

The Brain Scan of a Healthy Person

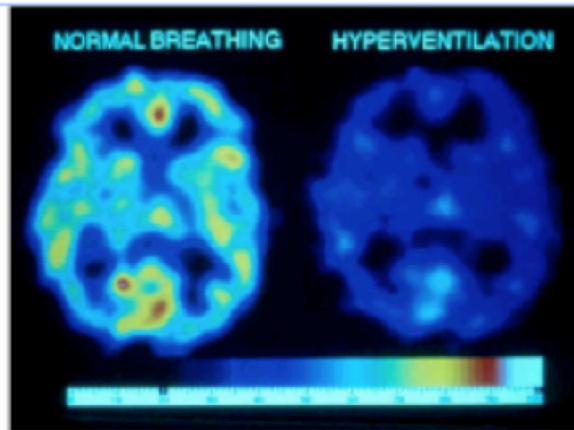


Image from: Litchfield PM, 2003

The above brain scan above shows the effect on a healthy person of over-breathing for just one minute. On the left scan breathing is normal - (high oxygenation red and yellow & low blue), the oxygen supply to the brain can be reduced by 50% and what makes the effect even worse is that the body may divert most of the blood to the lower centers of the brain to keep vital organs functioning, thereby further impairing our ability to think or function normally. This may lead to anxiety & panic attacks as we become dis-orientated.

What does Buteyko Breath training do?

The Breath Connection with stress is fundamental and due to the fight/flight automatic response to any potential danger, real or imaginary. The fight/flight response produces a cascade of complex changes in our bodies to prepare us for evasive action or fighting.

Most of these reactions involve biochemical, neurological effects we have no conscious control over such as increased release of adrenaline or histamine, but there are three major effects we can control; muscle tension, mental tension and our breathing rate. In fact as we consciously learn to calm our minds and relax our muscles we can begin to reduce our breathing rate and thereby overcome this automatic response from stress. This is the basis of the Breath Training taught using the Buteyko Method with the latest app technology.

How will breath training help me?

There is a direct connection between stress and hyperventilation; it is in fact a result of the primitive response to any life-threatening situation. The fight or flight response that was life saving for early man, is often inappropriate in the modern world, when we can neither fight with or flee from modern stressors..

Breath training teaches us how to reset our breathing patterns back to normal.

Some of the benefits of better breathing include:

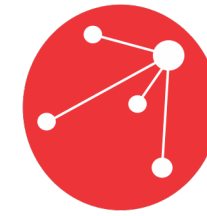
- Helps control your panic attacks
- Helps reduce your medication safely
- Reduces the symptoms of many other hyperventilation associated conditions
- Provides you with a better understanding of your condition & how to control it
- Gives you back a normal quality of life

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www.ButeykoKent.co.uk

Tel: 01580 752 852



The Breath Connection

Stress Anxiety & Panic Attacks

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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Symptoms of Hyperventilation Panic Attacks

Lack of air sensation / Chest tightness or pain
Palpitations, pounding heart, or fast heart rate
Feeling dizzy, light headed or faint
Feeling 'spaced-out' or as if you are not with it"
Fear of dying, losing control or going crazy
Hot all over, sweating in the palms or armpits
Mouth feeling tight and lips may form an "O" shape
Tense muscles / Trembling and shaking
Visual disturbances - blurred or tunnel vision,
flashes or shadows before eyes / Nausea or stomach
upsets / Numb or tingling sensations in fingers or lips
(Fried 1993) "Hyperventilation as a Cause of Panic
Attacks" Hibbert 1984

Hyperventilation Starts the Panic Attack

Any stress or fright will trigger the "fight or flight" response that leads to increased breathing (hyperventilation) but without increased physical activity (running or fighting) & this causes a drop in carbon dioxide (CO₂) levels in the body. This has two main physiological effects, first, as the blood becomes more alkaline, less oxygen is released to the tissue cells and more lactic acid is produced causing the breathing sensors in the brain to increase the breathing rate. Secondly, the low CO₂ levels cause smooth muscle throughout the body to spasm. Blood vessels affected narrow, reducing the flow of blood to the brain, for every 1mm of Hg pressure reduction of CO₂ the brain receives two per cent less blood flow (Raichle 1972).

The above combined with the Bohr Effect (reduced release of oxygen from the blood), can mean the brain may receive up to 50% less oxygen, which is a major stress that can result in feelings of extreme panic (Ley 1994). The brain reacts by stimulating more breathing and if hyperventilation continues the person faints. Once this happens the brain releases opiates and the breathing slows. (Danavi-Saubie 1978)

Hidden Hyperventilation

Although called "Panic Attacks" not everyone will feel frightened or faint, many may simply notice that their heart beat is rapid or they may feel 'spaced-out' with sweaty palms, chest pain or a dry mouth. It is not necessary to breathe exceptionally fast during a hyperventilation attack, and while some do pant, it is common to see only upper chest breathing. The subtlest form of hyperventilation is where the breathing appears normal with intermittent sighs, yawns and gasps. (Magarian 1982). Some may be operating on chronically low CO₂ levels, breathing is marginally faster or deeper than required, which causes mild apprehension or paranoia, and then it only takes a small stress such as an animated conversation, being in a crowd or driving to produce more noticeable symptoms.

Get Rid of the Panic

Once people are aware they have hyperventilation attacks, they sometimes believe that anxiety is causing the problem. This is not true, as any emotion can initiate an attack and in fact, it would seem that rather than anxiety causing hyperventilation attacks, it is often the other way round. (Gardner 1989, Lum 1975 & 76)

You first hyperventilate then the anxiety develops as a combination of:

The unpleasant physical sensations of hyperventilation

Fear that you will die, or at the very least do something embarrassing

Not knowing what is wrong with you but suspecting that it is dangerous

Being unable to stop the feelings

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General Advice for Coping

Don't bottle up your fear, try to express yourself effectively but tactfully, find ways to let go of the stress as it builds up inside. Physical exercise, meditation, going to a counselor or just talking to a good friend could help release tension.

Tranquillizer medications may be useful in the short term to take the edge off anxiety, but not in the long term because they can be addictive and less effective (Owen 1983) as well as simply masking the symptoms rather than addressing the cause.

Low blood sugar can be another trigger factor, as low blood sugar will stimulate the production of adrenaline to mobilize sugar reserves at the same time increasing the heart rate and breathing rate. Eat little and often, include protein and unrefined carbohydrates.

Breath Training Helps Control Hyperventilation & the Panic

The Buteyko Method works by retraining your breathing to conserve the carbon dioxide in your body and by giving you techniques you can use at the first signs of panic.

Buteyko challenges the idea that deep breathing solves stress-related problems. In an effort to avoid the symptoms, people frequently start to keep away from anything that stimulates breathing such as hot stuffy rooms, caffeine or highly charged emotions. This sounds like good advice, but in reality you are shutting yourself off from life, and in the extreme you could become agoraphobic. Restoring normal breathing patterns so that you are less likely to have an attack in the first place is the best way to overcome this problem.

"Buteyko has lessened the frequency and severity of my panic attacks as well as improved my asthma. I have more energy and greater concentration"

A typical comment from clients.