

Introduction: The purpose of this study is to investigate the effect of spontaneous electrical activity of a muscle on the degree of evoked response. Analysis of function of plantar flexor muscles and neuromuscular junction during indolent electric stimulation of fibular nerve in the poples may bring new information that might contribute to deepen our knowledge of biomechanical and neurophysiologic nature of changes of shape and latency of evoked reactions in various sorts of strain.

The aim of the paper:

To evoke H-reflex via electric stimulation of tibial nerve with escalating strain of plantar flexor muscles of the foot in supine position.

To process and analyse data by computer.

To assess findings of the study.

Methods: The dissertation is made out in the form of processing of case data from volunteers, whose muscle electrical activity will be scanned via superficial electrodes attached to the skin above a muscle during indolent electrical stimulation of tibial nerve in the poples. The muscle will be strained using a weight and the muscle response evoked by the stimulation will be scanned using EMG. The measurement will be carried out in various sorts of strain (isometric-isotonic). The data will be further processed and analysed by computer.

Results: The results clarify the H-reflex modulation during escalating isotonic strain of plantar flexor muscles of the foot.

Key words: H-reflex, neuromusclular transmision, EMG