Potential Immune Protective Effects of Nitric Oxide and Humming

- Nitric Oxide (NO) is produced in the paranasal sinuses and carried into the lungs during nasal breathing.
- NO is known to be broadly antifungal, antiviral, and antibacterial.
- NO is a broncho dilator helping open nasal passages bronchi and bronchioles in the lungs.
- NO is also a vasodilator playing an important role in the dilation of blood vessels so that oxygen can be properly distributed throughout the body.
- Gentle nasal breathing optimises NO levels in airways and blood.
- Humming leads to a 15 to 20-fold increase in NO levels helping to open airways and kill pathogens.

NO is produced in the paranasal sinuses, a group of four air-filled spaces that surround the nasal cavity. According to a 1999 paper by Lundberg and Weitzberg, NO in the nasal airways could represent an important first line of defence against infection.[1] NO is known to be broadly antifungal, antiviral, and antibacterial.[2]

Research conducted during a previous Coronavirus epidemic i.e., the SARS-CoV (Severe Acute Respiratory Syndrome Coronavirus) epidemic showed that NO inhibited the replication of SARS-CoV in a dose dependent manner, meaning that higher levels had a greater inhibitory effect on the replication of the virus.[3]

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Impaired breathing leads to poor air circulation and lower levels on beneficial NO in the nose and sinuses, thus creating an environment beneficial for bacterial growth and inflammation. Studies carried out at the Karolinska Institute in Sweden show that humming increases airflow in the sinuses. Further, the levels of NO increase 15 to

20-fold by humming compared with quiet exhalation.[2] By breathing through the nose, we harness the various properties of NO including its germicidal powers. [1]

According to *The Humming Effect* by Jonathan and Andi Goldman, humming also reduces stress, induces calmness, enhances sleep, lowers heart rate and blood pressure, produces neurochemicals such as oxytocin, increases lymphatic circulation and melatonin production, releases endorphins and creates new neural pathways in the brain. All help reduce stress and promote health and well-being.[5]

Humming Exercise

Here is a simple humming exercise you can do if you feel you are coming down with a respiratory infection, sinusitis, or are unwell. You can do it any time as a preventative measure to help boost immunity. We associate humming with cheerfulness, and you'll notice that it's difficult to hum and feel down at the same time.

1. Breathe through your nose with mouth closed and the tip of your tongue resting behind your top front teeth.
   (Note: if you can't breathe through your nose do the Nose Unblocking exercise first).
2. As you exhale slowly through your nose make a sustained "hmmmmmm….." sound.
3. Avoid pushing the air out with force. As with everything to do with breathing this should be done gently.
4. Now, breathe in gently through your nose and repeat.
5. The sinuses are air filled cavities located around your nose, temples and above your eye sockets. To increase the effect of the exercise you can gently massage those areas while doing the exercise.
6. If you have a stubborn blocked nose or sinusitis repeat this exercise for 5 to 10 minutes, two to four times a day for a few days or until symptoms improve.

When doing this exercise the vibrations you might feel are helping increase air circulation and production of NO in your nasal and sinus cavities.

To learn more about the benefits of humming read *The Humming Effect* by Jonathan and Andi Goldman. [5]

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Nasal Breathing and Nitric Oxide »

Immune Protective Effects of Nasal Breathing and Nitric Oxide for Coronaviruses - Self-Care Potential »

About this Post

The New Zealand Government and front-line workers in our hospitals are doing an exemplary job in containing the spread of this virus.

Please note neither this post/blog nor any linked articles claim that nasal breathing or humming prevent or cure COVID-19. However, now more than ever it makes sense both for physical and psychological reasons to take any steps that may improve our health. Like the advice to wash our hands frequently, the advice to nasal breathe also gives us a sense that there is something we can do, a sense of control and anything that makes us feel less stressed is also good for our immune system.

Booking online consultations

To book for an upcoming seminar, online consultation or for more information on ways you can boost your natural immunity, you can contact our clinic and speak with a practitioner.

Tel: 09-360 6291

Book online here »

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References:

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5. Jonathan and Andi Goldman. The Humming Effect https://www.amazon.com/Humming-Effect-Healing-Health-Happiness/dp/1620554844

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