

SAFETY AND EFFICACY OF THE INTERMITTENT NORMOBARIC HYPOXIC TRAININGS OF ELDERLY PEOPLE

*O. V. Korkushko, V. O. Ischuk, V. B. Shatilo,
A. V. Pisaruk, G. V. Duzhak*

Summary

Despite a fact that the intermittent normobaric hypoxic trainings (INHT) have long been used in preventive and clinical medicine, there is almost no experience of its application in the elderly.

Our study on the safety and efficacy of the INHT involved the group of 20 elderly subjects, most of whom had reduced organism's functional capacities and an accelerated aging of the cardiovascular system.

Regimens for hypoxic training were selected on the individual basis, with an account being taken of organism's reaction to a dose of hypoxic test. The course of INHT had 10 seances. Within a frame of each seance, the 5 min cycles of hypoxic mixture breathing (12–14 % oxygen) alternated with the 5-min cycles of atmospheric air breathing. There were 4 cycles during one seance.

It has been found that the INHT were fairly tolerated by elderly patients provided that an individual training regimen was properly selected and trainings were performed under a thorough clinical-instrumental control over the patient. The adaptogenic effect of hypoxic trainings was seen in an increase of physical and psycho-motor working abilities in more than half of study persons and a reduction of cardiovascular system and ventilation function reactions to the dosed out physical loads. The mechanism of a positive influence of the INHT on physical working ability is linked with economization effects of the organism functioning. Moreover, owing to hypoxic training the volumetric skin blood flow raises both at rest and, especially, at altitudes of reactive post-occlusive hyperemia. This indicates an improvement of vascular-motor function of the endothelium. The results of study permit us to recommend the INHT as a fair means for extending organism's adaptive capacities in the aged.