

## **ABSTRACT**

The submitted diploma thesis shows overview of the problem using upper extremity orthoses for adult with spasticity after the stroke. The aim of the thesis is to explore possibilities of using orthoses at different stages of the spasticity development. The theoretical part includes main information about the important point from central motoneuron disorder, it means spasticity. There is information about materials, production, availability and usability in various types of orthoses. Main part of the theoretical section shows research studies and available literature, which interprets using kinds of orthoses in various time when the spasticity was developed. The theoretical part follows the practical part. In the practical part are demonstrated available possibilities of using orthoses for interference spasticity in the upper extremity. For the practical part were chosen three groups of patients and each group of patients represents one case study. In the thesis are represented patients in acute, subacute and chronic stadium after the stroke. In each stadium were used different kind of orthoses: neoprene brace for acute, static-progressive for subacute and static thermoplastic for the chronic stadium. The measurement neuromuscular parameters were conducted according to Five steps clinical assessment: active. For the objective and subjective assessment of the upper extremity was used Modified Frenchay arm test and Global Subjective Self-Assessment. Measured parameters. For better outcomes presentation was collected control group, system of collecting was the same as in group with orthoses. These case studies present choices of using kind of orthoses in various stadium after the stroke. Measured outcomes indicate improvement or degradation of the upper limb spasticity after using orthoses in specified phase of injury. Outcomes bring new inspiration to other research which meets the requirements of explanation style of research. (Yin, 1994)

**Key words:** stroke, spasticity, orthosis, Five steps clinical assessment, neurorehabilitacion