

Abstract

Title: The Effect of Alcohol Ingestion on Maximal Treadmill Performance

Objectives: The aim of this study was to assess the effect of alcohol consumption before sport performance on the maximal running test and values of respiratory parameters.

Methods: This study attended 7 girls age $21,3 \pm 1,0$ years which are active in sports. They had been running at the treadmill first time after intake of juice with alcohol in relation with their fat free mass and secondly only after intake of juice. This is called Switch replication design. Independent variable was ingestion of alcohol and dependent variables were maximal relative oxygen consumption, heart rate, minute ventilation and respiratory exchange ratio. Alcoholic history of each participant was detected. For this study were used treadmill ergometer Quasar (Cosmos, Germany), the metabolic analyser Metalyzer (Cortex, Germany) and the sporttester Polar.

Results: Paired t-test was used for evaluation of the results. The measured values were not statistically significant with the level of significance 0,05.

The measured values were individually evaluated in the same time and increase of minute ventilation was confirmed at 5 tested girls otherwise the effect of alcohol on maximal relative oxygen consumption and heart rate was not proved. The alcohol did not influence the maximal running test in our case.

Keywords: alcohol, maximal relative oxygen consumption, respiration, treadmill, maximal performance