Clinic Search

International Journal of Clinical Epidemiology

Gusyev Valentyn *

Open Access

Mini Review article

# Muscle Work and Oxygen in the Blood

**Gusyev Valentyn** *

President, Member of Pedorthic Association of Canada.

***Correspondence Author:** Gusyev Valentyn, President, Member of Pedorthic Association of Canada.

**Received Date:** July 15, 2023 | **Accepted Date:** August 07, 2023 | **Published Date:** September 06, 2023

**Citation:** Gusyev Valentyn, (2023), Muscle Work and Oxygen in the Blood, *International Journal of Clinical Epidemiology*, 2(5); **DOI:**10.31579/2835-9232/030



**Abstract**

Speaking about violations in the body's work, we should also recall the role of oxygen in the blood. It is an active oxidizing agent, and is directly involved in metabolic processes. Its content in the blood is limited and replenished only in the process of muscle activity.

**Key words**

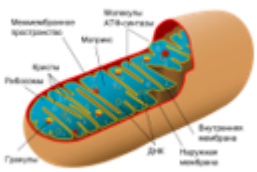
Oxygen; brain cells; skeleton; hypertension

**Summery**

Speaking about violations in the body's work, we should also recall the role of oxygen in the blood. It is an active oxidizing agent, and is directly involved in metabolic processes. Its content in the blood is limited and replenished only in the process of muscle activity. At rest in 100 ml of blood of a healthy person contains about 20 ml of oxygen. In total, about 1 liter of oxygen is in the blood. Under normal physical exertion, the oxygen content in the blood increases by 10-20%, the quality of metabolic processes improves. With long and heavy loads, a decrease in oxygen content is observed, which affects the quality of metabolic processes, the risk of heart attacks, strokes and other diseases increases. Without oxygen, brain cells die in five minutes.

1.

By increasing the amount of hemoglobin, one can judge the oxygen content in arterial blood. At rest, arterial blood in the capillaries gives 40-45% of the oxygen contained in it. During operation, the oxygen utilization rate reaches 70%. This important point should be known to people suffering from cardiovascular disorders, diabetes, with the development of foot gangrene, trophic ulcers, etc. With increased glucose levels, the movement of blood through vessels and capillaries is difficult, which is further aggravated by prolonged muscle spasms that occur during foot deformities. The only way to save your legs from amputation is to walk actively on unloading insoles of sub-correctors. They correct the musculoskeletal skeleton of the feet, allowing the muscles to contract in full. This creates the conditions for the normalization of the lymphatic and venous pumps, which supports cell metabolism. In this situation, it is also important to understand that a violation of the flow of fresh arterial blood is associated with poor functioning of the venous pumps of the legs. What is needed is not rest, not movement in a wheelchair or with crutches, but active and proper walking. In diabetes, walking is that effective medicine that enables mitochondria to develop in muscles that absorb blood glucose. We noted this back in the nineties, tried to explain the phenomenon of a decrease in blood sugar when walking on podkorekretory. Today, this is already explained by the fact that when walking the number of mitochondria in muscle cells increases thousands of times. They then process glucose.



2.

Some are trying to develop the number of mitochondria in the muscles due to intensive work. This is acceptable for athletes, but not for the elderly. Muscles are an oxygen depot, but they are not adapted for hard physical work, as well as for inactive or static activity. In our patients, a decrease in blood sugar was observed on the 7th day of walking on sub-correctors, which caused a lot of questions. Today we already know that this is a period of renewal, the life of mitochondria. For the treatment of hypertension, walking for 35-45 minutes is also recommended, but not running or lifting weights. One of the main biochemical causes of body fatigue is that the cell membrane is gradually discharged and it takes time to recharge. In case of chronic fatigue during the rest, the cell does not have time to recharge. Physiology considers walking as the basis for maintaining the viability of cells and the

processes of its metabolism. So today, the causes of diseases are judged by the state of cell membranes, by the composition of the intercellular fluid. With deformations, the cell membranes are greatly stretched, the shape of the ion channels in them has changed so much that elementary particles do not pass from the intercellular fluid into the cell.

And again, we say that the active work of muscles is possible only when the deformities are eliminated, the balance of forces is disturbed in the structures of the musculoskeletal frame of the feet, spine, and joints. We should not forget about the use of properly made shoes, without which there will be no proper walking when the sequence of contraction of the muscles of the feet, hips, and abdominals is not broken. This sequence of muscle contraction is laid down by nature to carry out the lifting of blood to the heart. All these tasks are solved by us in the correction of the feet and spine, normalization of the functional state of the body, which is interconnected and is solved in a single process of correction of the musculoskeletal skeleton of the body.