

# Breathing Can Damage Your Health

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A brief look at the most neglected function of living, something that is so unconscious and automatic in our lives that we rarely stop to consider its effects on our health or its protean impact on every disease.  
“The breath of life” can be incredibly damaging to our health, especially when chronic hyperventilation is unrecognized, undiagnosed and untreated.

It is remarkable how our prejudices and mindsets are so deeply embedded in our lives; perhaps this is the product of rote learning without development of our creativity and wisdom? <sup>1</sup> After twenty-five years working in healthcare I thought I understood what were the main elements that contributed to a healthy life. How wrong can one be? I had studied osteopathy and clearly understood how “our structure can influence our body’s functioning” for better or worse, I had worked with nutritionists who convinced me of the simple fact that “we are what we eat “. I had studied the work of Drs Scott Williamson & Innes Pearce <sup>2</sup> who together elucidated the vital component of family & community underpinning health, along with attending a workshop by the “Fun Doctor” Patch Adams<sup>3</sup> who opened my eyes to the value of joy and laughter in healing and health and I gained enormous experience & understanding from managing one of the UK’s first holistic clinics for 20 years. All this changed when I was suddenly became aware of the most important source of life and health that had eluded all my thinking and study for 25 years, namely, breathing. It is the first thing we do at our birth, our last breath marks the ending of our earthly existence and between these two events we take some 400-500 million breaths.

I knew that few of us have perfect posture & body use, that few have perfect diet, that few of us know how to be relaxed and stress free and that our health is affected by these simple matters. So why should we assume we all breathe perfectly, why had I ignored this fundamental element in our health equation for all those years? I took some consolation that I was in good company, as I cannot remember any doctor enquiring of quality of breathing except when it became pathologically bad with bronchitis, asthma or emphysema. I now had recognised that bad breathing habits could seriously damage our health, I had the theory and evidence before me, why, I wondered, had this been so neglected for so long?

The most common bad breathing habit is probably the chronic hyperventilation syndrome (CHVS). Its diverse and complex physiological and psychological effects are extensively well researched and documented.<sup>9 to 94</sup> Although a part of every medical student’s training, once in practice it seems the best that can happen is for the occasional patient to be diagnosed with CHVS and then left to deal with the problem themselves with little or no help.

Since training as a Buteyko Practitioner I now routinely check the breathing rate of most of my patients visiting me for osteopathic treatment and have found the majority suffering to some degree with CHVS. I suspect this may be the sort of proportion found in the general UK population, yet very few are receiving help for their breathing problem and are often enthusiastically medicated for the consequent illnesses arising from their CHVS. From a drug company’s commercial standpoint I understand there would be little profit in teaching better breathing if that led to lower medication demand (20% of their income arises from asthma medication alone). I can now also understand why most doctors fail to provide help for this “epidemic problem”; perhaps they too have been ignorant of this major component of their patient’s health as I was.

From time to time from earliest times there have been brief awakenings in the medical establishment from this mental block.

In 1870 A certain George Catlin having travelled throughout North America studying the native Indians wrote what is perhaps the first treatise on the evils of hyperventilation, entitled “Shut

Your Mouth” and Save Your Life. As this is out of print I believe, a pdf copy may be downloaded from <http://www.buteykokent.co.uk/article.php?aid=26> In 1871, Da Costa<sup>17</sup> published a paper, "On Irritable Heart; a Clinical Study of a Form of Functional Cardiac Disorder and its Consequences," describing 300 Union soldiers with a mysterious illness during the American Civil War. He felt the condition could be seen in private practice as well. Symptoms included palpitations, chest pain, and shortness of breath or oppression on exertion, indigestion, abdominal distension, and diarrhoea. Headache, giddiness, disturbed sleep, and dizziness were common symptoms."

In 1907 Sir William Gowers<sup>20</sup> published "The Borderland of Epilepsy. Faints, Vagal Attacks, Vertigo, Migraine, Sleep Symptoms, and Their Treatment", another pioneering book. Under the descriptive terms of "vagal and vasovagal," he described attacks that occurred more frequently in women than in men and were readily influenced by emotion, but not hysterical. The presentation in various cases included epigastric fullness; fullness in the head; difficulty in breathing; yawning; chest pain; palpitations; a sense of impending death; a slowness of mental operations, a difficulty in thinking or in concentrating attention; a sense of unreality; fatigue; coldness, numbness, and tingling of the extremities; tetanoid spasm of the extremities; blurred vision; and occasionally brief syncope. Most of these symptoms form the basis of today's Nijmegen Questionnaire<sup>126</sup> screening for CHVS, a much larger selection of CHVS symptoms is included in most Buteyko patient questionnaires, (39 compared with the 15 used in the Nijmegen test).

In 1922, Goldman<sup>21</sup> was the first to make the connection between "forced ventilation" and tetany. Symptoms preceding tetany in the eleven cases reported included dizziness; numbness and tingling of the hands, feet, and face; shortness of breath; and attacks of nervousness and crying. He observed, " Abnormalities of respiration are a well know symptom of hysteria." Goldman reasoned that the tetany was due to alkalosis.

In 1937 Kerr, Dalton, and Gliebe<sup>22,23</sup> first used the term "hyperventilation syndrome". They described the variety of symptom complexes caused by physical phenomena, associated with anxiety states, which could often be reproduced in the examining room with the "hyperventilation challenge" They also reported factors responsible for the anxiety state and how the medical profession dealt with these patients: "During the past several years the world, in general, has been undergoing critical social, moral, and economic changes; and, in the present state of upheaval, an ever increasing number of patients are observed who present a symptom-complex which is intimately associated with the individual's struggle for security, for independence, or for whatever state is presumed to assure the spiritual and material happiness of the individual. This symptom-complex is essentially a representation of the interaction between emotional and physiological factors. Patients presenting the well-known pattern of symptoms haunt the offices of physicians and specialists in every field of medical practice. They are often shunted from one physician to another, and the sins of commission inflicted upon them fill many black pages in our book of achievement.

In 1953, Lewis<sup>24</sup> argued that acute and chronic hyperventilation syndrome occurred relatively frequently and presented the common and atypical presentations, pathophysiology, and therapy that could be published today with minimal updating.

In 1964, Tavel<sup>25</sup> described patients with hyperventilation syndrome presenting with unilateral paresthesias at times associated with subjective unilateral weakness involving the left side of the face and body more commonly than the right. He believed that the paresthesias originated peripherally in the nervous system.

In 1969 Gotlieb<sup>119</sup> reported that 40% of patients presenting at his London medical outpatients had no detectable organic disease. He failed to make the association with CHVS and simply labelled them "anxiety patients" This is the commonest error according to Dr L C Lum of Papworth Hospital.

In 1975 Dr L C Lum<sup>7,26,107</sup> presented his findings in the Journal of Psychosomatic research "Hyperventilation: The Tip of the Iceberg", "Hyperventilation has often been labelled, stigmatised, is perhaps a better term as anxiety state. I would emphatically disagree with this. Anxiety, in my experience, has usually been the product, not the prime cause. Emotional upset

has been the most frequent trigger, which has set off the chain of symptoms; the anxiety state seems to have been most often engendered by doctors who have failed to recognise the profound biochemical disturbances (*due to hyperventilation*). Unfortunately when his many investigations prove negative the patient is left with the belief that he is suffering from something which is beyond medical science, or he may begin to question his own sanity. Are these not sufficient grounds for anxiety? ”

In 1990 Professor Konstantin Buteyko<sup>108</sup> brought his method to the West via Australia, based on a lifetime's research into respiration in health & sickness. He has given us a systematic, well structured, and workable training system that has stood the test of time and helped tens of thousands of patients world-wide.

In 2007 The Papworth Method trial results yet again demonstrated the benefits of improving the breathing habits of asthma patients. These positive results may now stimulate more awakening of the medical fraternity from their respiratory slumber!

May I appeal to all those in healthcare to take out a little time to acquaint themselves with the underlying theory, science, biochemistry and physiological consequences of this Western pandemic CHVS. Professor Buteyko claimed that more than a hundred modern diseases are associated with chronic hyperventilation. Simply by recognising the adverse physiological effects, as detailed in any physiology textbook, makes it is easy to understand this assertion.

To summarise what you will read, in a few lines; hyperventilation leads to lowered CO<sub>2</sub> levels, respiratory alkalosis, metabolic acidosis, spasm of smooth muscle throughout the body, excretion of HCO<sub>3</sub> and consequent magnesium depletion, impaired release of oxygen from haemoglobin due to the Verigo-Bohr effect, suppression of hydrochloric acid by the stomach, retention of phosphate and chloride, increased lactic acid production, increased retention of H<sup>+</sup> by the kidneys, reduction of available calcium ion and generally impaired biosynthesis of amino acids, hormones and other complex substances. *In a nutshell it could be safely stated that every biochemical reaction is adversely affected throughout the body.* The CNS is often an early sufferer with reduced oxygen delivery, which in turn may generate any number of secondary symptoms, physical & emotional, as a result.

Professor Buteyko did not regard CHVS as a disease but rather a bad breathing habit that could be changed through his training method to return the patient to a normal breathing pattern and good health.

Dr. Lum<sup>7,26,107</sup> recommended noting this breathing habit as an important physical sign, “it turns bosom watching from a furtive masculine diversion into a positive scientific study-particularly in tube trains, for hyper-ventilators are frequently claustrophobic” however from his research, he found this not a disease of weak women but the sex incidence was 50-50. However this is challenged in other research, which showed a higher proportion of females with CHVS symptoms. I would favour the latter findings, as they would be in line with Anthroposophical thinking which pushes the boundaries of medical thinking beyond our current materialistic & mechanistic paradigms<sup>31</sup>.

So it seems that every doctor will meet a number of patients each week who will present with characteristic upper chest breathing and frequently boast a thick case folder of negative test results and investigations - the well known “Fat Folder Syndrome” patient.

May I make a plea that this serious protean health problem be recognised and, at least, advice be given to the sufferers to find a respiratory trainer or Buteyko Practitioner.

A simple self-help guide to better breathing is given below, based on some of the Buteyko Method.<sup>24,25,26,27,28,29,30,31,32,33 95-105, 108,110,111</sup>

## First check your breathing: do you hyperventilate?

Sitting quietly in an upright seat, check where your breathing is felt. Is it more upper chest than lower abdomen? Quiet normal breathing causes small movement of the diaphragm and little or no upper chest movement.

Check roughly how many breaths per minute do you take. 10-12 is around normal, over 15 at rest suggests possible hyperventilation.

Do the Buteyko Control Pause test: after a few normal breaths, at rest, hold your breath after a normal out-breath and count the number of seconds before you want to breathe again. This measure takes practice to perfect but you will get a good idea of your breathing rate from this simple procedure.

With normal healthy breathing at rest, the Control Pause (CP) should be over 40 seconds, a CP of 25-30 suggests you are breathing enough for two people, a CP of 15-20 you are breathing for 3-4 people and a CP of 5-10 indicates severe hyperventilation. There are other tests but the above will give you a good idea of how far from normal your breathing is. Although Buteyko used all medical spirometry, and blood gas analysis equipment in his own researches he realized that a simple but reliable measuring technique for breathing rate was needed. Thus he developed the Control Pause (CP) that has been observed in widespread clinical practice to give a good measure of the rate of breathing, with very few exceptions.

## What can you do about it?

1. Try to understand what we need for good health is an **adequate level of carbon dioxide** in our lungs. As there is practically none in the air we breathe, we rely on our own production from normal metabolic activity. This provides more than we need, so we breathe to wash out the surplus. If you over-breathe, or hyperventilate, you will be **losing carbon dioxide faster than it is being produced**. Carbon dioxide levels will fall and all the many symptoms will start to arise: breathlessness, anxiety, tightness of the chest, lightness of the head, dizziness, panic attacks and so on.

2. Start to become more **aware** of your breathing.

3. Try to always **nose breathe** as this ensures the air entering your lungs is moisturized, filtered, warmed, sanitized by natural bactericides and nose breathing also stimulates the production of nitric oxide NO which has a profound effect on our bodies.<sup>47</sup>. So, keep your mouth for eating & talking!

4. Reduce the volume of air you breathe naturally simply by **relaxation**.

5. Remember if you are a hyper-ventilator and you feel breathless you need to breathe **less** not more.

Good luck with your efforts, if you find you don't progress on your own get some support and training from a respiratory specialist or a Buteyko practitioner. It will be a once in a lifetime investment, as when you know how to breathe correctly, you will always realize what you have to do if you fall back into the old bad breathing habits.

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(2350 words)

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