

Abstract

The bachelor thesis deals with the possible influence of barefoot shoes on kinesiology and kinetic parameters of gait. In the theoretical part there is a brief description of anatomy of the human foot, foot arch and movements. The kinesiology of gait is also described here. The theoretical part also deals with the problem of walking in barefoot shoes and explaining the basic parameters of barefoot shoes. Finally, the results of studies already underway on this issue are summarized. In the practical part we have devoted our research to the selected gait parameters that can be influenced by the wearing of barefoot shoes. The measurements were carried out on two groups of subjects, each with 6 tested persons, one of whom wore barefoot shoes instead of normal shoes, and the other subject did not wear barefoot shoes. The data was measured on the Zebris FDM by walking analysis. The results were then compared between the two subject groups. These gait parameters were measured and evaluated: step length, maximum pressure on the variant parts of foot during walking, and contact time of each part of foot with the surface. The resulting values showed a trend mainly in the load of the foot, in the sense of higher pressure mainly on the area of the middlefoot. Also, the contact time with the surface showed changes, in the sense of reducing this time when wearing barefoot shoes. Since most of the studies that have been done so far focus on the use of barefoot shoes at runtime and not on everyday wear. Further research will be needed to confirm these trends.

Keywords

Barefoot, minimalistic shoes, gait, gait analysis, step length, pressure analysis, force, contact time