Abstract

Title: Diagnosing of muscular imbalances in cross-country skiers using tensiomyography

Objectives: Objective of the thesis was to define hypothesis about impact of cross-country skiing on musculoskeletal system, most importantly the origin of muscular unbalance, on cross-country skiers using tensiomyograph TMG 100 and bioimpedance InBody 720.

Methods: This bachelor's thesis was conducted as qualitative research. It consists of six case studies. We examined the presence of muscular imbalance of back muscles in cross country skiers. Tensiomyograph TMG 100 and bioimpendace InBody 720 were used during this examination.

Results: Based on results from examination of six respondents we found out, that there could be muscular unbalance from the standpoint of lateral symmetry, mostly in m. erector spinae.

Conclusion: Based on six case studies, were formulated two hypothesis that take in account possible muscular unbalance of m. erector spinae and m. trapezius inferior that could be formed by specific usage by cross-country skiers.

Keywords: tensiomyograph, muscular unbalance, cross-country skiing, bioimpedance