

THE EFFECT OF FOOT ORTHOTICS ON ARCH HEIGHT: PREDICTION OF ARCH HEIGHT CORRECTION IN FLAT-FOOT CHILDREN

Jolanta Pauk, Valeriy Ezerskiy

Białystok Technical University, Białystok, Poland

Abstract

Prognosis of the arch height correction could provide valuable information in prescribing appropriate treatment to reduce the consequences of flat-foot. The goal of this study was twofold. First we explored effect of foot orthotics wedging on the gait pattern of flat-footed children population. Then a simple model to predict arch height correction using six variables was proposed. Measured parameters included the arch height, X-ray measurement, and ground reaction force (GRF). The suggested model allows predicting of the arch height correction. The results show that foot orthotics has small, but a positive impact on the arch height correction.

Keywords: flat-foot, arch height, X-ray, foot orthotics, regression analysis