## MECHANISMS OF ACTION CARBOXYTHERAPY

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2012 was declared the European Year carboxytherapy, the mechanism of action is associated with the physiological properties of carbon dioxide (CO<sub>2</sub>). There are two major mechanisms of action in the body of CO<sub>2</sub>. The first mechanism of action is direct and reflex stimulation of CO<sub>2</sub> respiratory and vasomotor centers of the medulla oblongata. And also, at the expense of local action on the cells of arterioles CO<sub>2</sub>:CO<sub>2</sub> injection body perceives as hypoxia and reacts to the increased blood circulation and the generation of new blood cells. As a result of the introduction of CO<sub>2</sub> per area of the body more oxygen and nutrients, and the process of restoration and renewal of cells. Also, by reflex, by chemical action of CO<sub>2</sub> receptors, promoting formation of bioactive substances.

The second mechanism of CO<sub>2</sub> action is called effect Verigo Bora, it is associated with lung function. Its essence is that, without the presence of CO<sub>2</sub>, oxygen cannot be released from the bound state of the hemoglobin, which leads to oxygen deficiency in an organism even at a high concentration of oxygen in the blood. But the greater the amount of CO<sub>2</sub> in arterial blood, the easier it is done separation of oxygen from hemoglobin and its transition into tissues and organs is rapid elimination of hypoxia - the main component of the pathogenesis of most diseases. In these mechanisms of action of CO<sub>2</sub> based carboxytherapy.

Cellulite also involved three mechanisms carboxytherapy. By increasing the local concentration of carbon dioxide increases oxygenation defective site, it promotes "burning" of fat cells actively pumped into the tissues with oxygen. Increased lipolysis - fat reduction process, eliminating stagnation of lymph tissue and improve the elimination of toxins and fluid from the tissues. Increased sensitivity of beta-adrenergic receptors responsible for the process of lipolysis.

Carboxytherapy also widely used in orthopedics. Firstly, the introduction of carbon dioxide along the spine and joints to improve local blood circulation, increasing oxygenation. Second, the reflex irritation of carbon dioxide nociceptors, and trigger points, causes vasodilation and thus easing pain, eliminates functional disorders of the musculoskeletal system.