

Abstract

Title: The impact of high-intensity interval training on aerobic and anaerobic performance of soccer players

Objectives: To find out the impact of a high-intensity interval training and a speed-strength-skill fitness programme on aerobic and anaerobic performance in a group of 14 year old football players.

Methods: 15 youths who were $13,8 \pm 0,6$ years of age took part in the 6-weeks research. They were divided into 2 groups. A method of high-intensity interval training was used in a group EX1 (n = 8). A group EX2 (n = 7) participated in speed-strength-skill fitness programme which consisted of speed training. The methods that were being used were a method of repeated starts with acceleration as well as a method of circuit and skill training. To be able to assess the actual aerobic and anaerobic performance a Yo-Yo intermittent recovery test level 2 was used as well as a test of a long jump from a spot with standing start.

Results: We found out that after a 6-weeks research there was an improvement of aerobic performance of the participants taking part in HIIT programme whose $VO_2\text{max}$ improved by $2,55 \text{ ml.kg}^{-1}.\text{min}^{-1}$ as well as of the participants taking part in a speed-strength-skill fitness programme who managed to increase their $VO_2\text{max}$ by $1,41 \text{ ml.kg}^{-1}.\text{min}^{-1}$. There was an improvement in the anaerobic performance. A group performing HIIT programme managed to improve their long jump from a spot by 1,25 cm and a group performing speed-strength-skill fitness programme improved by 1,71 cm.

Keywords: high-intensity interval training, soccer, youth, Yo-Yo test