

EXPLORING THE ROLE OF KAPALABHATI KRIYA IN THE PREVENTION OF SINUSITIS – A REVIEW

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ABSTRACT

Sinusitis is an inflammation or swelling of the tissue lining the sinuses. Healthy sinuses are filled with air. But when they become blocked and filled with fluid, germs can grow and cause an infection. An estimated 134 million Indians suffer from chronic sinusitis, the symptoms of which include headaches, fever and nasal congestion and obstruction. Kriyas are more popularly called Shat Karmas Kriyas are a chain of techniques that aid in cleansing the mind and body, via clearing excess phlegm, bile and undigested food particles from the body. This clears associated energy blockages from the various channels of the astral body while preparing the *yogi* to gain superior benefit from the practices to follow. One of them is *Kapalabhati*. *Kapalabhati* is also called breath of fire is an important *Shatkarma*, a purification in Hath yoga. It is intended mainly for cleaning the sinuses. In this kriya the inner cavity of nose and forehead are cleaned and purify by means of air and as a result forehead becomes bright. In present article the mode of action of *Kapalabhati kriya* in the prevention of Sinusitis has been explained.

Keywords: Yoga, *Shatakriya*, *Kapalabhati*, Sinusitis, Anatomy of Paranasal sinuses

INTRODUCTION

Sinusitis is a common problem among all age groups and is a leading cause of hospital visits worldwide. An estimated 134 million Indians suffer from chronic sinusitis, the symptoms of which include headaches, fever and nasal congestion and obstruction. The national institute of Allergy and Infectious diseases (NIAID) estimate does not even consider those who suffer from acute sinusitis. Among Indian this disease is more widespread than diabetes, asthma, or coronary heart disease. One in eight Indian suffer from chronic sinusitis caused by inflammation

of the nasal and throat lining, which result in the accumulation of mucus in the sinus cavity and pressure built up in the face, eyes, and brain. Higher in pollution level and unhealthy lifestyle is responsible for the occurrences.¹

Sinusitis is an infection of Para nasal sinuses and the nose and most caused by Streptococcus Pneumonia, Morexella Cattarhitis. Accumulation of mucus in the sinus secondary to obstruction and inflammation facilitates pathogen growth.²It remains as a focus for infections and inflammations in all associated

structures like tonsil, ear, pharynx, larynx etc. Clinical symptoms include mucopurulent nasal discharge, nasal congestion and facial pain, or tenderness lasting for 7 to 28 days during attack. Diagnosis is therefore presumptive, being based on clinical presentation and diagnostic interpretation. Diagnostic technique includes sinus radiography, sinus trans-illumination, sonography and computerized tomography.

Finally, it may lead to many complications like otitis media, rheumatic heart disease, polyarthritis etc. When we go through other systems of medicine, we can see that they fail to offer a complete cure and prevention of this disease.³

Yoga is an ancient Indian way of life, which includes changes in mental attitude, diet, and the practice of specific techniques and purification procedures to attain highest level of health. *Shatakramas* also known as *Shatakriyas* are the set of yogic purifications of the body, to prepare for the main work of yoga towards moksha. It is indicated in Hatayogic text that if there is excess of fat or phlegm in the body, the six kinds of Kriyas should be performed first. One of the six cleansing technique is *Kapalabhati kriya*.⁴

Kapala in Sanskrit means **forehead** and **Bhati** refers to **brightening**. So, *Kapalabhati* is a cleansing process which brightens the forehead. In this kriya the inner cavity of nose and forehead are cleaned and purify by means of air and as a result forehead becomes bright.⁵ And hence in present article, role of *Kapalabhati* in the prevention of sinusitis has been taken in consideration.

Aim and Objective

To explain the mechanism of action of *Kapalabhati kriya* in the prevention of sinusitis

Materials and Methods

Search was conducted using search terms ‘Yoga, *Shatakriya*, *Kapalabhati*, *Sinusitistitle* or abstract in National Library of Medicine MEDLINE (www.pubmed.com) website. Literature concerning mechanisms of action of *Kapalabhati* in sinusitis was searched from different books on yogic science like; *Hatha yoga*, *Gherand Samhita*, etc.

Anatomy of Para-nasal sinuses

Nose is a sense organ which performs two functions i.e. olfactory and respiratory.⁶ Due to its direct contact with external environment it is exposed to lot of microorganisms & pollutants present in the atmosphere. Due to the increased environmental pollution and busy life, rhinitis is a common disease in this present era. If this stage is not properly treated, it will cause the spread of infection to sinuses and result into sinusitis and later on chronic sinusitis.

Nose is divided into two main parts, (i) the external nose (ii) the nasal cavity.

External nose is partly bony and partly cartilaginous. Nasal cavity extends from the external nares to the posterior nasal apertures and is subdivided into right and left halves by nasal septum, each half has roof, floor, medial and lateral wall. Lateral wall of nose consists of concha i.e. shell shaped structure and below each concha there is a meatus i.e. opening or passage. Nasal sinuses are the air-filled spaces present within some bones around the nasal cavities. There are four sinuses viz. Frontal, Maxillary, Sphenoid and Ethmoid. All these sinuses open into nasal cavity through the lateral wall of the nose. Function of these sinuses is to make the skull light and resonance to the voice. The Eustachian tube connects the middle ear cavity with the nasopharynx. It aerates the middle ear system and clear mucus from the middle ear into nasopharynx. In this way normal functioning of paranasal sinuses takes place.

Higher in pollution level and unhealthy lifestyle is responsible for inflammation of sinuses which result in the accumulation of mucus in the sinus cavity and pressure built up in the face, eyes, and brain and leads facial pain tenderness etc.

Kapalabhati kriya

According to *gheranda samhita* there are two subdivision of *kapalabhati* viz. *Jalakrama* (i.e. using water for cleaning of nasal passage), and other *Vatakrama* (i.e. cleaning nasal passage using air).⁷ Only *vatakrama Kapalabhati* is described here.

Steps of Kapalabhati kriya⁸

1. Sit in *Padmasana*⁹

Steps for *Padmasana*

1. Sit on the floor in a relaxed position with legs stretched out keeping hands by the side of the body and head to any one side. (Fig 1)
2. Straighten out the legs, keep the hands on the floor by the side of the body. (Fig 2)
3. Fold the right leg at the knee and bring the folded knee near the chest with the help of hands. Let the calf muscle touch the thigh. (Fig 3)
4. Then holding the right heel on the right palm and toes at the left palm bring folded knee joint towards the floor. With the help of both the hands, gently make the sole face upward. (Fig 4)
5. Keep the right sole on the left groin in such a manner that the right heel is near the pubic bone. (Fig 5)
6. Next fold the left leg and bring the knee towards the chest. Hold the left heel in the left palm and toes in the right palm bring the knee towards the floor. (Fig 6)
7. Make the sole face upward gently and firmly in the right groin in such a manner that both the heel touches each other and the knee touches to the ground. Keep the hands-on respective knee. (Fig 7)
8. This is the **starting position of Kapalabhati**. Keep the body firm. (Fig 8)
9. Take more than normal breath-in and expand the chest. The rib cage will rise. (Fig 9)
10. Retain this position i.e. do not allow the ribs to come down. This is the easy way to fix the chest as required in Kapalabhati. (Fig 10)
11. Now keeping the abdominal region relaxed commence abdominal breathing.
12. Thereafter briskly take the abdomen in so that the diaphragm comes up and air inside the lungs is pushed out. This kriya is to be done consciously, quickly and completely so that the inhaled air comes out all at once, making the fractioning sound.
13. After expulsion is completed, promptly relax the abdomen and lower abdomen without disturbing the position of expanded chest. As such compared to exhalation the processes of inhalation will be slower, longer.

14. When the action is done quickly, the breathing-in process takes place easily in terms of principle of action and reaction.
15. The deliberate, forceful and quick exhalation followed by the passive; effortless inhalation done in this manner completes around of Kapalabhati kriya.

Eyes and attention

Close the eyes and keep the attention on the abdominal strokes.

Coming out of Kriya

1. After completing the requisite no of rounds, relax in starting position of *Kapalabhati*.
2. For releasing *Padmasana*, release in reverse steps which was required to sit in *Padmasana*.
3. Finally sit in relaxed position, legs apart, hands by the side of the body and head to any one side.

Practice: initially perform 3 rounds of 10 – 20 strokes. Afterwards add 5 strokes every week so as to perform 120 -150 cycles in a round in a minute. Practice 3 such rounds every day.

Leading and preparatory practices:

Before practicing *Kapalabhati* one must know the difference between chest breathing and abdominal breathing. For this one must practice leading and preparatory practices as follows:

Udara Shwasana abhyas

1. Sit in padmasana
2. Breathe predominantly with the movements of the abdomen.
3. When this attained keep the chest fixed and do only abdominal breathing [fig 11- (breathing out)], [fig 12 (breathing in)] for a minute.
4. Perform 10-30 such rounds. After getting master over this practice, start the practice of Kapalabhati.

Contraindications:

Severe pain in abdomen, appendicitis, hepatitis, very delicate bowels or intestine, disorders of throat and lung infection, blocked nostrils, polypus.

DISCUSSION¹⁰

In *Kapalabhati*, breathing out is done by giving an active, forceful and sudden stroke at the abdomen while keeping the chest expanded and steady. As a result, the inside air is forcefully pushed out at once. The air while going out has to pass from lungs to the throat, from the throat to the nose and from nose to outside atmosphere. When the air from the lungs passes into throat, there is less difficulty, however when the inside air goes out from the throat to the nose, as the passage for exit of air is restricted and narrow, all the inside air cannot go out quickly at once. Because of this, some air enters the cavities of the nose and the forehead and afterward finally goes out in an orderly fashion because of the initial force. Later breathing-in process is made passive and effortless. After the breathing-in is complete, the same action is done again and again by giving stroke at the abdomen. Breathing-out is active and sudden while breathing-in is passive. Every time with an expulsion, the air which enters in the cavities is expelled with force. During this, the expelled air takes with its dust, excess secretion (mucus), other secretions, bad odour, waste matter etc. outside the body. As a result, the breathing passage and the sinuses are cleaned and purified, and forehead acquires a glow. In case of patients with chronic sinusitis the regular practice of this kriya can be helpful in preventing the recurrence of sinusitis.

CONCLUSION

In *Kapalabhati* breathing out is done through forceful strokes at the abdomen. After performing this kriya hundreds of time, the nasal cavities are cleaned and purified. Thus, *Kapalabhati kriya* is helpful in preventing the recurrence of sinusitis.

REFERENCES

1. <https://timesofindia.indiatimes.com/blocked.cms> assessed on 10/1/2020
2. Dr. Hemant Kumar Panigrahi, Efficacy of Ayurvedic medicines in the treatment of uncomplicated chronic sinusitis, *Ancient science of life* 2006;26 (1-2):6-11.
3. Dr. Shree Kumar Pillai, *Anutaila Nasya-Dushta Pratisyaya-Shalakyas*-2005, Ipgt & R, Jamnagar, Gujarat.
4. Pancham Singh, Editors, *The Hathayogpradipika*, Chaukhambha Sanskrit Pratisthan, Delhi, Edition 2011 2/ 22, P. 27
5. S. P. Nimbalkar, Editors, *Pranayam - an effective means to mental health*, Yoga Vidya Niketan, Mumbai, Edition 2009, P. 135
6. B. D. Chaurasia, Editors, *Human Anatomy, vol.3 Head, Neck & Brain*, CBS Publishers and distributors, New Delhi, Fourth Edition 2004, P. 227, 228, 230, 233
7. Rai bahadur Srisa Chandra Vasu, Editors, *The Gheranda Smahita*, Chaukhambha Vidyabhawan, Varanasi, edition reprint-2014, 1/55-56, P. 20
8. S. P. Nimbalkar, Editors, *Pranayam - an effective means to mental health*, Yoga Vidya Niketan, Mumbai, Edition 2009, P. 138
9. Sadashiv nimbalkar, Editors, *Yoga for health and peace*, Yoga Vidya Niketan, Mumbai, 8th edition 2012, P. 48
10. S. P. Nimbalkar, Editors, *Pranayam - an effective means to mental health*, Yoga Vidya Niketan, Mumbai, Edition 2009, P. 135

KAPALABHATI PICS

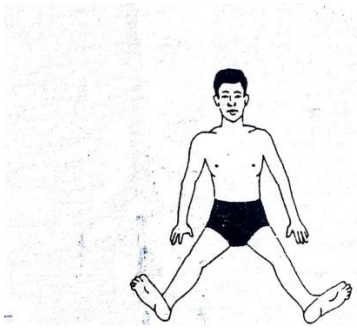


FIG 1

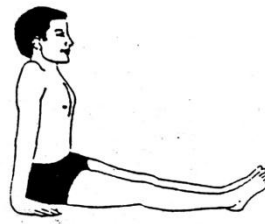


FIG 2

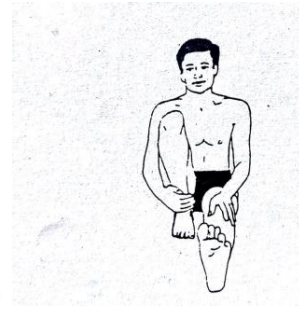


FIG 3



FIG 4



FIG 5



FIG 6

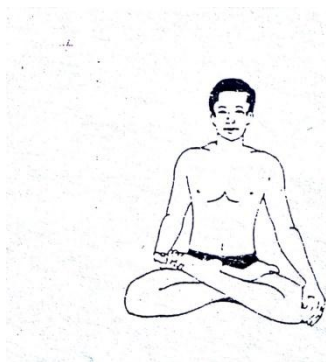


FIG 7



FIG 8

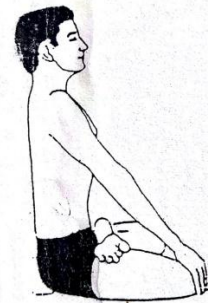


FIG 9



FIG 10

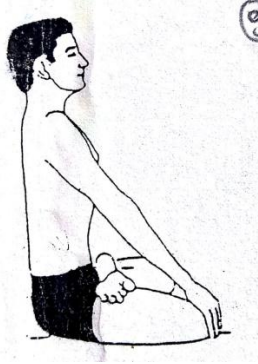


FIG 11



FIG 12

Source of Support: Nil

Conflict of Interest: None Declared

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