

Abstract

Title: Comparison of the impact of exposure to the shoe inserts foot arch deformation.

Aims of the thesis: The aim of thesis is to compare the effects between two selected inserts into the boots of foot arch deformation. The first one is a specially shaped insert and the second one is common available insert in the Czech Army.

Method: Bachelor's work was treated as an empirical quantitative research observational character. We tested 19 probands. The measurements were used to measure pressure insole PedarX. It was measured at a speed of 5 km/h with two different inserts in shoes. The monitored values was the total contact area between foot and shoe inserts, and the maximum force influencing the foot during the step cycle. The measured values were assessed using Cohen coefficient. The results were compared to studies dealing with the emergence of deformation at the foot arch.

Results: Special shaped insert was compared to common available insert in the Czech Army. It was found, that the special shaped insert increases total contact area between foot and shoe insert. Further the special shaped insert reduced the maximum total force acting on the foot during the step cycle in both feet. Increasing the total contact area and decreasing the total maximum force influencing the foot during the step cycle leads to a lower risk of acquired defects of the feet.

Keywords: **Walking movements, loads feet, shoe inserts, foot art defects.**