

GLOBAL ASTHMA CRISIS

Alina Vasiljeva MD Russia

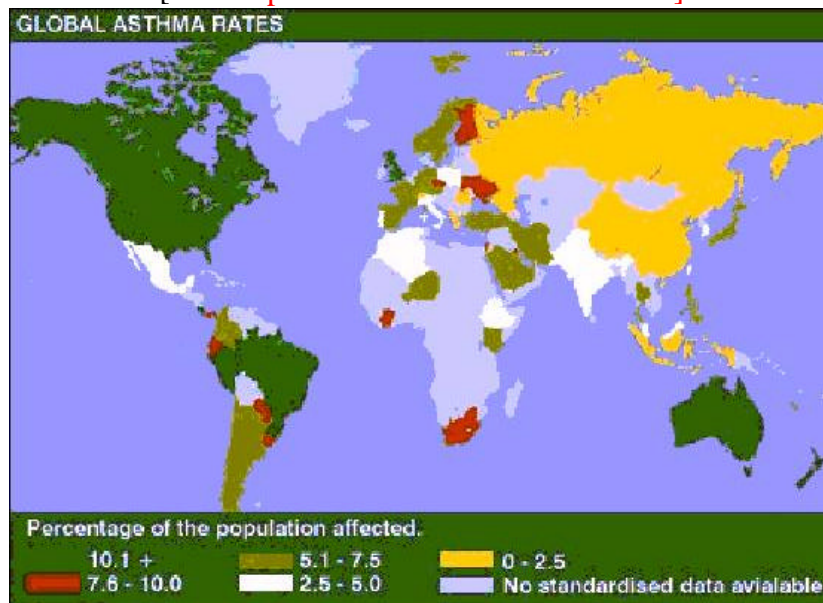
Recent newspaper reports about the prevalence of Asthma in the UK makes for alarming reading.

There are about 10 million asthma sufferers in Britain. The worst affected area is Scotland where over 18% of the population show symptoms of asthma. In Wales the figure is nearly 17%, and in England 15.3%.

The figures in some other parts of the world are almost as bad: Ireland 14.6%, Australia 14.7% and Canada 14.1%.

Compare these figures with those of other countries where asthma is far less prevalent, such as Switzerland (2.3%), Russia (2.2%), China (2.1%), Georgia (1.5%), Nepal (1.5%).

[This map taken from BBC news web site.]



What do Britain, Australia and Canada have in common to make their populations so susceptible to asthma.

Could it be climate? This is unlikely. Canada and Russia have similar climates, and the climates of Russia and Nepal are very different.

Pollution? Unlikely. Canada has relatively low pollution; Russia has high pollution.

Genes? This cannot be the cause. The main genetic make-up of each country goes back many centuries whereas the asthma problem has come about only in the last 50 years or so.

Food? Again there is no discernible pattern.

It appears that this global asthma crisis affects mainly English-speaking countries. I believe this is because English-speaking countries have a similar medical approach to asthmatic ailments and their management.

From my experience, the management (diagnosis and subsequent treatment of the airways diseases) are completely different in Britain and Russia.

Acute or chronic or bronchitis is not a standard diagnosis for chest infections in Britain, unlike other countries such as Russia. This gives us a clue as to the root cause. Asthma follows untreated chronic rhinitis, colds, and bronchitis with a wheezing component. Asthma never starts without warning in a completely healthy person.

No doctor in Russia would prescribe bronchodilators for cold or bronchitis to stop a wheezing cough. In the UK this is common practice with a prolonged cough. The Daily Mail has reported (June 2001): "Wheezing disorders have doubled among babies and young children in ten years experts say. The study also shows that the cause is not simply a rise in allergic reactions".

I discussed the asthma situation with Professor KP Buteyko in the summer 2002. The following are the questions I asked him and his answers.

Question: Your method for treating asthma was introduced in Australia more than ten years ago. How would you comment on this?

Answer: We are living in the era of a developing epidemic of *bronchial asthma* (BA) The situation with asthma in the world today is very worrying, and I would say terrible. Fifty years ago BA was a rare phenomenon. Nobody would even think that playing with a dog or a cat could cause an attack of breathlessness and that emergency medical help would be necessary to save a patient's life. Today asthma is some kind of a "monster" which has devoured whole continents. If the illness takes its worst course, in a short period of time patients can become disabled and it can even lead to death. All methods for asthma treatment and prevention currently being used can neither save patients from asthma nor stop the spread of the disease.

The majority of leading scientists working on the treatment of asthma believe that we moving into an era of bronchial asthma epidemics. The prevalence of asthma in adults and children in Europe, America and Australia is so high that these countries may even be considered to be "countries with no future".

Question: Every fourth child in Australia suffers from BA, and every eighth child in the UK. In the USA there are 16 million people suffering from asthma and nobody can explain why the figure is so high. Every year the increase in BA cases outstrips the most pessimistic forecasts, and this situation cannot be explained simply in terms of pollution of the environment and climatic conditions. Do you have an explanation?

Answer: Very often asthma is a result of modern medical drug treatments for

bronchitis, rhinitis, allergies, etc. Due to scientific discoveries medicine nowadays is able to control the spreading of many infectious diseases with prophylactic measures so preventing epidemics. However, in the case of BA the situation is more difficult. Until now we do not know the main mechanism for the spreading and progression of this disease. Each patient suffering from any form of allergy or ordinary chronic bronchitis is at great risk of developing BA. Very often we can observe in such cases, when using drugs for simple colds or prolonged cough, the appearance of the first BA symptoms. Our strong view is that for asthma management generally, attempts to eliminate the first symptoms of asthma (difficulty in breathing out) with bronchodilators or hormones are not correct. They can give short-term relief but when the symptoms occur more and more often, it becomes almost impossible to stop taking the drugs. With time, BA progresses by becoming more severe in proportion to the strength of the medicines being used. So medical treatment in the majority of cases helps to eliminate the symptoms but promotes quick and severe progression of BA. The situation seems to be irreparable because it is almost impossible to survive with asthma without elimination of symptoms. Taking away the symptoms with the help of medication leads to worsening of the disease itself - a kind of vicious circle”.

Question: Your method is now well established in Russia. However, it is known as a quick "miracle" rather than a medical treatment for (BA) in the West. Why is this?

Answer: It is not a miracle. The method has a physiological basis [see appendix] and takes time to work. And it is not just a treatment for BA. With asthmatic patients, you can take away asthma attacks in a few minutes. With other conditions, such as hypertension, it will take months.

For a practical evaluation of the Buteyko method we conducted a clinical trial in the Medical Institute of Setchenov. Children with BA who were selected for the trial underwent various tests. But even without these tests, it was easy to demonstrate the quick improvement of symptoms. For treating patients with asthma it is not necessary to involve special equipment or special tests. We had asthmatic patients with cyanosis (a condition of oxygen deficiency accompanied by blue colour of the skin, lips, and nails) and with noisy spastic breathing. Patients during practice make their breathing less. This leads to lung ventilation decreasing to normal and if done correctly a positive immediate effect is guaranteed.

Question: So taking drugs in the early stage of BA for any prolonged cough makes the prognosis worse. Can you explain this further with an example? In the UK the usual practice when treating a cough, even in very young children, is to use bronchodilators. This applies whether the cough is related to viral infection, bronchitis or laryngitis. How do you evaluate this approach?

Answer: This approach is totally wrong. Let us take laryngitis (inflammation of the larynx) as an example. This condition often occurs in very young children.

Because of the anatomy and physiology of a child's larynx, it tends to become swollen very quickly from any irritating agent such as viruses, bacteria, or allergens. A cough here is a symptom but not in itself a disease and so it is the cause of the cough that must be treated. A cough is a protective reflex that tries to rid the windpipe and the bronchial tubes of anything that is blocking or irritating them. Why should bronchodilators be prescribed in such cases? They are not effective for inflammation or swelling of the larynx. Besides, in the case of laryngitis the bronchus is not involved. Bronchodilators dilate the muscles of the bronchus and can soon disturb their normal function. So as well as being absolutely unnecessary for the treatment of laryngitis (or other cough), using them can contribute to the mechanism of BA development

Question: What is the mechanism of BA development?

Answer: Almost half a century ago the Institute of Experimental Biology and Medicine of the Academy of Sciences of the USSR made a special study of BA. It was found that BA can occur as a result of a long lasting discrepancy between the volume of air flow passing through the lungs and the volume of air necessary for metabolism. We are talking about the development of so-called "chronic alveolar hyperventilation", in other words a "deep breathing condition". Though this term is more literary than physiological, it was found in practice from thousands of cases that there would not be any asthma without "deep breathing". The term "deep breathing" is a clue to the development of an entirely new way of asthma treatment and indeed treatment for many other diseases as well.

People suffering from asthma have excessive lung ventilation (the condition called "deep breathing" or hyperventilation), even when they are relaxed and their breathing cannot be seen or heard. If there is asthma then there is hyperventilation. What is more, BA may be simply the body's way of resisting hyperventilation; i.e. the body's defence mechanism against excessive breathing with the aim of stopping the loss of CO₂. Narrowing of respiratory passages is the main cause of attacks of suffocation in asthma. We consider that an asthma attack is an attempt to reduce the airflow passing through the lungs in order to reduce CO₂ loss. Our method is based on the elimination of "deep breathing". To be more precise, it is based on the elimination of excessive ventilation of the lungs with respect to the ventilation necessary for metabolism.

Question: What is the cause of hyperventilation?

Answer: Even 30 years ago, hyperventilation in people was not so common and cases of BA were comparatively rare. Researching thoroughly the causes of chronic hyperventilation in modern humans, we can affirm that the modern way of life with low physical (muscular) loading, lack of movement and exercise (hypodynamia), and constant stress (vessels constriction and hyperventilation) is the cause. In other words, a wrong style of life is the main cause of hyperventilation. (More Hyperventilation by DNias). BA is a kind of reaction by the body to hypodynamia which is why different forms of asthma can be successfully treated with the help of physical loading and participation in sport.

We are the first in the world to have stated that an asthmatic is not a disabled person who is hardly able to move because of constant attacks of suffocation. More than this, people with asthma are able to live normal active lives and to participate in sport (at the highest level) without taking any medicines at all.

Professor Martyn Partridge, chief medical adviser to the National Asthma Campaign, said: "It is essential that patients receive prompt and accurate diagnosis and skills to control their condition"

Good clinical judgement should be exercised in dealing with asthma. It requires accurate diagnosis and the intelligent use of bronchodilators and steroids and/or reasonable alternatives. Caution is necessary with other drug prescriptions, such as anti-inflammatory or antibiotics for their allergic, trigger-like effects. Unfortunately, usual practice of "accurate diagnosis and skills to control their condition" can lead in 20 years the lungs of asthma sufferers to full degeneration and the mortality rate is increasing. Doctor's desperation in a patient with asthmatic status (prolonged attack) difficult to describe: no bronchodilators or steroids work any more. Buteyko found in patients with severe asthma that oxygen does not improve situation "In mild form of bronchial asthma hyperventilation leads to decrease of carbon dioxide in alveolar air and in the blood and little increase of oxygen. More severe asthma attack more hyperventilation occurs; in severe asthma during attack ventilation of lungs can be increased in 4-5 times. Increasing ventilation in lungs wash out carbon dioxide, carbon dioxide level in alveolar air decreases and oxygen increases. At the same time, contrariwise, in the blood carbon dioxide increases and oxygen decreases and as a result blood supply in tissues worsens and cells will suffer from hypoxia. In this condition patients can die (full of oxygen in their lungs)."

From "The Buteyko method" edited by K Buteyko (1990).

Asthma sufferers need more information and good advice. They have a right to know that there is a safe alternative offering hope and inspiration and this is not false.

I welcome your considered choice.

Yours sincerely
Alina Vasiljeva MD Russia

About Carbon dioxide (CO₂)

Our ancestors' illnesses were often caused by too much hard physical exertion, insufficient food, acute infectious diseases, lack of medicines and ignorance in matters of health. Nowadays we become ill because of insufficient physical exertion, too much stress, overeating, chronic infections, overuse of strong drugs, and ... ignorance in matters of health.

Why is it that so many people today are tired and stressed, have head and backache and are overweight? It is easy to get chronic diseases, but is it possible to prevent and cure them? Are there people who remain healthy? To answer these questions we should take note of ancient wisdoms and also of modern day science (physiology) including space research. Yogi, who breathe just once a minute during meditation, enjoy excellent health. People who live in the mountains, do lot of walking, and have good natural food tend to live long healthy lives.

What is common to these people is normal levels of carbon dioxide in the alveoli of their lungs.

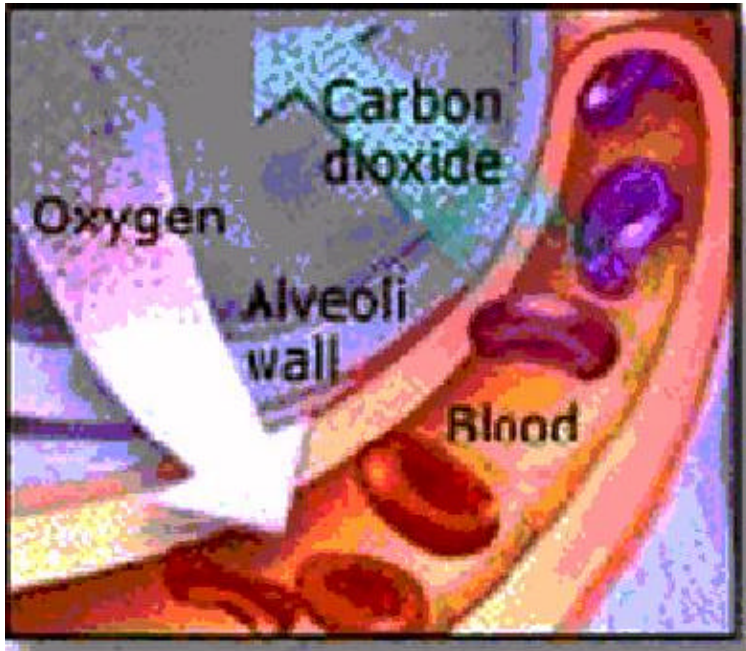
The main role of CO₂ on the physiology of the body:

This is important to know that CO₂ is not merely a waste gas. CO₂ as an important body substance has been studied by many scientists over the past century, including Albitzkiy, Bohr, Henderson, Hamilton, Verigo, Buteyko and Agadganyan. As a result of this research the mechanism behind many chronic diseases was found to be caused by physiological and biochemical imbalances in the body caused by lack of CO₂ in the blood and cells (known as hypocapnia). When blood circulates through the alveoli (in the lungs) it makes contact with the inhaled air. Molecules of oxygen bind to haemoglobin and are carried by the blood to all internal organs. At the end of 19th century, scientists Bohr and Verigo (independently) found that CO₂ is responsible for breathing processes in tissues and cells through their oxygen supply. I.e. a certain CO₂ level in the blood (about 6.5 %) is necessary for oxygen to be released from haemoglobin to the tissues.

They discovered what seemed a strange law: a decreased level of CO₂ in the blood leads to a decreased oxygen supply to the cells in the body including the brain, heart, kidneys, etc. CO₂ was found responsible for the bond between oxygen and haemoglobin. If the level of CO₂ in the blood is lower than normal it leads to difficulties in releasing oxygen from haemoglobin to the cells. Hence this law.

Appendix

Reading a student text book



1. The expression “we breath in oxygen and breath out carbon dioxide” is not correct either physiologically or literally. We breathe in air containing about 21% oxygen

	Inhale	Exhale
Nitrogen	79%	79%
Oxygen	21%	19%
Carbon dioxide	0.03%	~2%

2. The formula for Carbon dioxide is O-C-O. C is carbon, O is oxygen. How can they be antagonists?
3. Oxygen oxidises nutrients in the cells in order to produce energy and build cell material.
 $\text{Glucose} + \text{Oxygen} \rightarrow \text{Carbon dioxide} + \text{Water} + \text{Energy (ATP)}$
4. For an efficient oxygen supply the difference between oxygen levels in alveolar blood and arterial blood (A-a) is important. Normally it is 10mm Hg. It increases with age over 30 and in sick people, it depends on the CO₂ level in the alveoli and the blood (lower level greater[A-a]).
5. If barometric pressure drops by 1mm Hg, the oxygen level in inspired air

decreases, and the carbon dioxide level in the arteries increases correspondingly. This is an adaptive mechanism to mountain height (the barometric pressure halves every 5.5 km). Less oxygen provides optimum metabolism due to better oxygen assimilation by the cells thanks to increased carbon dioxide (Bohr effect).

Carbon dioxide is responsible for the following (in the blood mainly 95% dissolved in plasma):

- Keeps capillaries functioning - open-tone regime.
- Relaxes bronchi's muscles.
- The ratio of CO₂ to bicarbonate determines pH which in the blood is 7.36-7.44. Responsible for alkaline-acid balance in the organism, plays vital role and changes rapidly through ventilation. Vice versa, Hyperventilation decreases level of carbon dioxide leading to disturbances caused by respiratory alkalosis (hypocapnia).
- Reduction in cerebral blood circulation.
- Both hypotention (central mechanism) and hypertention from capillaries spasm.
- Minerals level such potassium, calcium, and chlorine decrease.
- Arrhythmia to fibrillation.
- Convulsions.