

Abstract

Title: Corrected arm hang as a compensatory element in physiotherapy

Objective: The main objective of this master thesis is to measure and compare the level of engagement of muscles stabilizing the scapula during arm hang and supported exercise.

Methods: Our study included nine probands whose measurement results were evaluated quantitatively. The age of probands at the time of measurement was from 18 to 25 years. A condition for inclusion in the investigated group was absence of subjective symptoms, functional impairment, traumatic injury, orthopedic defects or diseases of the upper limb. All probands were active athletes. Biomonitor ME 6000 manufacturer Mega Electronics Ltd. was used for recording the electrical activity of the muscles. The obtained data were processed by the Megawin software. All measurements for the purposes of the study took place in the laboratory of biomechanics FTVS UK. The resulting data were compared intraindividual and interindividual.

Results: The results demonstrated that middle and lower portions of m. Trapezius is more active in the corrected arm hang. In contrast, the supported exercise leads to greater activity of m. Serratus anterior and lower activity of upper portion of m. Trapezius.

Keywords: arm hang, supported exercise, surface electromyography, stabilization of the scapula, shoulder girdle