

Abstract

Title:

Acute effect of a warm-up on the force of a punch

Objectives:

The aim of this diploma thesis is to test whether a warm-up before a performance affects the force of a punch at a sample participants practicing full-contact combat sports. Further goal is to analyze a change in the force of a punch depending on elapsed time after warming up.

Methods:

Each participant in this experimental study with intra-subject design went through all phases of the measurement, where the force of a punch was tested in four specified times (before a warm-up and then 4, 10 and 25 minutes after the warm-up).

Results:

No statistically significant effect of a warm-up on the force of a punch was observed, nor was there a statistically significant change in the force of a punch during the time following a warm-up. However, a warm-up did have a significant effect on change in heart rate and body temperature.

Keywords:

Combat sports, performance, fight, dynamic stretching, explosive power, punch sensor