

The influence of negative aeroions on some respiratory and psychological indices in basketball playing schoolchildren.

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Abstract

Background. Some previous beneficial results obtained in healthy people by negative aeroionotherapy explain the use of this procedure in athletes, aiming to stimulate the after-exercise recovery and to improve the physical performance during sport training and competitions.

Aims. The study explores the changes of exercise adaptation and attention tests results in a group of schoolchildren under the influence of negative air ions.

Methods. Following indices have been measured in a group of 12 schoolchildren, aged 15 years, playing basketball: a. the functional level of the respiratory system (pulmonary volumes and capacities); b. adaptative ways on physical exercise; c. psychological exploration of the concentrated attention (Toulouse-Pieron's test). All parameters have been measured before and after a 18-days period of aeroionotherapy. The negative aeroions have been generated by a Raumionization Device BION 90, in a concentration of 15,000/cm³ air, every day for 25 minutes, at a distance of 70-80 cm.

Results. Before the treatment half of the persons had higher values of the pulmonary vital capacity, the other half had lower values compared to normal levels. After ionotherapy the percentage of children with increased VC, VEMS and V max raised. Negative aeroions induce an improvement of the quantitative attention capacity, which suggests a shorter adaptation to exercise. The qualitative efficiency of attention remained unchanged.

Keywords: aeroionotherapy, adaptation to exercise, respiratory indices, concentrated attention, human efficiency.