The influence of ozone exposure on the exercise capacity (Note I)

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Abstract

Background and aims. Our experimental study intends to explore the influence of intermittent exposure to ozone (O_3) on the aerobic capacity and on the physical performances.

Methods. Experiments were performed on white, male, Wistar rats, having an average weight about 170 ± 20 g, divided in 2 experimental groups, as follows: 1st group (n = 10) – control group, composed of animals subjected to exercise (28 days); 2nd group (n = 10) – composed of animals subjected to exercise, associated with intermittent exposure to O_3 (28 days). The research was made in the Experimental Laboratory at Physiology Department, University of Medicine and Pharmacy, Cluj-Napoca and consisted of exposure to ozone and measuring aerobic capacity.

Results. The aerobic capacity increases significantly for both groups by training. The aerobic capacity, during the entire training, is significantly increased in the unexposed group compared with the group exposed intermittently to O_3.

Conclusions. Experimental intermittent exposure to O_3 limits the increase of aerobic exercise performances.

Keywords: ozone, aerobic capacity, exercise.