Investigating the treatment of rhinitis in asthma using the Buteyko Method
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Introduction

Rhinitis is the leading cause of respiratory obstruction[1] and a significant contributory factor to numerous cormobid disorders, including dentofacial and craniofacial alterations. [2,3,4]

The most common treatment for rhinitis includes avoidance, decongestants, corticosteroids or allergy shots, and while these offer therapeutic benefit, they are effective only for as long as treatment continues.

A different perspective put forward by the late Russian Dr Konstantin Buteyko is based on the premise that breathing a volume of air in excess of metabolic requirements causes nasal congestion. Upon the first onset of nasal congestion, a feeling of air hunger occurs causing one to switch to mouth breathing. This in turn increases breathing volume, thus completing the vicious circle.

The Buteyko Method features a measurement appraisal known as the control pause, a breath hold exercise to unblock the nose and reduced breathing exercises to reset breathing volume towards normal.

The objective of a study undertaken by Dr Adelola et al. from the Department of Otolaryngology at Limerick University Hospital in Ireland was to investigate the effectiveness of the Buteyko technique on the nasal symptoms of patients with asthma.

Method

26 volunteers with a diagnosis of asthma and chronic rhinitis, ranging in age from 23 – 60 years were recruited from the general population. Training took place weekly for three weeks by Buteyko practitioner; Patrick McKeown. Participants were followed for three months.

Each participant completed quality of life scores to rate their nasal symptoms at the beginning of training and three months post training. Validated evaluations consisted of the sinonasal outcome test (SNOT)[5], nasal obstruction symptom evaluation (NOSE)[6] and visual analogue scale.

Results

The study showed a significant reduction of nasal symptoms in asthmatics across all three evaluations. For example, NOSE evaluation surveys nasal congestion or stuffiness, poor sense of smell, snoring, nasal blockage or obstruction, trouble breathing through the nose, trouble sleeping, having to breathe through the mouth, unable to get enough air through the nose during exercise or exertion and feeling panic that one cannot get enough air through the nose. This evaluation showed a 71% reduction of rhinitis symptoms in asthma at three month follow up.

Test	Baseline Mean Measure	3 Month Mean Measure	Improvement
Visual Analog Scale	66.65	18.25	72.60%
Nasal Obstruction Symptom Evaluation	12.03	3.46	71.20%
Sinonasal Outcome Test-22	44.07	12.34	72.00%

Table one: Pre- and post-test mean scores of visual analogue scale (VAS), nasal obstruction symptom evaluation (NOSE) and sinonasal outcome test (SNOT-22)

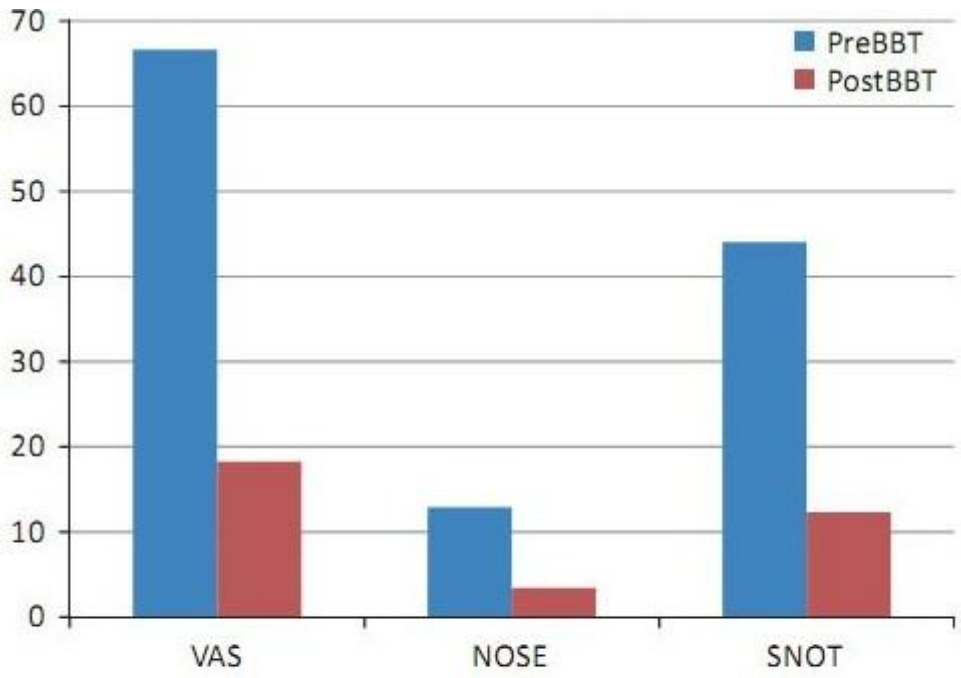
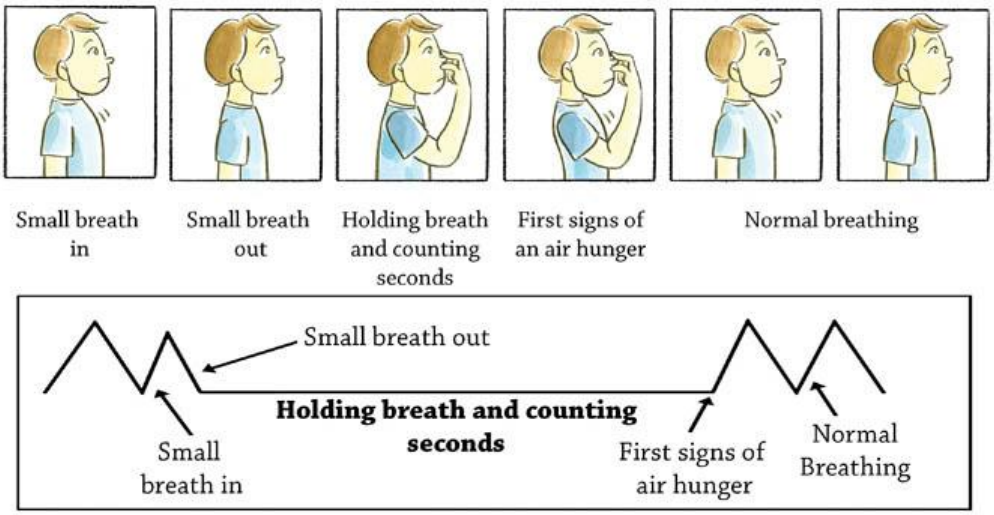


Fig. 1. Pre- and Post-test Mean scores of Visual analogue scale (VAS), Nasal obstruction symptom evaluation (NOSE) and Sinonasal outcome test (SNOT-22).

Measure relative breathing volume by length of breath hold time (Control Pause)

A number of researchers have determined an inverse relationship between length of breath hold time and breathing volume.[7,8,9] The measurement below was developed by the Late Russian Dr Konstantin Buteyko and is known as the "control pause". A low control pause is indicative of higher ventilation during rest, resulting in rhinitis symptoms for those genetically predisposed. From measuring the breath hold time of thousands of individuals over the past twelve years, I have consistently found that rhinitis symptoms including nasal congestion, runny nose and post nasal drip are greatly reduced when the control pause is greater than 25/30 seconds. Furthermore, each five second increase to the control pause corresponds to reduced rhinitis symptoms.

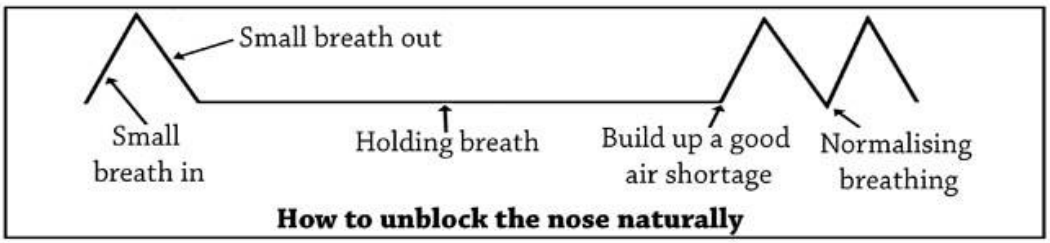


Measuring the Control Pause

- Take a small, silent breath in through your nose and allow a small silent breath out through your nose.
- Hold your nose with your fingers to prevent air from entering your lungs.
- Count the number of seconds until you feel the first distinct desire to breathe in.
- At the first distinct desire to breathe in, you may also feel the first involuntary movements of your breathing muscles. Your tummy may jerk and the area around your neck may contract.
- Your inhalation at the end of the breath should be calm.
- Release your nose and breathe in through it.

Breath hold exercise to unblock the nose

The first step to normalising breathing volume is to decongest the nose and make a permanent switch to nasal breathing. As chronic hyperventilation can be maintained by an occasional sigh, it is important to counteract the sigh by swallowing or holding the breath. The switch to nasal breathing is followed by employing breathing exercises designed to bring breathing volume towards normal.



The nose can be decongested for both allergic and non allergic rhinitis by holding the breath as follows:

- Take a small, silent breath in and a small, silent breath out through your nose.
- Pinch your nose with your fingers to hold your breath.
- Walk as many paces as possible with your breath held. Try to build up a large air shortage, without overdoing it of course!
- When you resume breathing, do so only through your nose; your breathing must be calmed immediately.
- After resuming your breathing, your first breath will usually be bigger than normal. Make sure that you calm your breathing as soon as possible by suppressing your second and third breaths.
- You should be able to recover this breath hold within two to three breaths. If you cannot, you have held your breath for too long.
- Wait for about a minute or so and then repeat.
- Repeat this exercise five or six times until the nose is decongested.

Conclusion

The Buteyko Method offers a therapeutic intervention for rhinitis and allergic rhinitis. The study showed a significant improvement in nasal symptoms of asthmatics, and quality of life of participants. Further research is necessary to establish the effectiveness of the Buteyko Method for chronic rhinitis.

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