

ABSTRACT

Thesis title: Evaluation of effectiveness of using myoelectric prosthesis by people with congenital or acquired amputation of the upper limb

Aims: The aim of my thesis is to evaluate the effectiveness of myoelectric prosthesis using by people with upper limb amputation. Find out how effectively users are able to manage individual tasks with myoprosthesis and basic ADL activities.

Methodology: The research group consisted of 6 people with upper limb amputation. In this thesis, there were used three methods of data collection. The first method that was applied was a survey, which was used to obtain anamnestic data by the research group. The second method of data collection was the observation of probands during the performance of individual tasks. The third chosen method was measurement by using a special test aimed at evaluation of the effectiveness while using and the involvement of myoprosthesis in the locomotor chain against a healthy upper limb.

Results: Based on observations and measurements, it was performed that all probands are able to functionally and effectively involve the myoprosthesis in the locomotor chain in the performance of individual tasks. Another positive result of this thesis was the finding that all probands obtained in the test over 50% rate of effective use when comparing the myoprosthesis with a healthy upper limb. The last fundamental result of this thesis is that in the basic manipulation operations there is no fundamental difference between the basic types of myoprostheses and modern multi-articular systems.

Key words: prosthetics, myoprosthesis, occupational therapy, grip, manipulation, electrode, myosignal