

The Breath Connection Facts

1. Overbreathing, either by taking larger breaths or more breaths per minute or both leads to low carbon dioxide levels in the lungs.
2. Lowered carbon dioxide levels (less than 5%) leads to spasm of smooth muscles that wrap around airways, blood vessels, bladder and other hollow organs.
3. Lowered carbon dioxide levels lead to the impaired oxygenation of the body as blood holds onto oxygen more strongly not releasing it fully to the tissues. (The Bohr Effect)
4. Lowered carbon dioxide levels changes the acid/alkaline balance of the blood thereby impairing the entire chemistry of the body.
5. Chronic long-term over-breathing causes receptors in the brain to accept and maintain lower levels of carbon dioxide in the blood, thereby ensuring the continued state of over-breathing to the detriment of the person's health.
6. Over-breathing has been shown to be associated with many sleep conditions including poor quality sleep, sleep apnoea and snoring from the body's response to these physiological disturbances.

Contact: Michael Lingard BSc DO BBEC

The Breath Connection
St Bridgets, Rye Road
Hawkhurst, Kent. TN18 5DA

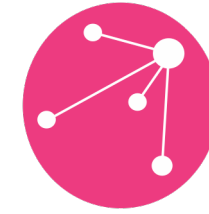
Tel: 01580 752852
E-mail : enquiries@buteykokent.co.uk

Hyperventilation & Sleep Problems

Hyperventilation is considered to be the fundamental cause of OSA, according to Professor Buteyko's theory. He argues the apnoeas or pauses in breathing which occur in OSA are the body's defense mechanism against the excessive loss of carbon dioxide due to hyperventilation and consequent hypoxia. Breathing retraining with the Buteyko Method offers a safe, effective, convenient, and more appealing option for people with OSA, which can usually eliminate the need for surgery, oral appliances, or CPAP. We are now able to offer sleep studies in your own home (UK only) using a Pulse Oximeter worn overnight on your wrist for constant measurement during your sleep.

References:

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The Breath Connection

Insomnia Snoring & Sleep Apnoea

Our breath connects everything in our lives: our health, emotions, our whole being and every living thing in the environment, as we all, plants, animals & fellow humans, breathe the same air.

Good breathing means good health.

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People who hyperventilate (over-breathe) may suffer some from:

- Repeatedly waking during the night
- Waking up tired instead of refreshed
- Vivid dreams and nightmares
- Having extra mucus on waking
- Talking or walking during sleep
- Waking with a dry mouth

Sound Sleep

As a person relaxes and prepares for sleep, the breathing pattern lessens slightly, creating a small rise in carbon dioxide. This might be resisted at first with repeated yawning, but after a time the respiratory centre adjusts, and the nervous system relaxes, encouraging sleep. (Jennet 1994).

To remain asleep, this small rise in carbon dioxide level needs to be maintained. When babies are asleep, their breathing is so gentle that it is hard to see any movement when sleeping. To meet the demands of metabolism during sleep, it is only necessary to breathe through one nostril, and this is normally achieved by lying on one side. The nostril that is closest to the pillow fills with fluid while the other is breathed through. When the working nostril tires, it causes the person to roll over and the reverse happens. (Cole 1984). This cycle is repeated several times a night and ensures a sound sleep because backache, cramp, numbness and circulatory problems (Davies 1989) can occur if the person stays in one position for too long. Being able to breathe through your nose is therefore vital for sound sleep, because with a chronically blocked nose it is impossible to maintain this cycle (Barelli 1984). The fastest way to block up your nose is to breathe too much air, especially through the mouth, which is why lying on the back tends to encourage poor sleep patterns. In this position the jaw is likely to relax so much that the mouth falls open and facilitates loss of carbon dioxide, as well as heat and water from the lungs, throat and mouth.

Tel: 01580 752 852

The Buteyko Method improves breathing & improves your sleep

Lying on the back also makes for more effort breathing (Hough 1997), and this increased effort requires additional oxygen, causing increased breathing and loss of carbon dioxide. This removes the sleepy, relaxed feeling that higher carbon dioxide levels provide and either wakes the person up or prevents them getting to sleep in the first place. At the same time, smooth muscle spasms, and this may cause reactions such as chest tightness, or an urge to empty the bladder. In an effort to correct for the loss of carbon dioxide, the kidneys excrete extra bicarbonate ions which also make more frequent urination necessary.

Insomnia

Constantly feeling tired and battling with sleep each night not only encourages health risks but it can also make the rest of your life harder to cope with, so people who lack sleep often crave it, spending eight to ten hours in bed whenever they can. There is no proof that this is healthy and in fact a study conducted in the United States on over one million adults revealed that people who sleep for eight or more hours die younger than those who sleep less. This is one good reason to stop worrying next time you are wide awake and wishing you were asleep. (Kripke 2002)

Snoring

Since breathing through the mouth is unnatural when sleeping, then breathing through the mouth so vigorously that it makes a noise is even more so. Anyone can snore if they have a cold, nasal polyps, a nasal infection or enlarged adenoids, but it seems to be primarily linked to obesity, aging and alcohol. Men snore even more than women. The person doing the snoring usually feels they have slept quite well but it is the effects of snoring that are not healthy. As well as making the person feel rather tired and perhaps guilty for waking other people, snoring can also cause health problems of (Lumb 2000)

Sleep Apnoea

Snoring night after night can often develop into the more serious sleep apnoea. Sleep apnoea means that while sleeping, the person has periods of breathing quite vigorously and periods of not breathing at all. There are two major & overlapping causes of sleep apnoea; obstruction in the airways and sleep reduction in the drive to breathe. (OSA & CSA)

During sleep there are two types of sleep patterns, rapid eye movement, REM that is when dreaming occurs and non-rem NREM, the deep and dreamless sleep. During NREM, which is approximately 80% of sleep time (Tortora 1984), breathing is critically dependent on carbon dioxide pressure. As soon as the carbon dioxide pressure drops, the breathing initiates the next breath. (Skatrud 1995)

Like snoring, sleep apnoea tends to get worse as the person gets older, fatter and after drinking alcohol. Getting worse means more episodes of apnoea, which in some cases are short but reach up to 160 times per hour, while others are less frequent but can be as much as 90 seconds long. To stop breathing 300 to 400 times a night for at least 10 seconds is common in people with sleep apnoea.

It has been linked to the same health problems of snoring and also diminished ability to think clearly or remember things, headaches, impotence, daytime fatigue, which can sometimes be so severe that the person will fall asleep driving a car, emotional and often irrational behaviour such as jealousy, suspicion, hostility and paranoia. (Davies 1993), Lumb 2000) Partners of people with sleep apnoea typically also sleep badly because if the snoring does not wake them, then the silence does.

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