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Promising Prophylaxis and Therapy with Oxygen: Two Methods

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ABSTRACT

We cannot live without oxygen. However, most people breathe too shallowly and suffer from subclinical oxygen deficiency. Two methods or devices are presented here that can improve this situation with acceptable effort and in everyday life: singlet oxygen therapy and hyperbaric oxygenation in a chamber. We have used and tested both methods and they actually work for everyone. We have not seen side effects.

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Introduction

Oxygen is ambivalent: on the one hand - aerobically - it generates a large amount of ATP energy in the mitochondria, but on the other hand it produces free radicals in the form of oxidative stress. These electron-deficient ions are aggressive and must be neutralized by antioxidants.

In the Covid-19 era, we have seen patients treated in intensive care units die despite oxygen therapy. What does this look like? In medicine, long-term oxygen therapy (LTOT) is the long-term supply of oxygen for more than 16 hours a day. It is used for diseases in which there is a severe lack of oxygen in the arterial blood (hypoxemia). The survival time and quality of life of affected patients can be improved by this treatment [1-4].

As an adaptation to a lack of oxygen, the organism tries to produce more red blood cells. However, this can lead to a thickening of the blood with an increase in the hematocrit value (polyglobulia), which has an unfavorable effect due to the blood's tendency to thrombosis.

Continuous administration of oxygen leads to an improvement in performance. Any increased pressure in the pulmonary artery can subside, relieving the pressure on the right ventricle. If oxygen therapy is administered consistently for more than 16 hours a day, patients' lives can be prolonged [5-8].

Oxygen poisoning with damage to the lungs (Lorrain-Smith effect) is hardly to be feared with the oxygen quantities used in long-term therapy. However, such effects can occur at higher concentrations, for example when pure oxygen is supplied in closed systems. Oxygen concentrators are often used to avoid these problems.

This is the clinical side of the issue, namely when there is an oxygen deficiency-related diagnosis with a clear deficit in the partial pressure of O2. The question arises as to whether oxygen supplementation could not also take its place in the everyday lives of many people, naturally with as little effort as possible. We have evaluated two methods: a) singlet oxygen application with the Airnergy device, b) Hyperbaric oxygen treatment in a chamber.

Singlet Oxygen

Singlet oxygen, systematically named dioxygen and dioxidene, is a gaseous inorganic chemical with the formula O=O, which is in a quantum state where all electrons are spin paired. It is kinetically unstable at ambient temperature, but the rate of decay is slow. Thus, the lowest excited state of the diatomic oxygen molecule is a singlet state. Thus, the physiological state of oxygen in the respiratory chain of the mitochondria is that of singlet oxygen. The company Airnergy has developed a device that makes the photon energy of singlet oxygen available to the body [9].

The company writes: "The Airnergy vitalizers: Following the example of "understanding and copying nature", Airnergy has succeeded in developing a processor that transforms a low-energy and polluting air or breathing atmosphere, in which about 80% of all people live today, into an energetic and vital air atmosphere according to the principles of natural photosynthesis and makes it applicable almost everywhere. The unique mode of effectiveness of Airnergy technology can be explained solely by the biological significance of the body's own ability to utilize the air we breathe. In Airnergy breathing, the body can only optimally use the entire energy potential of the breathing air. Daily Airnergy breathing has a positive effect on the entire organism: It increases the body's own ability to regenerate, leads to a strengthening of the immune system, optimizes metabolism and cell communication and thus increases the vitality. Disclaimer: Spirovitalization with Airnergy does not increase oxygen, ionize it, add ozone or other foreign substances [9].

The principle was developed by Silko Günzel (former GDR swimmer). He applied for an American patent for it in 2007 [10]. The mode of action is explained as an imitation of nature, namely the photosynthesis of plants. In nature, we often have to deal with photosensitive substances or catalysts that enable

biochemical reactions [11]. One such catalyst is chlorophyll, the green pigment of plants. The activation of chlorophyll by sunlight enables photosynthesis in plants. In the lower part of the Airnergy vitalizer - spatially separated by a glass pane - the activation unit contains catalysts and oxygen.

Only the excitation of the catalysts by light with a specific wavelength leads to the non-reactive oxygen being excited to its reactive singlet state. In a fraction of a second, the reactive singlet oxygen falls back to its basic state, triplet oxygen, and releases energy in the process. This released energy in the form of photons reaches the neighboring chamber where it is supplied to the body by water molecules via the nasal cannula as an applicator. (Fig. 1) In short: the photon energy of the singlet oxygen is supplied to the organism via water molecules.

Figure 1: One of the Airnergy Devices

The Airnergy device is not only used for the treatment of diseases, but also for prevention and especially for regeneration. Airnergy spirovitalization uses an innovative technology to increase the utilization of natural atmospheric oxygen. By breathing Airnergy, the body can optimally use the energy potential of the breathing air - without increasing the oxygen concentration and without the addition of foreign substances. Rather, Airnergy improves the utilization of the available oxygen in the ambient air.

The Airnergy process thus helps the body to measurably optimize the energy for oxygen utilization in the cells in the most natural and gentle way - and thus to gain freshness, vitality and strength. Oxidation processes are also positively influenced: we know of a sliced apple that turns brown after a short time in the air, i.e. in contact with oxygen - an oxidation process. As a result of free radicals, similar processes take place in human cells. Airnergy inhibits this oxidation process in the cells, resulting in an anti-aging effect.

Our Results

We have tested this and found an improved regulatory and regenerative capacity of the autonomic nervous system - the highest control and regulation center in the human organism - in the body using heart rate variability measurement technology (HRV) [12]. Stress to the point of rigidity on the one hand and exhaustion to the point of chaos on the other were changed towards the center - the healthy state. In contrast, the partial pressure of oxygen in the blood did not change.

Hyperbaric Oxygen Treatment (HBO)

Hyperbaric oxygenation is a proven, but still rarely used method. The user breathes increased oxygen in a chamber under increased atmospheric pressure of approx. 1.5 bar (= 1.5 hPa) for 90 minutes. What is the purpose? Under normal pressure of 1 bar, the oxygen saturation of the blood cannot be significantly increased, as the oxygen can only be bound to the hemoglobin, but not dissolved in the plasma. According to Henry and Dalton's law, oxygen can be dissolved in the blood plasma at an increased partial pressure (1.5 bar corresponds to a diving depth of 5 meters). This increases the diffusion distance of the oxygen in the tissue, so that cells that are further away from the capillaries are also supplied. New capillaries can also be formed (Krogh-Erlang model) [13-16].

In hyperbaric oxygenation, the user breathes in approx. 90% oxygen (from a concentrator). The pressure in the chamber is increased by a compressor to approx. 1.5 bar, although 2 bar is also possible (Fig. 2) [17].

An important effect is the increase in neuroplasticity in the central nervous system. This has a positive effect on pre-dementia and dementia, but also on Long Covid. Hormesis is activated, it is a phenomenon in which dosed cell stress can trigger a positive adaptation, with training of defense mechanisms and antioxidants. All tissues need a good supply of oxygen: skin, connective tissue, muscles, joints, tendons, ligaments, etc., among others. Hyperbaric oxygen treatment is therefore a genuine anti-ageing method [18].

Figure 2: A Flexible HBO Chamber Incl. Compressor

Results

We checked this: the partial pressure of oxygen in the blood (norm: 75 - 100 mmHg, increased by an average of 27 mmHg directly after oxygenation. The increase decreased to the normal range after an average of 13 hours. The vegetative nervous system (examined with HRV) also reacted positively, but only slightly significantly [19].

Conclusions

Oxygen is the most important substance necessary for human life. You can live for a month without eating, you can live for about a day without drinking, but only for a few minutes without oxygen. The medical application method using pure oxygen from cylinders is not possible in everyday life and is associated with risks. On the other hand, there are two methods that can be used without any problems. These are singlet oxygen breathing (device price: several thousand USD) and hyperbaric oxygenation in a chamber (device price: several tens of thousands USD). The methods complement each other, have no side effects and work reliably. We have seen positive results when using them.

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