

JALA NETI FOR THE MANAGEMENT OF SINUSITIS

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ABSTRACT

Satkarmas consist of six groups of purification practices. Dhauti, Basti, Neti, Trataka, Nauli and Kapalabhati - these are said to be the six purificatory processes. Astakarmas are cakri, nauli, dhauti, neti, basti, gajakarani, trotana and kapalabhati. The aim of the satkarmas is to create harmony between the two major pranic flows, ida and pingala, thereby attaining physical and mental purification and balance. These are also used to balance the three doshas or humours in the body: kapha, mucus; pitta, bile; and vata, wind. According to both ayurveda and hatha yoga, an imbalance of the dosas will result in illness. These practices are also used before pranayama and other higher yoga practices in order to purify the toxins from the body and to ensure safe and successful progress along the spiritual path. Neti is a process of cleansing and purifying the nasal passages. Practices included in this category are: jala neti and sutra neti. Jala Neti is nasal cleansing with water. Sinusitis is an inflammation, or swelling, of the tissue lining the sinuses. Common symptoms of sinus infections include: runny nose, stuffy nose, facial pain or pressure, headache, mucus dripping down the throat (post-nasal drip), sore throat, cough and bad breath. Two stages of Jala neti are washing the nostrils and drying the nostrils. The aim of Jal Neti is to purify and clean the entire upper respiratory passage right from the nostrils to the throat using water. Regular practice of Jal Neti helps to establish the correct working environment of temperature and humidity in the nose. It is a kind of “moisturizer” for “dry noses”. Jal Neti rinses out the dirt and bacteria filled mucous lining as the warm water loosens and dissolves any internal build ups, and takes those outwards.

KEY WORDS – Satkarma, Astakarma, Neti, Jalaneti, Sinusitis.

1. INTRODUCTION

Sodhana Kriyas in Yoga

Satkarmas - Shat karma is described under hatha yoga. It is a very precise and systematic science. Shat means 'six' and karma means 'action'; the satkarmas consist of six groups of purification practices. Dhauti, Basti, Neti, Trataka, Nauli and Kapalabhati- these are said to be the six purificatory processes.¹

²Performing the satkarmas: Dhauti, Basti, Neti, Laukiki (Nauli), Trataka and Kapalabhati, is essential.³
4 & 5

Astakarma - In Hatha Ratnavali, astakarmas have been described such as cakri, nauli, dhauti, neti, basti, gajakarani, trotana (trataka) and kapalabhati (mastakabhranti).⁶

Characteristics of Satkarmas - These six cherished processes, which purify the body and yield wonderful results, are held in high esteem by the foremost of the Yogis.^{1&2}

Indication of Satkarmas - Those having an excess of fat or kapha must practice the six purificatory processes first (i.e. before attempting kumbhaka). Those in whom the three humours (dosas) are in a state of equilibrium need not practice them.^{1&2}

The aspirant should do the pranayama (the kumbhakas) after getting rid, by means of six purificatory processes, of corpulence, disorders of kapha etc. and other impurities. In this way he will succeed in yoga without much difficulty.^{1&2}

Aim of Satkarmas - The aim of the satkarmas is to create harmony between the two major pranic flows, ida and pingala, thereby attaining physical and mental purification and balance. The satkarmas are also used to balance the three doshas or humours in the body: kapha, mucus; pitta, bile; and vata, wind. According to both ayurveda and hatha yoga, an imbalance of the dosas will result in illness. These practices are also used before pranayama and other higher yoga practices in order to purify the toxins from the body and to ensure safe and successful progress along the spiritual path.

II. DESCRIPTION OF NETI AND SINUSITIS

Neti is a process of cleansing and purifying the nasal passages. Practices included in this category are: jala neti and sutra neti.

Jala Neti (nasal cleansing with water)

Preparation: A special neti lota, 'neti pot' should be used. This pot may be made of plastic, pottery, brass or any other metal which does not contaminate the water. The nozzle on the end of the spout should fit comfortably into the nostril so that the water does not leak out. Even a teapot may be used if the tip of the spout is not too large or sharp. The water should be pure, at body temperature and thoroughly mixed with salt in the proportion of one teaspoonful per half liter of water. The addition of salt ensures the osmotic pressure of the water is equal to that of the body fluids, thereby minimizing any irritation to the mucous membrane. A painful or burning sensation is an indication of too little or too much salt in the water.

Stage I: Washing the nostrils

Fill the neti pot with the prepared salt water. Stand squarely, with legs apart so that the body weight is evenly distributed between the feet. Lean forward and tilt the head to one side. Breathe through the mouth. Gently insert the nozzle into the uppermost nostril. There should be no force involved. The nozzle should press firmly against the side of the nostril so that no water leakage occurs. Tilt the neti pot in such a way that water runs into the nostril and not down the face. Keep the mouth open. Raising the elbow of the hand which holds the neti pot helps to adjust the body position so that the water flows out through the lower nostril. When half the water has passed through the nostrils, remove the nozzle from the nostril, centre the head and let the water run out of the nose. Remove any mucus from

the nose by blowing gently. Tilt the head to the opposite side and repeat the process, placing the nozzle of the Iota in the upper nostril. After completing this process, the nostrils must be thoroughly dried.

Stage 2: Drying the nostrils

1. Stand erect. Close the right nostril with the right thumb and breathe in and out through the left nostril 10 times in quick succession, as in kapalbhati pranayama. Repeat through the right nostril, with the left nostril closed. Perform once more through both nostrils. 2. Bend forward from the waist so that the trunk is horizontal. Repeat the same process as described above, but tilt the head to the right, closing the right nostril. Repeat again, tilting the head to the left and closing the left nostril. Finally, repeat again with the head centered, breathing through both nostrils. Practice note: This step helps to drain trapped water from the sinus cavities. 3. Stand erect with the feet apart. Close the right nostril and exhale forcefully while bending forward rapidly from the waist. Inhale normally while returning to the upright position. Repeat 5 times. Repeat with the right nostril open and then with both nostrils open. Do not blow the nose too hard as the remaining water may be pushed into the ears. If necessary, perform shashankasana for several minutes to allow the drainage of any remaining water.

Duration: This practice should take about 5 minutes. Neti may be practised daily, once or twice a week, or as required.

Awareness: Physical - on relaxing and positioning the body, on the flow of water through the nostrils, and on relaxed breathing through the mouth, especially for beginners. Spiritual - on ajna chakra.

Sequence: Jala neti is ideally practiced in the morning before asanas and pranayamas. However, if necessary, it may be performed at any time, except after meals.

Precautions: The water should only pass through the nostrils. If any water enters the throat or mouth, it causes no harm, but indicates that the position of the head needs to be adjusted. Make sure that the nose is properly dried after the practice, otherwise the nasal passages and sinuses may become irritated and manifest the symptoms of a cold. Only practice neti when necessary. Prolonged practise is not advisable unless instructed by a competent teacher.

Contra-indications: People who suffer from chronic bleeding in the nose should not do jala neti without the advice of a competent teacher. Those who-consistently have great difficulty passing water through the nose may have a structural blockage and should seek expert advice. People prone to or having ear infections should not do neti. During colds, flu or sinusitis, when the nose is totally blocked, neti should be avoided.

Benefits: Jala neti removes mucus and pollution from the nasal passages and sinuses, allowing air to flow without obstruction. It helps prevent and manage respiratory tract diseases. It helps to maintain good health of the ears, eyes and throat. Jala neti relieves muscular tension of the face and helps the practitioner to maintain a fresh and youthful appearance. It has a calming and soothing influence on the

brain. It alleviates anxiety, anger and depression, removes drowsiness and makes the head feel light and fresh. Jala neti stimulates the various nerve endings in the nose, improving the sense of smell and the overall health of the individual. A balance is brought about between the right and left nostrils and the corresponding left and right brain hemispheres, inducing a state of harmony and balance throughout the body and mind. Most importantly, however, neti helps to awaken ajna chakra.

Practice note: Jala neti may be practised either in a squatting position or standing. The latter is most suitable for doing neti over a sink while the former may be performed outside. After some practice, a full neti pot may be used for each nostril. Variations: Practitioners may suck water up the nostrils directly from a glass or bowl. This is the original form of the practice called vyutkrama kapalbhati, or usha paan, which literally means 'water of the dawn'. Other liquids may also be used instead of water for the practice of neti. These include warm milk - dugdh neti, warm clarified butter or ghee - ghritha neti, and yoghurt. If oil is used instead of ghee, it must be natural and without added chemicals. The most powerful form of neti is practiced with the midflow of one's own urine, and is known as amaroli neti. This form is particularly useful for alleviating inflammation of the nasal passages. Each liquid bestows a different benefit. None of these variations should be attempted unless instructed by a competent teacher.⁷

Sinusitis - It is an inflammation, or swelling, of the tissue lining the sinuses. Sinuses make mucus, which keeps the inside of your nose moist. That, in turn, helps protect against dust, allergens, and pollutants. Healthy sinuses are filled with air. But when they become blocked and filled with fluid, germs can grow and cause an infection.

Conditions that can cause sinus blockage include: the common cold, allergic rhinitis, which is swelling of the lining of the nose caused by allergens, small growths in the lining of the nose called nasal polyps, a deviated septum, which is when the nasal cavity is crooked.

Sinuses - These are empty spaces in your skull. We have four pairs of sinuses for a total of eight. The pairs are found: above our eyes, between our eyes, behind our nose, under our eyes, behind our cheeks.

Acute sinusitis - It is typically caused by the common cold, a viral infection. We should feel better within 10 days, though symptoms could stick around as long as 4 weeks. We will experience the following symptoms:

- Stuffy nose, or nasal congestion, that makes it tough to breathe through your nose.
- Thick green or yellow mucus draining from our nose - a runny nose - or down the back of our throat, called postnasal drip.
- Pain, pressure, swelling, and tenderness around our nasal passages that feels worse when we bend over.
- We also may get a headache; have pressure in our ear, a cough, and other unpleasant symptoms.

Chronic sinusitis - It brings on the same unpleasant symptoms as acute sinusitis. But it lasts a whole

lot longer. We won't be diagnosed with chronic sinusitis until we have had symptoms for at least 3 months.

There are many things that increase our risk, including: nasal polyps, or small growths inside our nose, deviated nasal septum, in which the bone and cartilage that divides your nose gets pushed to one side, often due to an injury, allergies, recurring respiratory infections, diseases that affect the immune system, such as cystic fibrosis and HIV.

Sub-acute sinusitis - This type of sinusitis falls between acute and chronic. If our sinusitis lasts more than 4 weeks but less than 12 weeks, we will be diagnosed with sub acute sinusitis. Our symptoms may not be as severe as those we would experience if we had acute sinusitis.

Recurrent sinusitis - It's not uncommon to get the occasional bout of acute sinusitis. After all, it goes hand in hand with the common cold. But for some people, it keeps going away and coming back again. If we get acute sinusitis four or more times each year, we have what's called recurrent sinusitis. Some of the same risk factors for chronic sinusitis also up the chances of recurrent sinusitis, such as nasal polyps, deviated nasal septum, and other abnormalities that can occur in or around the sinuses. If we regularly inhale tobacco smoke or other irritants in the air, you may have a higher risk of recurrent sinusitis. Sinusitis also raises our odds of developing a bacterial infection, which in turn makes recurrent sinusitis more likely.

Fungal sinusitis - Fungi are living organisms that include mold, mildew, and mushrooms. They come in all sizes. Tiny fungi can be breathed in. Sometimes, that causes a fungal infection in your sinuses. There are two main categories:

- Invasive fungal sinusitis** - These rare infections can spread to your eyes, brain, and elsewhere. They can be deadly.
- Non-invasive fungal sinusitis** - These infections are more common. They affect only your nose and sinus area.

The most common type of fungal sinusitis is called allergic fungal rhino-sinusitis. It's caused by an allergic reaction to fungi that have taken up residence in our nose. The symptoms are similar to other forms of sinusitis. But if we have a weakened immune system, the symptoms can be different and severe:

- Changes in behavior and brain function. We may have trouble thinking clearly.
- Skin color changes, turning very pale or black.
- Numbness in our face.
- Our eyeballs stick out, a condition called apoptosis.
- Severe swelling in our eyes and cheeks.
- Changes in vision, including vision loss and blindness.

Allergic sinusitis - Dust, pollen, smoke, and other environmental irritants that you breathe in can trigger sinusitis. The symptoms are mostly similar to symptoms of other types of sinusitis. But allergic sinusitis

can cause a unique symptom: itchy nose, eyes, and throat. Symptoms can come and go with the seasons as the number of allergens in the air change throughout the year.

Pansinusitis - Normally, a sinus infection doesn't affect all four pairs of sinuses in your head; it only affects one or two. But sometimes, all four can become infected at once. This is known as pansinusitis.

Bacterial sinusitis vs. viral sinusitis - Both types of sinusitis are infections that cause similar symptoms. But they are not the same and are treated differently. Most sinusitis is caused by the common cold, a virus. And there's no cure for that viral infection. Instead, we have to wait until it goes away. The symptoms typically begin to fade after 5 days to a week.

A bacterial sinus infection, on the other hand, sticks around longer -- often a week to 10 days. We can treat the symptoms the same way you treat those of viral sinusitis. Antibiotics do not work for viral infections like viral sinusitis. These two types of sinusitis do often travel together. We may start with a viral infection and pick up a bacterial infection a week or so later. That initial infection makes it harder for our mucus to filter out threats to our health, including bacteria.

Sinusitis vs. sinus infection - These terms are commonly used interchangeably, but they refer to different things that often go hand in hand. Sinusitis, sometimes called rhino - sinusitis, refers to inflammation or swelling develops in our sinuses. A sinus infection, which 9 times out of 10 is caused by a virus, is usually the cause of that swelling. But we can have sinusitis without an infection. For example, allergies can cause inflammation and swelling in our sinuses.

People Gets Sinusitis - Swelling inside the nose like from a common cold, blocked drainage ducts, structural differences that narrow those ducts, nasal polyps and immune system deficiencies or medications that suppress the immune system.

For children, things that can cause sinusitis include: allergies, illnesses from other kids at day care or school, pacifiers, bottle drinking while lying on the back and smoke in the environment. The main things that make sinusitis more likely for adults are infections and smoking.

Sinusitis Symptoms - We may have these symptoms for 12 weeks or more: feeling of congestion or fullness in our face, nasal obstruction or nasal blockage, pus in the nasal cavity, fever and runny nose or discolored postnasal drainage, we may also have headaches, bad breath, and tooth pain. We may feel tired a lot.

Sinusitis headache - When sinusitis causes a headache, we will feel a nonstop dull pain around the area of the affected sinuses. That means behind our eyes, in our cheekbones, in our forehead, or around the bridge of our nose. The pain from the headache gets worse if we move our head suddenly or if we bend over. Sudden temperature changes also can increase the pain. Other symptoms include: worse pain in the morning and tenderness in our face.

Duration of sinusitis - In order to receive a diagnosis of chronic sinusitis, our symptoms must last at least 12 weeks, or 3 months. Unfortunately, we may experience symptoms for much longer. Some

research has found that symptoms can linger for more than a decade. They may improve over time, but they don't always go away completely.

Sinusitis Treatment - Sinusitis medications are antibiotics, painkillers, decongestants, allergy medicines and steroids.

Sinusitis home remedies – To breathe in steam vapors, to use warm heat and sinusitis nasal washing (nasal irrigation), to drink lots of fluids and rest.

Sinusitis Surgery - The different sinus surgeries include: endoscopic sinus surgery, septoplasty, and balloon sinuplasty.

Chronic sinusitis treatment - There are some other things you can do yourself to help with chronic sinusitis:

- Warm compresses can ease pain in the nose and sinuses.
- Drink plenty of fluids to keep mucus thin.
- Saline nose drops are safe to use at home.
- Over-the-counter decongestant drops or sprays can help.

Other Options

- We also need to avoid any triggers linked to our sinusitis.
- If we have allergies, our doctor may recommend an antihistamine.
- If a fungus is to blame, we will get a prescription for an antifungal medicine.
- If we have certain immune deficiencies, our doctor may give you immunoglobulin, which helps fight the things your body reacts to.
- If our symptoms do not get better, we have to talk with our doctor. They might order tests to figure out why we still have symptoms. These can include:
 - ACT scan or other imaging tests. Imaging tests create pictures of the inside of the body.
 - A test to look inside the sinuses.

Prevention of Sinusitis

- Not to smoke, and to avoid other people's smoke.
- To wash hands often, especially during cold and flu season and try not to touch face.
- To stay away from things we know our allergic to.

Untreated Sinusitis - We will have pain and discomfort until it starts to clear up. In rare cases, untreated sinusitis can lead to meningitis, a brain abscess, or an infection of the bone.

Sinus Infection (Sinusitis) –

Causes - Sinus infections happen when fluid builds up in the air-filled pockets in the face (sinuses). This fluid buildup allows germs to grow. Viruses cause most sinus infections, but bacteria can cause

some sinus infections.

Risk Factors - Several factors can increase your risk of getting a sinus infection: a previous seasonal allergy, smoking and exposure to secondhand smoke, structural problems within the sinuses i.e. growths on the lining of the nose or sinuses, known as nasal polyps and a weak immune system or taking drugs that weaken the immune system

Symptoms - Common symptoms of sinus infections include: runny nose, stuffy nose, facial pain or pressure, headache, mucus dripping down the throat (post-nasal drip), sore throat, cough and bad breath.^{8,10 &11}

Effect of Jala Neti on Sinusitis – Over the time, our sinus cavities get clogged with impurities which can cause infections, headaches, and inflammation. The aim of Jal Neti is to purify and clean the entire upper respiratory passage right from the nostrils to the throat using water. Regular practice of Jal Neti helps to establish the correct working environment of temperature and humidity in the nose. It is a kind of “moisturizer” for “dry noses”. Jal Neti rinses out the dirt and bacteria filled mucous lining as the warm water loosens and dissolves any internal build ups, and takes those outwards. It also can whisk away bacteria, thin mucus, and cut down on postnasal drip. Due to gravity and a venturi-effect, the sinus passages are also drained by the vacuum pressure flow of the water. Whereas it would normally be impossible to drain a “dead end” cavity like the sinuses, Jal Neti achieves this ingeniously and simply. A daily practice helps maintain the nasal hygiene by removing the dirt and bacteria trapped along with the mucus in the nostrils.^{9,10}

At the immediate level, jala neti is a great tool for any kind of respiratory disorder – sinusitis, allergy, asthma, hay fever to name a few. People invariably notice an immediate relief and sustained results and without side effects which prescription medications fail to achieve. It helps to reprogram the body’s natural mechanisms against respiratory complaints including sore throats, coughs, postnasal drips etc. It pacifies the sensitive tissues inside the nose, which can assuage a bout of rhinitis or allergies. It is very effective in dealing with asthmatic conditions making breathing easy. It reduces tinnitus and middle ear infections. It helps abate sinusitis or migraine attack. It can alleviate upper respiratory complaints like sore throats, tonsils and dry coughs. It helps flush the tear ducts, encouraging clearer vision and gives a sparkle to the eyes.^{10, 11, 12}

Clearing of nasal passages helps improve sense of smell and thereby improves digestion. It may help with better sleeping and less snoring. It actually calms the nervous system and the mind. Helps relieve stress and brings clarity to the mind. It has a cooling and soothing effect on the brain and is therefore beneficial for headaches, migraine, depression, mental tensions and temper tantrums. People have experienced reduction in their anger by practicing Jala Neti regularly. The yogis practice this as it improves the quality of their meditation. It is very effective for meditation as it works on the subtle effects of the olfactory bulb, and the psychic center, which is known as the Ajna Chakra in yoga. It is excellent for those trying to give up smoking. It reduces mouth breathing and re-sensitizes the nose to the indecency and discomfort of ingesting smoke, therefore deprogramming the brain of the physical and psychological addiction. It cleanses cranium, gives clear sight and alleviates diseases which manifest above the root of the neck.¹

It removes foreign bodies like allergens, dust and enhances the drainage of sinuses by preventing stasis

of mucus. It also increases blood circulation and functional efficiency of the nasal mucosa. It provides a relaxing and irrigating effect upon the eyes by stimulating the tear ducts and glands. It has a positive effect on cognitive faculties like memory, concentration and is beneficial in reducing anxiety and depression. By the systematic practice of jala neti, secretory and drainage mechanisms of the entire ear, nose and throat area are well maintained. This helps to keep at bay conditions like sinusitis, cold, cough, allergic rhinitis and insensitivity to smell.^{12,13}

III. CONCLUSION –

Jala Neti helps in preventing and managing upper respiratory tract diseases. It offers manifold benefits and relief from the antibiotic grip. It is very effective in treating sinusitis, rhino-sinusitis, allergic conditions and in improving vision. It has a significant role in improving the presence of mind and intelligence. It is a very simple cost-effective, non-pharmacological mode of treatment for sinusitis. It can effectively be applied in conditions like sinusitis, rhinitis, rhino-sinusitis and allergic rhinitis which are kapha predominant. Jala neti can be adopted as a first-line treatment for sinusitis. It restores the competence of nasal mucosa, wards off mucus, debris and reduces the chance of respiratory infections.^{9,12,13}

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