

Boonta Khakai 2006: The Effect of Exercise Ball and Roman Chair Training upon Back Muscle Strength. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Apiluk Theanthong, M.S. 85 pages. ISBN 974-16-1896-4

The purposes of this research were to study and compare the effect of exercise ball and roman chair training upon back muscle strength. The subjects were 30 female college students (18-21 years old) of Sports Science and Technology, Mahidol University. They were recruited using simple random sampling. They were divided into 3 groups with 10 subjects in each group by randomly assignment. The controlled group performed their usual activities, the experimental group 1 performed exercises using the exercise ball and the experimental group 2 performed exercises using the roman chair. The experimental groups participated in the training programs 3 days a week for 8 weeks. Data were analyzed using two- way analysis of variance with repeated measures, one - way analysis of variance with repeated measures, and one way analysis of variance and following by multiple comparisons testing by using the Tukey's method. An alpha level of .05 was used for all statistical tests.

The results showed that the back muscle strength after 8-week of two experimental groups were significant difference from the controlled group ($p < .05$). There were no significant differences in back muscle strength after 8-week between the experimental group 1 and the experimental group 2. In addition to, the results showed that the increased percent of back muscle strength of experimental group 2 using the roman chair had better than the experimental group 1 using the exercise ball and the controlled group.

Boonta Khakai

Student's signature

Apiluk Theanthong 29 / 05 / 2006

Thesis Advisor's signature