

Bibliographic record

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Abstract

The thesis deals with the reaction of body to postural loading during stance and walking. The theoretical part of this thesis is focused on postural control and postural reaction during stance and walking. Particular attention is paid to gait cycle, dynamic plantography and Zebris FDM-T Rehawalk system, which has been used in the practical part of this thesis. Two chapters deal with postural loading, the first is focused on symmetrical loading (e.g. backpack) and second on asymmetrical loading (laptop back - ipsilateral, contralateral and held in hand).

The practical part presents the examination of 32 volunteers who were either standing or walking on a dynamic plantograph. The volunteers were exposed to either symmetrical or asymmetrical 5 or 10 kg load. Subsequently, statistical tests were used to search for any change of dynamic plantography parameters depending on the level of loading, on the type of loading and in the comparison of the situation with and without loading. The results show a significant change of some dynamic plantography parameters and support the information presented in the theoretical part of this thesis.

Keywords

Zebris FDM-T systém, dynamic plantography, postural loading, stability, gait cycle