

Vetchasit Suksumie, Sergeant major 1 st calls (SM1) 2010: The Effects of Training Muscle by using Different Resistant Intensity via Rubber Chain Detected by Striated Muscle Morphologic Changes. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Associate Professor Charoen Krabuanrat, M.Ed. 91 pages.

The purpose of this investigation was to study and examine the effects of training with different resistance on leg muscle mass and strength. Subjects are 40, Private first class, 21-year- old men. The Inbody 720 was chosen to evaluate leg muscular mass value. The leg muscular strength in isokinetic system and leg stretch strength was evaluated via Leg dynamometer. Simple random sampling was used to divide the subjects into 4 groups (10 subjects per group). There were control, 1,2 and 3 groups. Group I was trained with 70% resistant weight of RM, 12 times /set. Group 2 was trained with 80% resistant weight of 1 RM, 8 times/set. Group 3 was trained with 90% resistant weight of 1 RM, 4 times /set. All groups were trained in Half Squat position, for 8 weeks (3 times /week, 3 sets /time,3 minute rest after each set) All 4 groups were evaluated the leg muscular mass value (by Inbody 720), the leg muscular strength in isokinetic system and leg stretch strength (by Leg dynamometer) before and after 8 weeks of experiment. The results were statically analyzed by mean, standard deviation value and one-way analysis of variance (ANOVA). Comparing different pair, Turkey Method was used. Comparison in each group matched pair-test ($p < 0.05$) was performed

After 8 weeks of experiment, results showed that the average leg muscular mass and foreleg muscular strength of 4 groups were not different ($p < 0.05$). But leg stretch strength of group 3 (trained with 90% resistance weight of 1 RM, 4 times/set) and back-leg muscular strength of group 1 (trained with 70% resistance weight of 1 RM, 12 time/set) were statistically different from control group ($p < 0.05$).

Student's signature

Thesis Advisor's signature