

Physical training and exercise capacity in children – beginner football players

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Abstract

Background. General and special physical training are indispensable for high performances. For 10 to 12 years old children, physical training endorses to form and consolidate basic motor skills and to develop the motor qualities.

Aims. We studied the influence of physical education in schools and the general physical education on the exercise capacity in pre-puberty pupils.

Methods. Research was carried out on two groups of children, young boys aged 11 to 12 years: group I – control – with 15 not-sportsmen pupils and group II – 15 sportsmen pupils. Direct determinations included: anthropometric indicators, vital capacity as a physiometric index, motric indicators (sportsground test) – aerobic resistance and anaerobic resistance. Indirect measurements: growth rhythm, body mass index (BMI), Lorentz index, physical activity index, progress rate. The program and the testing steps for both groups consisted of the initial test (T₁)-September 2004, 8 months of physical training and the final test (T₂)-June 2005.

Results. Our results show an improvement in the anthropometric indicators in both groups, a low vital capacity in pupils who did not practice sport and within normal range in pupils who did, diminished aerobic and anaerobic capacities in non-sports pupils and significantly improved capacities in sport pupils, low values for the BMI, the improvement of the physical activity index and the Lorentz index in active sports' pupils.

Conclusions. Physical education in schools of non-sports pupils and the general physical training of pupils that actively practiced, contributes to the improvement of the vital capacity and the exercise capacity. General physical training of sport pupils – beginner football players induces, in comparison with non-sports pupils, superior progress rates for the vital capacity, aerobic and anaerobic resistance, physical activity index and Lorentz index.

Keywords: children, physical training, exercise capacity, football.