

for the reason that to be a control value of experimental group. Then divided experimental group into two subgroups (B1 and B2; 20 persons each). Group B1 continued with the same exercise and group B2 performed the same isometric exercise 10 times per day until the last 8 weeks. Compared strength, endurance, and cross-sectional area of thigh muscle at the fourth week and the eighth week in control group and experimental group.

The result from this study conclude that in control group no change in muscle strength and endurance. In group B1 has strength value in pretest for 11.18 ± 4.04 kilograms, at the fourth week increase for 58.32 %, at the eighth week increase from the pretest for 76.48 % and increase from the fourth week for 11.47 %, endurance value in pretest for 20.35 ± 11.23 seconds, at the fourth week increase for 27.52 %, at the eighth week increase from the pretest for 44.23 % and increase from the fourth week for 13.10 %. The cross-sectional area of thigh muscle at pretest, the fourth week, and the eighth week averaged $54.45 \pm 11.70 \text{ cm}^2$, $54.61 \pm 11.73 \text{ cm}^2$, and $54.58 \pm 11.62 \text{ cm}^2$. In group B2 has strength value in pretest for 12.30 ± 4.63 kilograms, at the fourth week increase for 57.72 %, at the eighth week increase from the pretest for 76.72 % and increase from the fourth week for 12.06 %, endurance value in pretest for 20.75 ± 9.85 seconds, at the fourth week increase for 32.29 %, at the eighth week increase from the pretest for 47.61 % and increase from the fourth week for 11.58 %. The cross-sectional area of thigh muscle at pretest, the fourth week, and the eighth week averaged $54.87 \pm 11.57 \text{ cm}^2$, $55.21 \pm 11.56 \text{ cm}^2$, and $55.44 \pm 11.70 \text{ cm}^2$.

This study can be concluded that brief maximal isometric exercise can increase significantly in strength and endurance, and no significant difference in single and ten repeated brief maximal isometric exercise ($p < 0.01$). Other than that, no changes in cross-sectional area in 3 groups. So this increase does not appear to be the result of skeletal muscle hypertrophy.