

ABSTRACT

Title: Comparison of internal loading on the organism by double poling and diagonal striding during the sprint on the roller ski

Objectives: The aim of the diploma thesis is to compare the internal loading using the Cortex Metamax 3B and the SenzoStar GL devices in a two-hundred meters long section performed by the maximum effort between the double poling and diagonal striding about the 10.4% climb on roller skis.

Methods: The diploma thesis is conceived as an empirical field research, the aim of which is to compare a double poling and diagonal striding in terms of internal loading on roller skis during sprint. The test subject will be a group of cross-country skiers and long-distance skiers.

Results: Using the measured values of the internal loading and the measured time, we found differences during comparing the diagonal striding and double polling in specific values of SF, VO₂ / kg, VE. the conclusion was that diagonal striding is faster than double poling to the uphill on roller skis.

Keywords: XC-skiing, roller skis, Cortex MetaMax 3B, oxygen consumption, heart rate, lactate