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Rehabilitation**

## **Analysis of the Distribution of Forces and Pressures on the Plantar Surface in Different Walking Types**

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### **Abstract**

Over time, the studies on the gait cycle have tried to highlight different behaviors of the human body and quantify movement parameters. The correlation mechanism between the forces and pressures developed at the level of contact between the plantar surface and the ground is simple and easy to use for medical evaluations on the various pathologies manifested in the locomotor system. This paper presents a procedure for identifying and measuring the dynamic parameters of the gait cycle for walking variants but also for different planting surfaces (flat foot, normal or hollow). In the first part of the work, in the introduction, different aspects related to the walking cycle for different types of walking are reviewed (normally relaxed, walking, walking with eyes closed, walking with blocking and walking with an added step) in order to then determine the equipment needed for recording. In the second part of the paper, the experimental concept developed for the analysis of the distribution of forces and pressures on the plantar surface in contact with the ground is presented. In the third part of the work, the results and observations obtained from the application of the analysis procedure are presented. The conclusions on this procedure come to finalize the presentation of the analysis of the measurement of the distribution of forces and pressures for the walking cycle and to establish the future directions of development.



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