

ABSTRACT

Background: Growing popularity of minimalist footwear brings up a lot of questions. Studies on its long-term positive as well as negative effects are further needed.

Purpose: The aim of the thesis is to investigate how does wearing of minimalist shoes for six months influences a human foot. Initially, we have expected a finger extension in width, especially the lateral extension of the big toe. Additionally, we have assumed to improve the medial longitudinal arch of the foot.

Methods: We had two groups of participants – the experimental one (11 participants), which was wearing minimalist shoes for six months and the control group (7 participants). The control group continued to wear its conventional footwear. For both of the groups, plantar imprint on the podoscopic device PodoCam as well as the angle of the big toe were measured. Subsequently, the footprints were transferred to Chippaux-Šmiřák index for sequent evaluation.

Results: Welch test was used to verify our two hypotheses. The first one, six months of wearing minimalist shoes decreases Chippaux-Šmiřák index, was statistically significant ($p=0,009$). The second one, six months of wearing minimalist shoes decreases angle of the big toe, was statistically significant as well ($p=0,03$). The hypotheses were accepted.

Conclusion: Wearing of minimalist shoes for six months decreases the Chippaux-Šmiřák index and the angle of the big toe.