

THE PHYSIOLOGICAL ROLE OF CO₂ IN AN ORGANISM AND PHARMACOLOGICAL EFFECTS OF CARBOXYTHERAPY

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Carbon dioxide long time was considered as the final metabolism's product, harmful for an organism, of which it is necessary to get rid completely. However at the end of the last century it was proved that CO₂ is very important product of an exchange which is necessary for normal organism's activity. In recent years new data which characterize CO₂ role as the most important regulator of many processes, including, ensuring preservation of a homeostasis at adaptation to the most various conditions collected.

Therefore more detailed studying of physiological and pharmacological properties represents essential interest for medicine and pharmacy.

Physiological properties: expansion of vessels; microcirculation acceleration; relaxation of muscle fibers of vessels; improve a tone of veins; stimulate angiogenesis, respiratory reflexes, functions of fibroblast; raise a tone of smooth muscles; stimulate secretion of hormones, functioning of digestive glands; interfere with lipid peroxidation; reduces a threshold of excitability of nervous cages; regulates cellular respiration, electrolytic balance.

Thus, carbon dioxide, contrary to a popular belief, is necessary for an organism not less, than oxygen. It is the powerful physiological regulator of numerous systems of an organism: respiratory, transport, cardiovascular, secretory, haematogenic, immune, hormonal, etc.

Pharmacological effects.

Carboxytherapy thanks to the natural action's mechanism CO₂ and a rich pharmacodynamics, solves many complex and unresolved problems of medicine. Use of carbon dioxide allows to improve blood circulation, tissue respiration, to regenerate fabrics, to bring toxins and slags out of an organism, to split fats.

Medical effects: hypotensive (secondary), cardiogenic (positive inotropny), metabolic, reparativno-regenerative, toning, anti-spastic, anti-inflammatory (primary), antianginalny.

Carboxytherapy promoting updating and clarification of an organism, increase of immunity and working capacity, normalization of work of internals, and also improvement of quality of life.