

# VENTILATION AND PULMONARY GAS EXCHANGE IN OLDERLY PATIENTS WITH COPD: INFLUENCE OF HYPOXIC TRAINING

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## *Abstract*

**Aim:** to study the effectiveness of the influence of interval normobaric hypoxic training on lung function and gas exchange in elderly patients with COPD.

**Methods.** 24 elderly patients with COPD and 17 healthy older age people were examined. We assessed lung ventilation, lung diffusion capacity, uniformity of mechanical ventilation, blood oxygen saturation. Hypoxic training course consisted of 10 daily sessions. Each training cycle consisted of 5 minutes of breathing with hypoxic mixture and 5 minutes of breathing with atmosphere air (3 five-minute cycles of breathing with hypoxic mixture in total).

**Results.** Use of hypoxic training resulted in improved lung ventilation, increased the reserves of external respiratory system and increase bronchial passage in elderly patients with COPD. This helped to improve the uniformity of their ventilation and the diffusion capacity and, as a consequence, led to an increase in blood oxygen saturation.

**Conclusions.** Hypoxic training is an effective tool for treatment of bronchial obstruction and improvement of the effectiveness of pulmonary gas exchange in elderly patients with COPD. At the same time, due to the use of automated complex "Gipotron-M" with up-to-date software, hypoxic training appear to be effective and safe.

**Key words:** COPD, lung ventilation and gas exchange, interval normobaric hypoxic training and aging.

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