

# **INFLUENCE OF HYPOXIC TRAINING ON AUTONOMIC NERVOUS SYSTEM IN ELDERLY PATIENTS WITH COPD**

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## *Abstract*

*The aim* is to evaluate the effect of hypoxic training on the autonomic nervous system (ANS) in elderly patients with COPD.

*Methods.* 32 elderly patients with COPD and 18 apparently healthy aged people were examined. Spectral analysis of heart rate variability and oxygen saturation were measured and hypoxic test was performed. Hypoxic training course consisted of 10 daily sessions: alternating 5 minutes cycles of hypoxic mixture/atmospheric air breathing (3 five-minute cycles of hypoxic mixture breathing).

*Results.* Hypoxia led to the predominance of the sympathetic division of the autonomic nervous system in elderly patients with COPD. Interval normobaric hypoxic training had normalizing effect on the regulation of ANS in elderly patients with COPD. At the same time under the influence of hypoxic training course a parasympathetic influence was reduced, leading to a relative predominance of sympathetic tone.

*Conclusions.* The hypoxic training had a positive effect on a regulation of ANS in elderly patients with COPD: the decrease of parasympathetic and increase of sympathetic influences were observed. Automated software and hardware complex "Gipotron-M" provided a safe and efficient hypoxic trials and hypoxic training.

**Key words:** COPD, heart rate variability, interval normobaric hypoxic training, aging.

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