

Banchonglak Sawatdeephuth 2008: Effects of Ultrasound and Swedish Massage Treatment on Delayed Onset Muscle Soreness. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Supitr Samahito, Ph.D. 114 pages.

The objective of this study was to investigate the effects of ultrasound and Swedish massage treatment on Thai students of irrigation engineering, aged 18-21 years, who were experiencing muscle pain after exercise. They were tested by weighing 80% of 1 RM following 30 sets of exercise at 10 repetitions per set. The test subjects were divided into three groups; the first was treated as the control group, and they received donot adjust intensity of ultrasound. The second group was treated with ultrasound, and the last with a Swedish massage treatment. The results were measured by range of motion (ROM), levels of creatine kinase in their blood, pain scale, and tricep circumference. These measurements were taken before exercise, as well as after, at intervals of 1, 24, 48, and 72 hours. The treatment programs were conducted for 4 days. Data then were statistically analyzed by using means, standard deviation, one-way analysis of variance, one-way analysis of covariance, and multiple comparison testing by Tukey's method at a .05 level of significance.

The results showed that the effect of the 3 methods of treatment (donot adjust intensity of ultrasound, ultrasound, and Swedish massage) for ROM, pain scale, and tricep circumference were significantly different at the .05 . However, the effect on creatine kinase levels from each treatment showed no difference. Means of creatine kinase levels from Swedish massage treatment increased less than those using donot adjust intensity of ultrasound or ultrasound treatment methods. Ultrasound and Swedish massage treatments can improve ROM, relieve muscle pain, and decrease tricep circumference better than the control group.

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