

## **Abstract**

**Title:** Verification of finger flexor critical force as an indicator of maximal metabolic steady state

**Objectives:** The aim of this work was whether the 4-minute all out test reliably determines the level of critical force

**Methods:** 7 participants did a 4-minute all-out test to determine the critical force during intermittent isometric contraction. Then they did 2 more tests: 2kg below and 2kg above the critical force from which the maximum metabolic steady state should be observed.

**Results:** We found that participants failed to meet the prediction of the test that means that the critical strength determined by the 4 min all-out test does not represent a metabolic steady state.

**Keywords:** sport climbing, critical power, anaerobic threshold