



The effect of fatigue on postural stability in athletes during various types of standing

Poster Presentation

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Abstract

Introduction: Athletes' performance may be affected by various factors during various sports activities; fatigue can be one of the most important of them. Fatigue can affect athletes' sensory-motor systems during sport and impair their performance. The aim of the present study was to investigate the effect of the general fatigue on center of pressure (COP) variables in athletes while standing in different positions.

Methods: Ten available female athletes were studied. Subjects performed single-leg and double-leg standing tests with eyes-open and eyes-close before and immediately after the application of the general fatigue protocol. Dependent t-test and Wilcoxon statistical tests were used to analyze the data at a significance level of 0.05.

Results: The results of the present study showed that there was a significant difference in the Area variable of COP in the double-leg standing with eyes-open ($P=0.029$) and in the single-leg standing with eyes-close ($P=0.032$) when compared between pre and post fatigue. In contrast, no significant difference was observed in the variables of standard deviation of COP at the anterior-posterior direction, standard deviation of COP at the medial-lateral direction and the total mean velocity of COP between before and after fatigue of athletes in different standing positions ($P>0.05$).

Conclusion: According to the significant changes in the variables of COP after fatigue, it seems that fatigue has a negative effect on the balance of athletes. Destructive changes in a person's balance following fatigue can negatively affect athletes' performance and increase the risk of various injuries such as falling.

Keywords

General Fatigue; postural stability; Athletes; Standing

