

Siwa Leeyawattananupong 2010: Acute Effects of Static, Dynamic and Neuromuscular Facilitation Stretching on Muscle Power of Quadriceps. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Udon Ruttanapak, M.A. 100 pages.

The purposes of this study were to study and compare the acute effects of static, dynamic and neuromuscular facilitation stretching on muscle power of quadriceps. Thirty seven participants were the first year male students in the faculty of Sports Science at Kasetsart University, Kampaengsaen campus. The muscle power of quadriceps of the participants were tested four times which consisted of non-stretching and after stretching which were static stretching, dynamic stretching and neuromuscular facilitation stretching by Isokinetic Machine (Biodex System 3) with the speed level of 120 degree angle per second was used in the experiment. The data were analyzed by one way analysis of variance and the multiple comparison testing using the Tukey's method. All testing used the .05 level of significance.

The results of the study showed that means difference of static stretching, dynamic stretching and neuromuscular facilitation stretching were significantly difference at .05 level. The power of quadriceps of dynamic stretching was the highest power (156.28 watts), followed by neuromuscular facilitation stretching (153.30 watts) and the lowest power of quadriceps was static stretching (127.60 watts). However, there were no significantly difference of the power of quadriceps between dynamic stretching and neuromuscular facilitation stretching.

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Thesis Advisor's signature