

Abstract

Title: A time motion analysis of lead climbing of elite climbers in the competition route of Czech Cup.

Objectives: The aim of this works is to perform time motion analysis of lead climbing of elite climbers in the competition route of Czech Cup.

Methods: Data were collected by video recording. Observation criteria were set (total time, holding, quickdraw clipping, rest and chalking). 8 climbers were measured on the 10- UIAA difficulty route.

Results: The average climbing time was $203 \pm 32,6$ s, the average holding time was $7,1 \pm 0,8$ s (total $161,3 \pm 29,2$ s), the average rests period was $1,2 \pm 0,4$ s (total $6,5 \pm 3,3$ s), the average quickdraw clipping time was $2,3 \pm 0,4$ s (total $24,9 \pm 4,6$ s), the average chalking time was $2,1 \pm 0,6$ s (total $16 \pm 3,7$ s) and the average hand-transfer time was $0,9 \pm 0,2$ s (total $38,4 \pm 9,1$ s). Climbers climbed 4,8 meters per minute.

Conclusions: The static part almost four times prevails the dynamic part. There were no significant differences between right and left hand in our measurements.

Keywords: holding, loading, rest, static phase, dynamic phase