

Electromyography Activity of the Lower Limb Muscles during Prostration and Squat Exercise

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Abstract : This paper investigates the activity of the rectus femoris (RF) and biceps femoris (BF) in healthy subjects during salat (prostration) and specific exercise (squat exercise) using electromyography (EMG). A group of undergraduates aged between 19 to 25 years voluntarily participated in this study. The myoelectric activity of the muscles were recorded and analyzed. The finding indicated that there were contractions of the muscles during the salat and exercise with almost same EMG's level. From the result, Wilcoxon's Rank Sum test showed significant difference between prostration and squat exercise ($p < 0.05$) but the differences was very small; RF (8.63% MVC) and BF (11.43% MVC). Therefore, salat may be useful in strengthening exercise and also in rehabilitation programs for lower limb activities. This pilot study conducted initial research into the bio mechanical responses of human muscles in various positions of salat.

Keywords : electromyography, exercise, muscle, salat

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