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**Title of the diploma thesis:** The Influence of Manual Centration Methods of the Shoulder Joint on Muscles Action around the Shoulder Girdle –EMG analysis

**Department:** Klinika rehabilitace a tělovýchovného lékařství FN Motol

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**Abstract:** The thesis deals with the influence of therapy methods by Čáková on muscles action around the shoulder girdle. The surface electromyography has been set as the method of the analysis. Electromyography of 11 muscles of the shoulder girdle has been performed before and after the manual centring in 14 healthy patients while lying on the back as well as lying down and doing chosen motion exercises. The measurements in twelve people in both positions have been carried out with a pause of one week. One patient has been measured only in the prone position and one in the supine position. The muscles action before and after the centration has been evaluated according to Wilcoxon signed-rank test. Also the differences of the measurement have been compared and the sequence of the muscles involved into the action has been analysed. The relationship between the measured phenomena cannot be rejected, although the null hypothesis has been proven. Several statistically important issues have been concluded through the measurements, for example the significant increase of muscle action, which was measured in the standing position immediately after the centration in the prone position.

**Key words:** manual centration by Čáková, surface electromyography, shoulder girdle.

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