

ABSTRACT OF BACHELOR THESIS

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Title: Walking training within Proprioceptive neuromuscular facilitation concept in stroke patients

Subtitle: Influencing of the Mid-Stance phase of stride

Abstract:

The topic of the bachelor's thesis is the training of walking in patients after a stroke. This acquired non-traumatic brain damage represents the second most common non-traumatic cause of death in today's modern civilization, in the Czech Republic the incidence of this disease is around 300 cases/100,000 inhabitants. The consequences of a stroke are usually numerous, and one of the resulting disorders can be hemiparetic walking with spasticity.

The theoretical part includes four main chapters. The first section is devoted to the description of a commonly occurring non-traumatic brain injury, namely the description of a stroke. The second chapter describes stereotype, kinesiology and gait analysis. The third chapter includes a description of the philosophy of Proprioceptive neuromuscular facilitation (PNF), basic concepts and principles of the concept, PNF therapy of hemiparetic gait and summarizes the issue of spasticity in PNF therapy. In the last section, walking tests for patients after a stroke, their use and application in clinical practice are comprehensively described.

The practical part contains two case studies of patients after a stroke with impaired standing and swing phases of walking. Based on the initial examination and research on the treatment of the middle stance phase of the step using PNF elements, a brochure was created. For the objective evaluation of the results, a comprehensive kinesiology examination and the use of three standardized walking tests for patients after stroke were used – 10 Meter Walk Test, 6 Minute Walk Test, MiniBESTest: Balance Evaluation Systems Test, two scales test and detailed gait analysis using the RehaGait Analyzer. The aim of the thesis is to create a brochure for the training of hemiparetic walking with a focus on the Mid-Stance phase for the professional public and its subsequent application in patients after a stroke.

Key words: gait analysis, PNF concept, stroke, hemiparesis, spasticity