

# **NORMOBARIC HYPOXIA IN TREATMENT OF PATIENTS WITH MALIGNANT NEOPLASMS OF THE UPPER RESPIRATORY TRACT**

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## *Summary*

The article describes the method of hypoxitherapy used for the treatment of patients with oncology diseases of upper respiratory tract. The essence of this method lies in breathing with hypoxic mixtures before or during radiotherapy seances. Due to certain training schemes it's possible to create conditions similar to highlands, accompanied with the increase of resistance to both hypoxia and other physical factors, especially ionized radiation, toxic substances, anemia, infections and etc. Based on these data there was developed a method for prophylactics of radiation therapy complications, decrease of the chemotherapy side effects, preparation of oncology patients to operative treatment.

The article raised a question about overcoming tumor radioresistence. It is caused by the presence of the transcription factor HIF-1, which target genes provides adaptation to hypoxia and angiogenesis stimulation, contributing to maintenance of oxygen homeostasis under the physiology conditions. At the same time transcription factor HIF-1 stimulates tumor tissues growth. The article underlines the ambiguity of tumor reactions both to common aerogenic hypoxia and hypoxia induced by the conditions of tumor growth.