

Abstract

Title: The influence of alpine skiing on balance

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Objective: The aim of this work was to study the available literature, to characterize alpine skiing from its inception through biomechanics and physiological demands for skiers to characteristics of the individual disciplines. At the same time characterize motor skills in whole and focus on the main reference factor: the balance ability. The main objective of this work was to perform an experiment on two groups: experimental and control group. The aim of the experiment was to test the influence of alpine skiing on the balance and if there is the potentiality to improve the results of balance tests by only one week of intense skiing. The results of the experimental group were compared with the control group.

Method: Measurement was carried out using the GymTop USB and one test for measuring static equilibrium. The main group consisted of 10 subjects selected from the participants of the ski-instructor course APUL "C" and measurement took place in two phases - before the course and after a week of intense duration of the course. An important criterion for the selection of subjects was their good health with no on-going acute musculoskeletal diseases. Only one year younger injuries were the reason for non-inclusion in the study. The control group of "non-skiers" consisted of 10 randomly selected subjects who practised no skiing sport during the period between the first and second measurement. Essential criterion was again good health and exclusion from the study due to injuries on the musculoskeletal system under one year. Age interfaces of both groups was 20 to 28 years, the sex was not taken into account.

Analysis: Data obtained from GymTop USB and standing stork test were analysed using T-test and subsequently shown graphically.

Results: Confirm the close relationship of alpine skiing and balance abilities and show the possibility of affecting the balance abilities by alpine skiing.

Key words: alpine skiing, equilibrium, balance ability, balance, GymTop USB