

Junior ice hockey players' haemodynamics analysis

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Abstract

The study was designed to analyse the age-specific haemodynamics in junior (11-15 years old) ice hockey players. Subject to the study were 58 boys from the special sports classes of School #1 in Kazan city trained in ice hockey groups and having the 5-years-long uninterrupted formal sport records. The 11 yearold subjects were at the beginner stage of intensive physical training process. The Reference Group for the study was composed of the boys (n=48) from general education school attending a standard physical education course. The cardiovascular system functionality was tested in the study by the tetrapolar chest rheoplethysmography using Reo-Spectrum-2 Rheograph (made in Russia). The study data was found to indicate that a systemic physical training may be of high effect on the junior athletes' age-specific cardiovascular system functionality. It was found that the 11-14 years old subjects' systolic arterial pressure (SAP) notably grows with the falling heart rates (HR) and the growing stroke volumes (SV) associated with the growing peripheral resistance of the blood vessels with age - versus the Reference Group subjects whose test rates were meaningfully lower. Fast adaptation of the 11-13 year-old athletes' cardiovascular system (CVS) to graded exercise is associated with spastic responses of the vessels with no positive changes in the stroke volumes (SV).

Keywords

11-15 year-old hockey players, Graded cycle ergometry exercise, Hemodynamics

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