

## ANALYSIS OF GAIT DIAGNOSTICS FOR PEOPLE WITH IMPLANTS

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*Gaits is one of the splendid functions, which concerns every human being. The standard gait is perceived as precisely controlled activities, based on the periodically coordinated, recurrent leg and trunk (torso) movements, which provide the relocation of the human body from one place to another with the minimal waste energy (Gage J.R., DeLuca P.A., Renshaw T.S. – gait definition) [2]. Different types of diseases cause the changes in gait pattern of the patients. The patients, who have the certain diseases since they were born and the acquired diseases have different deviations from the gait pattern. The conclusion is that there is no universal gait pattern.*

*The gait of the patients with implants differs from the gait pattern and in this case it depends on the implants type. Analysis and estimation of the gait of the people who have implants is problematic, that is why the paper presents the research connected with the gait diagnostics for people with implants.*

Key words: implants, standard gait, cycle gait

### 1. The gait phases and their parameters

According to Perry, in order to observe the gait process, the human body should fulfill the certain conditions: stability of the loaded foot in the loaded phase, flexibility of the unloaded foot during the transfer phase, the proper foot layout to get the burden in the final transfer phase, the proper gait length. The results collected during the research should be referred to the certain pattern in order to make an accurate diagnosis of the human gait. The basic certainty from which we can start our diagnosis is the comparison of the correctness of the very gait mechanism. Such mechanism can present the gait cycle. It is approved that the gait cycle consists of certain phases. Depending on the accuracy with which we want to observe the human gait, we chose the proper cycle consisted of the fixed quantity of the cycle phases. It is said cycle starts during the first contact of the with the ground and in that very moment the first cycle phase named the support phase begins, and ends with the next contact of the food with the floor and in that moment we deal with the end of support phase [1], [2].

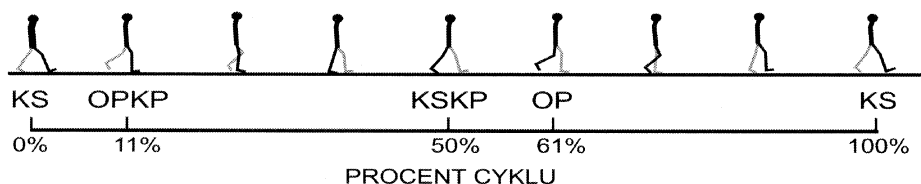


Fig.1: Gait cycle scheme: KS – foot contact; OPKP – detach of the reserved leg toe; KSKP – contact of the reserved leg toe; OP – toe detach from the ground [2]

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