



# DELTA LIFE SKILLS<sup>sm</sup>



EMOTIONAL FREEDOM IS IN YOUR HANDS with REB<sup>sm</sup>

*Integral Energy Psychology*

*Phillip W. Warren, B.A., Ph.C., Zetetic Scholar, Professor Emeritus*

4459 52A St., Delta, B.C., V4K 2Y3 Canada

Phone and voice mail: (604) 946-4919

E-Mail: [phillip\\_warren@telus.net](mailto:phillip_warren@telus.net)

Website: [www.rebprotocol.net](http://www.rebprotocol.net)

U.S. mailing address: P.O. Box 1595, Point Roberts, WA 98281-1595

Δ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞XΔ∞X

---

## PART ONE: THE RADIANT ENERGIES BALANCE (REB)<sup>sm</sup> PROTOCOL: PHILOSOPHY/RESEARCH/THEORY BACKGROUND©

### Section:

17.5. Overbreathing: Its effects and what you can do about it

17.5.1. Introduction

17.5.2 Konstantin R Buteyko

17.5.3 Development of the Buteyko Method.

17.5.4. Two drug-free approaches seek to correct the low c02 that results from overbreathing.

17.5.5. Comparing the two approaches

17.5.6. Two typical case histories from Australia

### 17.5. OVERBREATHING: ITS EFFECTS AND WHAT YOU CAN DO ABOUT IT

by Joseph G. Hattersley, MA and Kevin J. Treacy, MBBS Townsend Letter For Doctors & Patients,  
January 1998, pp. 92-95 (quoted in full)

Kevin J. Teacy, MBBS\* 156 Ashmore Rd. Benowa, QLD 4217 Australia \*The degree MBBS in Australia, Canada and elsewhere is equivalent to the degree MD in America.

Joseph G. Hattersley, MA 7031 Glen Terra Court S.E. Olympia, Washington 98503-7119 USA.  
360-491-1164

#### 17.5.1. INTRODUCTION

"A sports-trainer in Olympia, Washington tells his students, 'Breathe deeply.'<sup>1</sup> We've all heard it: inhale more oxygen, improve energy and health. But a karate instructor in North Pole, Alaska tells his charges to meditate half an hour before each lesson. Meditation *slows* heart-beat and breathing - and increases energy, improves health. Who is right? Surprise: the karate teacher!"

"America has the most expensive, least successful health-care system in the "First World." We expend 14% of Gross Domestic Product on it; for only 6-8% of GDP, other nations achieve better health, longer life expectancy and lower infant mortality. So we need to explore alternatives. And no matter how derisively ridiculed at first, many such options later become integrated into standard medical practice. Examples include *penicillin*, the *electrocardiogram* and the *pap smear* Among

alternatives, the principle that overbreathing causes illness is little-known in America."

"Victor Potapov, PhD's article, '*Hypoxia as Essential Healing Factor in Clinical Medicine in Russia*' (Townsend Letter for Doctors and Patients, Aug./Sept. 1996: 88-91) - will puzzle most doctors among the journal's readers, and almost all patients. *How can lowering oxygen intake increase oxygen utilization in the cells?* The answer is found in the *Bohr effect* - discovered by Austrian physiologist Christian Bohr - which physiology textbooks describe but not its consequences. Habitual deep breathing lowers carbon dioxide (CO<sub>2</sub>) in the bloodstream." 2

"A chief function of hemoglobin in erythrocytes (red blood cells, RBCs) is to deliver oxygen molecules to all the body cells. In the Bohr effect, when CO<sub>2</sub> is lowered by overbreathing, hemoglobin molecules bind oxygen molecules too tightly. (In technical terms, deep breathing strengthens the bond between hemoglobin and oxygen molecules.) The RBCs then do not release enough oxygen to the body's cells."

"The resulting oxygen starvation is known as hypoxia, defined by Webster's New World Dictionary as an abnormal condition resulting from a decrease in oxygen supplied to or utilized by body tissues. 3,4 The body then takes genetically determined defensive measures, identified as more than 150 conditions. This is destructively poisonous and leads to general deterioration of health. Treated symptomatically, these conditions remain "incurable" simply because their origin (hyperventilation) is not recognized and corrected." 5

"With a less than ideal CO<sub>2</sub> level, the body uses other mechanisms against this excessive loss of CO<sub>2</sub>, to make more oxygen available to cells. CO<sub>2</sub> dilates vessels. Therefore, a shortfall of it causes spasming not only of bronchus tissue as in asthma and bronchitis, but also of blood vessels as in angina. Without these defensive reactions, said Konstantin Buteyko (see below), people would perish faster."

"Most people should normally breathe three to four liters of air per minute (L/min.; a liter is 1.06 quarts). (Intake of more air is of course necessary during physical exertion, particularly at high altitude.) As is well known, extreme hyperventilation (overbreathing) of say, 30 L/min. can kill. Tradition taught that death then resulted from oxygen over saturation of the brain; in fact, because of the Bohr effect, extreme hyperventilation cuts off oxygen supply to the brain."

"*Humanity evolved in an atmosphere in which CO<sub>2</sub> was in whole percents* perhaps from volcanoes. As atmospheric oxygen built up through evolution of photosynthesis, 6 CO<sub>2</sub> levels dropped. Now its concentration in the air is 0.03 percent. Through gradual evolution, humans have had to ideally maintain CO<sub>2</sub> levels in the alveoli (air sacs) of the lungs, at 6.5 - 7%."7

### **17.5.2 KONSTANTIN R BUTEYKO**

"*Konstantin R Buteyko, MA, Ph.D. (Born In 1923)* - strangely, not mentioned by his countryman Potapov - first noticed and explored these relationships. He discovered *hidden hyperventilation* or "hyperventilation syndrome": long-term overbreathing that is not clearly noticeable in the patient. People normally breathe in and out about 17,000 times a day. The damage that extreme hyperventilation can accomplish in a few minutes -- hidden overbreathing wreaks slowly Many people breathe three to 10 L/min. too much whenever conscious and, possibly to a greater extent, while sleeping (see below)."

### 17.5.3 DEVELOPMENT OF THE BUTEYKO METHOD.

"Assigned as a medical student to monitor dying patients' breathing, Buteyko found that the sicker they grew, the deeper they breathed. He learned to predict the day and *even the hour* of death."

"Knowing that no one would pay heed to his work without laboratory studies, he established a series of functional diagnostics laboratories. In 1958-59, he showed the USSR Academy of Science a linear relationship between the depth of breathing, the content of CO<sub>2</sub> in the body, vessel spasming and degrees of illness. By the end of 1966 he and his students had treated more than 1,000 patients including themselves for asthma, hypertension or heart pain. All of them substantially recovered, some from 20 or more conditions; none had been helped by allopathic treatments."

"Owing to the Bohr effect, habitual hyperventilation decreases delivery of O<sub>2</sub> to cells of brain, heart, kidneys and other organs, and to cells of blood vessels, muscles and all tissues. Due to artery spasm as well as the Bohr effect, brain oxygen drops measurably within 30 seconds of the start of deep breathing. Low CO<sub>2</sub> also disrupts the work of enzymes, protein catalysts or enablers that are required for absorption and utilization of our food. And it decreases synthesis of ATP (adenosine triphosphate), which the mitochondria, the energy powerhouses of all our cells, require."

"Like every revolutionary new medical technique, Buteyko's treatment was long rejected and he suffered personal abuse. One laboratory after another was destroyed or disbanded, yet he and his students pushed on; his method has been Russian government approved since 1983. It has been practiced ever since with a high degree of success throughout Russia, and more recently in, Australia."

*"Without any objective evidence, for centuries the majority of the human race has taught children and adults, alike, to breathe deeply. Well-meaning but misinformed nurses, physicians and health writers tout the claimed benefits; some nurses even advise a new mother to rhythmically raise and lower her baby's little arms to inculcate a habit of deep breathing."*

"Overeating, especially of animal proteins, processed and cooked foods, poor fitness and lack of physical exercise, emotional reactions, stress and stuffy environments also promote overbreathing. The resulting oxygen starvation of vital organs can excite the breathing center in the brain, leading to 'shortness of breath' and even more overbreathing in a vicious cycle."

"Prolonged sleep, especially on the back or with the mouth open, or both (as is common among asthmatics), encourages hyperventilation. One should sleep on one side rather than the back. A more reliable way to minimize mouth breathing in sleep is to tape the mouth shut."

*"The gaseous mix in the womb, between 7% and 8% CO<sub>2</sub> (if the mother doesn't overbreathe excessively), is an interesting indicator of the ideal human environment. In South America, ancient tribes swaddled newborns, their prospective chiefs, so that they could adjust to consuming less oxygen. Mary wrapped the baby Jesus in 'swaddling cloths,' but the scriptures omit the reason for the then common practice."*

"To achieve proper midfacial and upper jaw development, minimize teeth crowding and the need for braces, children must constantly keep the tongue behind the upper teeth, touching the palate. That is possible only with nose breathing. (Weston Price found in the 1930s that as "native" peoples moved from traditional diets to Western foods loaded with white sugar, white flour etc. - the next

generation had crowded jaws, as well as decaying teeth. He photographed people of old and new generation side by side. 9 Habitual hyperventilation and mouth breathing, then, worsen the ill effect of processed diets on the face.)"

"And mouth breathing is an overlooked source of gum disease. Many people who sleep with their mouth open dry up their own saliva, promoting dental caries and gum disease."10

"CO<sub>2</sub> is found in the body in five forms: (1). dissolved CO<sub>2</sub> gas as dCO<sub>2</sub>; (2). carbonic acid (H<sub>2</sub>CO<sub>3</sub>); (3). bicarbonate (HCO<sub>3</sub><sup>-</sup>); (4). carbonates (CO<sub>3</sub><sup>2-</sup>); (5). carbamates (R - NCOOH)."

"Perhaps carbon dioxide's most important function is, through its conversion to carbonic acid, as the number one buffer (regulator) cooperating with intracellular hemoglobin in maintaining a remarkably stable pH (acid/base balance) in the blood plasma. When our bodies are deprived of this balance by overbreathing, *respiratory alkalosis* (high pH) develops. And this directly alters the pH of the body, affecting the activity of all enzymes, vitamins and minerals. Years of nutritional abuse, emotional stress and/or negative emotions exacerbate this respiratory alkalosis."

"This in turn leads to renal (kidney) excretion of alkaline minerals calcium, magnesium, sodium and potassium, which are required for health. (Sherry A. Rogers, MD, a pioneer and authority in environmental medicine, often quickly halts years-long-recurrent panic attacks using magnesium supplements. 17)"

"Such *respiratory alkalosis* creates a *compensatory metabolic acidosis*, promoting such degenerative diseases as cancer, heart attacks and possibly ALS (Lou Gehrig's disease).18 CO<sub>2</sub> functions also as one of the powerful up-regulators of the tricarboxylic acid (Krebs) cycle. The Krebs cycle is a series of biochemical reactions which produce carbon dioxide and water from foodstuffs and release energy for the synthesis of ATP molecules. 19 If the CO<sub>2</sub> level falls below 3%, shifting the pH to 8 (alkaline), death ensues."

"Conditions that can result from hyperventilation - all of which Buteyko and his followers have ameliorated using his learned-shallow-breathing technique - include allergies; asthma; rhinitis, bronchitis, nonspecific pulmonary diseases; blocked sinuses; increased clotting and development of thrombophlebitis, angina (often as momentary sharp twinges), sclerosis of vessels, palpitations, tachycardia, ischemic cardiac disease and heart attacks; strokes and, remarkably, both hypertension and hypotension." 21

"Others are pneumonia, hemorrhoids and varicose veins, tuberculosis, eczema, ulcerative stomach disease, endarteritis (inflammation of the coating of arteries), muscular spasms, fainting spells or convulsions, sclerosis of lungs, neurocirculatory asthenia; anemia; stomach disease, chronic bacterial, viral, fungal and parasitic infections, and skin disease."

"The lowering of CO<sub>2</sub> through hyperventilation renders the nervous system extraordinarily sensitive to outside stimuli. This can lead to irritability, sleeplessness - sometimes including sleep apnea - stress problems, unfounded anxiety and allergic reactions."

#### **17.5.4. TWO DRUG-FREE APPROACHES SEEK TO CORRECT THE LOW CO<sub>2</sub> THAT RESULTS FROM OVERBREATHING.**

"Not only drug-free, both methods often enable patients to lower or stop drugs. They seek to

improve the body's oxygen transport and utilization; their use stems from the conviction that most illnesses are provoked by *oxygen deficiency at the cellular level.*"

"Potapov tells of a 100-pound device called the *Hypoxicator*.<sup>22</sup> In daily 30-minute treatments, through a face mask it feeds the patient lowered CO<sub>2</sub> air; periodically the patient breathes ambient (room) air for a short time. This therapy, adjusted to the needs of each individual, is called *RIHT* (Respiratory Intermittent Hypoxic Training). Its successful use in avoiding post-surgery complications was sensational and encouraged wider use. Sample devices have become available in Germany, Switzerland, Slovakia and the US."

"He states that the body's cells acquire more oxygen using this device than cells in matched patients given biooxidative or hydrogen peroxide therapies - both of which are practiced successfully in Russia and other republics of the former Soviet Union, throughout Europe and (under cover to avoid an FDA raid) in the United States."

"The same statement applies to Buteyko's method of sustained shallow, diaphragmatic breathing. (Such breathing, similar to that used in *yoga*, provides much more efficient oxygen utilization than chest breathing, The advantage over *yoga*: after one has trained the brain's breathing control center to want less oxygen, proper breathing is automatic.) He named his system **ICDR** for Intentional Cessation of Deep Respiration. Its goal is to increase blood and alveolar CO<sub>2</sub> and thus to eliminate the body's many reactions to too-low CO<sub>2</sub>."

"In both Hypoxic training and the Buteyko method the brain cells, cardiac and respiratory muscles get increased supplies of blood, oxygen and CO<sub>2</sub>. The citric acid cycle quickens, causing liberation of energy from sugars and a higher rate of waste metabolizes washout. Except for a few temporary "sanogene" (self-cleansing) reactions, no adverse symptoms have been reported from use of either method. And it is impossible to raise CO<sub>2</sub> above 6.5 percent."

#### **17.5.5. COMPARING THE TWO APPROACHES.**

"Just as exhaling into and inhaling from a paper bag is not a viable long-term solution to anxiety, the Hypoxicator cannot break any patient's tendency to overbreathe. One could then ask, "Is it only an expensive paper bag?" Potapov suggests relapse is unlikely; yet that could happen to a patient with a chronic condition like asthma, if he/she does not continue regular treatments on the machine."

"In the Buteyko method, without any equipment, the patient learns self sustainable correct breathing. Buteyko and doctors he has trained have treated *hundreds of thousands* in Russia for a wide variety of conditions, achieving remarkable long-term results. As long as the patient is vigilant regarding any tendency to overbreathe and especially to avoid mouth breathing, the clinical improvement is sustained."

"*Australia has used the Buteyko technique for over five years*, particularly in asthma and rhinitis; results there have also been remarkable. In an unpublished study at a major teaching hospital in Brisbane, 20 asthma patients were trained in the Buteyko technique; 19 matched patients used conventional physiotherapy deep breathing techniques. At three months, the Buteyko group showed a statistically significant 80% reduction in bronchodilator use and a non statistically significant 36% drop in inhaled corticosteroids."

"*Buteyko under breathing is difficult to learn unassisted*, though he did it curing his own hypertension. When Buteyko resumed his former breathing habits, his blood pressure went right back up. And after he told patients to revert to their earlier breathing their symptoms, too, invariably recurred. He concluded that he had made a global discovery and that medical thinking was upside down. After extensive library research he was astounded to discover that no one had ever published this simple idea before."

"With skilled instruction, children from three years of age on up, as well as adults readily learn the method. The training requires two solitary half-hours daily. The Buteyko-Australia manual concludes, 'We often observe patients who start to improve immediately after our introductory lectures: for those people the simple awareness of the harm caused by over-breathing was beneficial.'"

#### **17.5.6. TWO TYPICAL CASE HISTORIES FROM AUSTRALIA 23**

"(1) *Emma S. (age 8.5 yr.)* had been diagnosed with asthma at age six; despite (or because of) increasing medication she grew steadily worse. When she started ICDR she was using two nebulizers, each four times a day, and prednisone. Seven weeks later and up to the time of the report after two years, she needed no medication nor had asthma symptoms."

"(2). *Giovanna C. (age 57)*. A severe asthmatic, virtual invalid on heavy drug regimen including nebulizers, other drugs, and a ventilator to sleep; massive weight gain; and respiratory arrest. Less than three weeks after the training, Giovanna was living without the ventilator and using only one drug at half the former dose. Huge weight loss and improvements in other areas of her health were continuing."

"**Addendum:** In a related therapy, the Institutes for the Achievement of Human Potential, Philadelphia, PA, achieve arousal from coma using inhalation of 10 percent CO<sub>2</sub> with oxygen. The carefully regulated inhalation, lasting 10 to 15 seconds, is repeated 10~15 times daily. Inhaled carbon dioxide, they find, produces vasodilatation (widening of arteries)."<sup>24</sup>

"The Institutes have used this technique also to improve emotional, intellectual and cognitive performance in children with various forms of brain injury. It shows promise against Parkinson's disease too."

"*ASTHMA is increasing, especially among children*. Between 1980 and 1992 the number of children in America with asthma grew from 2.4 million to 3.7 million. Twenty-five percent of urban elementary children carry an inhaler to school, higher in some cities." Since 1980 the total number of asthma patients has risen more than 60%, to over 15 million; and since 1978, asthma deaths have more than doubled."<sup>12</sup>

"*Asthma is not a disease*, Buteyko asserted, but one of the body's defensive mechanisms against hyperventilation.<sup>13</sup> He discovered that *the average person with asthma breathes three to twelve times* the recommended amount.<sup>14</sup> The body slowly increases bronchospasm and mucous production - its defences against overbreathing. Bronchodilator medications ease the tightness experienced during an asthma attack, overriding the defensive mechanism - and so gradually the condition worsens."

"Conventional treatments of asthma have a dark side. For certain allergic patients the preservatives in nebulized bronchodilators cause bronchoconstriction.<sup>15</sup> And for many older patients inhaled

steroids, intended to block or reduce inflammation formerly claimed not to circulate throughout the system - promote glaucoma, the leading cause of blindness. In a comparison the risk appeared to be elevated by 44%, compared to matched patients not using inhaled steroids. Lea Davies of Georgetown University Medical Center in Washington, DC, adds that inhaled steroids may cause about one-third of the 3,000 glaucoma cases developing each year among Americans over 65." 16

"It is widely acknowledged that asthmatics benefit from swimming, yet other forms of exercise trigger 'exercise induced asthma.' The secret: swimmers gradually release their breath while swimming with their face under water, then turn the head and inhale quickly. There isn't time to overbreathe. A young friend confirmed- regular swimming made his asthma better; after he quit regular swimming, it worsened. Although a championship swimmer in high school, he couldn't play baseball or basketball 'because of asthma.' He could hyperventilate in those activities."

**"Note:** Allergies are often blamed for asthma; yet Buteyko believes many allergies too are a defensive measure against chronic hyperventilation."

"Recent research has thrown new light on the mechanism by which hypoxia-caused acidity promotes tumor growth. Research led by Toni Y. Reynolds at Yale University School of Medicine appeared in the December 15, 1996 Cancer Research and was abstracted in Science News. They confirmed that hypoxia does promote tumor growth and speculated that the resulting increased acid content may directly injure DNA or may impair the enzymes used to correct DNA mutations." 20

"Dr. Treacy has made a 45-minute, professional quality video - Buteyko Breathing Method: The Most Effective Drug-Free Approach to the Management of Asthma, Emphysema, Bronchitis. It is to be distributed in America by Lane Smith of Intercept USA. Phone 1-714-854--5004- a toll-free number will be added soon."

"Recommended Reading

Mines, Allan H. Respiratory Physiology, 3rd ed. NY.. Raven Press, 1993.

Fried, Robert. The Hyperventilation Syndrome: Research and Clinical Treatment. Baltimore, MD: Johns Hopkins University Press, 1987."

## References

1. The Olympian, Sept. 20, 1996.
2. In a little very elementary physics: O<sub>2</sub> is the stable oxygen molecule formed when two unstable oxygen atoms join. Nitrogen constitutes about 70%, of the air we breathe, oxygen 20-21%; other gases including CO<sub>2</sub> up the remainder.
3. This definition of hypoxia differs from Potapov's.
4. Bunn H. F., Poyton, R.O. "Oxygen sensing and molecular adaptation to hypoxia." Physiological Rev 1996; 75: 839-885
5. Buteyko, K.P., Genina, V.A. "The theory of discovery of deep respiration (hyperventilation) as a main cause of allergic, bronchial-vascular-spasmodic and other diseases of civilization." Tez. Dokl Vsesoyuzn. Conf. Moscow, 1986 (Report Thesis from All-Union Conference, M.)
6. Graham, J.B., Dudley, R., Aguilar, N.M., Cans, C. "Implications of the late Palaeozoic oxygen pulse for physiology and evolution." Nature 1995; 375: 117-120.
7. Buteyko, K.P., "The theory of CO<sub>2</sub>-deficient diseases of civilization as an adaptation to the evolution of atmosphere. Kibernetiche Aspekty Adaptatsii Sistemy "Chelovek-Sreda." Tez. Seminara. Moscow, 1975 (Cybernetic aspects of adaptation of the

- system "Man-Environment") Seminar Thesis, M, 1975.
8. Potapov V *Op. cit.*
  9. Price W. Nutrition and Physical Degeneration. LaMesa, CA; Price-Pottenger Nutrition Foundation, 1939.
  10. "Your questions answered." What Doctors Don't Tell You 1997 (Mr); 7; 1: 8.
  11. Cowan, T "Nutrition & Behavior." PPNF Health J. 1997; Spring: 10-11.
  12. Lawson, L., Staying Well in a Toxic World, Evanston, IL: Lynnword Press, 1993.
  13. Buteyko, Y.P., Genina VA. 1986. *Op. cit.*
  14. Messerlich, J., et al. "Cromolin and bronchial spasm induced by deep respiration." Pneumonologic, 1975; 153: 1-15.
  15. Zhang, Y.G., Wiight, W.J., Tam, W.K., etal "Effect of inhaled preservatives on isthinatic subjects. II. Benzalkonium chloride," Ann. Rev. Resp. Dis. 1990; 1405-1408.
  16. Sternberg, S. "Breathing freely threatens seeing clearly." Sci. News, 1997 (Mar 8) 151: 143; see also JAMA March 5, 1997.
  17. Rogers, S.A. Tired or Toxic? Syracuse, NY. Prestige Pub)
  18. Ganzel, P. "Patient report: A potential cause of ALS." Townsend Ltr Dr/Patients, 1997, June: 70-80.
  19. Webster's New World Dictionary, 2nd College Ed., 1983.
  - 20, Travis, J. "Tumor offers unsafe home for cell's genes," Sci News, 1997, (Jan 4); 141: 5
  21. Buteyko, K.P., Shurgaya, S.I. " Functional diagnosis of coronary disease. Thesis from Symposium on Surgical Treatment of Coronaruy Disease," Moscow, 1962
  22. Potapov, V. "Hypoxia as Essential Healing Factor in Clinical Medicine in Russia." Townsend Letter for Doctors and Patients, Aug/Sept. 1996: 8-91.
  23. Australian Well Being, 1994.
  24. Bland, J.S. Prev. Med. Update, 1996; Oct."

\*\*\*\*\*