

Monsinee Peerawat 2010: The Study of Effects of Straight Leg Raising and Split-Twist Stretching Techniques combined with Deep Heat and Superficial Heat on Range of Motion of Knee Joint in Stroke Patient. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Vullee Bhatharobhas, B.Ed. 132 pages.

The purposes of this study were to analyze and compare the effectiveness between the straight leg raising and the split-twist stretching techniques on range of motion of knee joints in stroke patients. The subjects were stroke patients with hamstrings muscle shortening of the sound side. Forty participants were selected by simple sampling method. The participants were divided into four groups; 10 in each group. The first group was the straight leg raising technique combined with the shortwave. The second group applied the split-twist stretching technique combined with the shortwave. The third group employed the straight leg raising technique combined with the hot pack. The fourth group used the split-twist stretching technique combined with the hot pack. The range of motion of the knee joints were measured before and after intervention. The data was analyzed with the ANOVA, Tukey and matched pair t-test.

The results show a significant difference in the range of motion in extension of the knee joint both before and after interventions at the .05 levels in every group. Moreover, the results indicate that the range of motion of knee joints of the second group (the split-twist stretching technique combined with the shortwave) was significantly different than those of others groups. Therefore, the split-twist stretching technique combined with the shortwave might be considered for stroke patients who suffer from hamstrings muscle shortening.

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Thesis Advisor's signature