Abstract

Thesis title: Downhill skiing with exarticulation of the knee joint.

Main objectives: Evaluate prosthetic options for people with exarticulation in the knee joint for downhill skiing on two skis.

Goals: 1) Suggest prosthetic solutions for downhill skiing with exarticulation of the knee joint.

2) On the force measuring plate L.A.S.A.R.-Posture, measure gravity center of skier on proposed prosthetic systems and evaluate substantial features for downhill skiing.

Method: The work is empirical-theoretical nature. The methods are comparative analysis and observation with subsequent description. The monitored variables were skiers center of gravity position, and angles of the ankle and the knee joint at the neutral position and the base downhill ski position on the power measuring plate L.A.S.A.R.-Posture. Becouse of complexity and uniqueness of this issue, we chose a case study.

Results: In our thesis we verify that there are available prothesis in the Czech Republic, which allows to people with exarticulation of the knee joint, safe skiing on two skis.