High Oxygen-Containing Water and Their Therapeutic Effect

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Introduction

Oxygen is the foundation of life on Earth; the energy production of biological bodies is determined by redox processes in nature determine the energy production of the body, the interaction and balance of internal free radicals and antioxidants. Oxygen is present in nature as a free gas or in a bound form. At standard temperature and pressure oxygen is a colorless, odorless gas.

In normal state, the oxygen molecule is paramagnetic, i.e. due to the magnetic momentum of the spin of uncoupled electrons and the negative exchange energy between the adjacent molecules, oxygen becomes a magnet in a magnetic field.

Singlet oxygen contains several molecular oxygen types of higher energy (excited state), in which all electron spins are coupled. It is much more reactive to organic molecules than ordinary dioxin alone. In nature, singlet oxygen usually originates from water; by photosynthesis, using the energy of sunlight. It is generated by the photolysis of ozone in the troposphere by short wavelength light, and the immune system can also produce it as an active oxygen source. The oxygen content of the atmosphere is 20.8% at sea level, decreasing proportionally with height. The oxygen content of 20-degree water is 7.6 mg/l. Oxygen content is often expressed as a percentage (100%), which provides a reference to the oxygen absorption of a given solution at a given atmospheric pressure.

At a given degree of phylogeny, animal organisms cover their energy needs from oxidative processes: compounds (primarily ATP) whose energy can be directly used by the cells, are mainly formed during the oxidative degradation of nutrients. Most of the ATP is synthesized in the mitochondria: the electron transport pumps out protons from the mitochondria, the process involves the formation of a proton electrochemical gradient (ApH); The protons return to the interior of the mitochondria through the membrane-based ATP-synthase and it is linked to ATP synthesis. The efficiency of this process is less than 100%; the energy of the oxidation process is partially converted to thermal energy.

We differentiate between two forms of energy production of the cell in the context of oxygen. The one occurs in the presence of oxygen (aerobic) when 32 ATP molecules are formed from one glucose, whereas the other type is anaerobic when 6 ATP molecules are produced from one glucose molecule and lactic acid is produced in the meanwhile.

The characteristics of oxygen dissolved in water

There are several forms of producing an air-water mixture:

i. Having high pressure oxygen absorbed by water
ii. Having nanobubbles absorbed by water
iii. Having ozone gas absorbed by water
iv. Modifying the structure of water by electrolysis

The first supporter of oxygenized water was dr. Otto Heinrich Wartburg, who wanted to help miners suffering from lung silicosis by applying oxygenized water. In the course of his research he found the relationship between hypoxia and cancer,
and in 1931 he was awarded the Nobel Prize in Medicine for this. He pointed out that a hypoxic environment is necessary for the evolution of tumours. Later his research had been forgotten. In the past 30 years there have been articles published on the effects of oxygenized water. Nestle et al. have proven it with an MRI scan that oxygenized water increases the oxygen content of the oral cavity and the stomach, thus this are the areas where it is absorbed. This can be an explanation to the observation that following the consumption of Kaqun water the subcutaneous oxygen level immediately increases, and blood circulation passes it on as dissolved oxygen. Japanese authors have justified that as opposed to normal water, the consumption of water containing oxygen nanobubbles increases the mass of plants, and the development, mass increase of fish and mice speed up. Other authors have shared similar results for chicken, and they also reported on the reduction of stress reactions.

**Special functional water, the Kaqun water**

Kaqun water is a special water (functional water) produced with the help of electrolysis, to be used for consumption and bathing purposes alike; as for its physical characteristics, pH value, and oxygen level it is different from normal potable water. In the course of the production oxygen concentrations higher than the normal environmental one is achieved. The oxygen content of normal natural water is about 10 mg/l. The oxygen content of tap water is often only half of that. The oxygen content of water is strongly dependant on environmental effects and air pressure, thus a percentile evaluation is applied, where the oxygen naturally bonded by pure water at a given temperature and atmospheric pressure is 100%, and our oxygen ratio is compared to this value. The oxygen level of Kaqun water moving -by our measurement- between 150 - 250%. The thermal condition coefficient of Kaqun water is lower than that of normal water (normal water 0.6, Kaqun water 0.52W/mK); thus it has good insulation effect.

**Biological effects of Kaqun water (on basic own tests):**

**Increases the physical performance**

The percentile ratio and function of the Natural Killer cells (special T-cells) had significantly increased. The non-specific activation of the T-lymphocytes had taken place, indicated by the increase of the surface CD 25 molecular expression of the cell, referring to the activation of the cellular immune system.

i. Increasing the ratio of CD 34 stemcells.

ii. The increasing quantity of the reactive oxygen radicals within the lymphocytes show the intensified killing ability of the neutrophil granulocytes. These tests have been confirmed in our daily routine measuring.

iii. It decreases the systolic and dyastacles blood pressure

iv. It increases the brain activity, increases the baseline frequency of brain

v. It increases the expansions of the small vessels

vi. It reduces stress sensitivity of the vegetative nervous system

vii. It accelerates (reduces) cognitive time, improves attention concentration ability

viii. It quickly increases tissue oxygen levels (TcPO2 ) without using haemoglobin

ix. It Acting on Prolyl hydroxylase (PHD) reduces the formation of HIF1α, thus the possibility of anaerobic metabolism.

**Discussion**

Overall, the hypoxic organism transforms itself into normoxic, restoring metabolic processes in the body. This effect - the recovery of homeostasis and metabolism - can be used extensively in prevention, healing, aging symptoms or restoring ability to work [1-6].

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