabhati* and *brahmari* often work best for kapha and vata, while *sitali* is helpful for pitta. Moderate, regular exercise is also recommended.

## LIFESTYLE TIPS FOR SINUS SUFFERERS

1. Refrain from eating foods which your body cannot easily digest, as evidenced by belching or pain within a few hours after eating, or by gas, sluggishness, diarrhea, or constipation the next day.

2. Refrain from overeating. Do not eat when you are not hungry. Unless you actually feel hungry in the early morning, delay the first meal until 10:00 AM.

3. Wait at least 3-4 hours between consuming solid food and eating it again. It is better to eat two or three relaxing and satisfying meals each day than to graze continually. It is recommended that a short walk be taken after each meal.

4. Avoid extremes in diet: ice cream and ice water; excessively spicy food; too many sour and acidic foods; excessively oily and fried foods; dry foods taken alone; meat and other foods which are slow or heavy to digest. Eat a variety of fresh foods, and drink water and fruit or vegetable juices. Take sufficient oils for your body type in your diet: ghee, olive, sunflower, sesame. Avoid caffeine, tobacco, and alcohol. If you are vata prakriti, make sure that your diet contains adequate protein: eggs, dairy, tofu, and quinoa are all acceptable sources for your body type.

5. Avoid drinking or using chlorinated water for *neti*, as it can aggravate mucous membranes. Avoid exposure to toxic chemicals and fumes and second-hand smoke.

6. The following elements from the Yogic daily routine can be especially helpful for people with a proneness to sinus problems. Upon awakening, drink trifala water which you have prepared and let set from the night before. Before breakfast, do *jala neti* and rinse the eyes. Afterwards gargle with the remainder of the *neti* water, which helps to release more mucous. Then, if the provocation is vata, or if the weather is cold and dry, massage lightly inside the nostrils with vacha sesame oil or vacha ghee, or brahmi coconut oil if the provocation is pitta or if the weather is hot and dry. Clean the teeth, tongue, and mouth cavity and then massage the gums either with sesame oil or coconut oil. Put a little castor oil on the tips of the little fingers, and, one at a time put the tip of the finger in the ear and rotate or vibrate the fingers several times to help open the sinuses. With the thumb or heel of the palm of the hand, press on the forehead and rub vigorously. Using the fingertips of both hands, press down on the top of the head and massage. Then do yoga asanas, a few breathing practices, and a few minutes of

meditation. A light breakfast or warm drink may be taken when at least one hour has passed since drinking the trifala water.

7. For vata and pitta, drink warm turmeric milk with a little honey on an empty stomach before bed (or substitute rice milk if you are lactose intolerant). For kapha vikriti, use turmeric and ginger soy milk with honey. Before retiring, prepare your triphala water for the next morning by placing 1-3 teaspoons of trifala in a glass of filtered water.

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