

Abstract

Title: Evaluation of running techniques in elite Czech male and female runners

Aims: The main goal of the work is to evaluate the running technique of elite Czech male and female runners on middle tracks and intra-individual variability of the running style.

Methods of work: Qualitative kinematic analysis of motion and quantitative cinematographic examination method of video recording of running technique were used to create this work. The records were further processed using Adobe Photoshop, Adobe Premiere, Kinovea and Microsoft Excel.

Results: The individual probands of the research group fulfill a substantial part of the model running technique recommended by the literature such as the active forefoot strike, the duration of individual phases, or the correct position of the head, torso, and extended reflex limb in the propulsion phase. So, we can say that Czech runners are technically capable. However, at the same time we observe a different individual concept of running technique for each proband, such as lumbar hyperlordosis, retroflexion of torso, head tilt or the extent of arm work.

Key words: biomechanics of motion, kinematic analysis, running technique, economics of motion