

How Sinuses May Help in Humming

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In 2020 at the height of COVID pandemic I started doing [Neti](#). It is an old yogic practice of cleaning the nose and the sinuses. One puts lukewarm water in one nostril by the spout of the Neti pot and it flows out by gravity from the other nostril. This is done a couple of times. It cleans up the nose and keeps the sinuses healthy.

Sinuses are the first defense against airborne diseases and [COVID-19](#) which spreads through air was supposed to be taken care of by Neti. During the pandemic I did not get COVID. Whether it was due to Neti; or living in a clean environment; or following strictly COVID protocols; or good immunity; one cannot tell.

However one of the unintended benefits I observed, as I progressed in Neti *kriya* (practice), was that I could hum nicely. During [my student days in IIT Kanpur](#) in late 1960s I used to practice singing and had attained some proficiency. Later on I stopped singing but this cleaning of nostrils and sinuses allowed me to start it again.

I therefore felt that probably the basic function of sinuses in human beings is to make the brain resonate when [we hum](#) or sing. And the use of sinuses as a first defense against air borne diseases could be an evolutionary progression. Many researchers have speculated on [why we have sinuses](#) but it has still remained a mystery.

Sinuses or empty spaces in skeletal structure help in reducing the weight of the birds for flying purposes but in humans it does not make sense to have them for this purpose. I therefore conjecture that it might be to vibrate the

brain when we sing, hum or chant in a certain way. Doing this is very enjoyable and I am sure singers in different cultures might vouch for that.

Why does such [humming produce an enjoyable feeling](#) ? I think a probable answer could be that when the vibrations reach the brain it helps in “jiggling” the neurons so as to produce better connectivity for neural pathways. Or in other words these vibrations may help in increasing the firing of neurons similar to that when we take some drugs. [Brain plasticity](#) can be increased either by chemical, physical or photonic means. Nature uses all the forces that act on any system for increasing its efficiency and brain is no different.

Ancients understood the power of these vibrations and it can be conjectured that [Sanskrit](#) language may have come out of this understanding since chanting of Sanskrit mantras produce lot of humming vibrations. It is therefore quite possible that humans evolved with singing as primary means of communication; the languages evolved later on.

Not only humming may help in improving neural pathways formation, it might also help in stimulating the vagus nerve. Studies have shown that [vagus nerve stimulation affects the voice](#) and so by principle of equivalence singing and humming may stimulate vagus nerve.

Sinuses and thoracic cavity probably form a total resonance system. Both of them have to be clean for resonating at some natural resonance frequency. We are still not sure what this resonance frequency is; but some call it [Brahma Naad](#).

The [maximum vagus nerve density is in the thoracic region](#) and its vibration by humming or chanting in deep lower notes may help in its stimulation. Stimulation of vagus nerve is very necessary for keeping a healthy body and mind. Many studies of [vagus nerve stimulation](#) have shown that it helps in

regulating heart rate, keeping the gut healthy and in toning of the nervous system.

In different cultures chanting or singing in deep lower tones has been a part of religious or mindfulness practices and the above scientific principle may help explain the practice. Thus if we keep our noses clean it will help us to remain healthy and be happy!

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