

Budsaya Phukang 2555: The Effect of Exercise on Adiponectin and Visceral Fat in Overweight. Master of Science (Sports Science), Major Field: Sports Science, Faculty of Sports Science. Thesis Advisor: Assistant Professor Siriporn Sasimontonkul, Ph.D. 93 pages.

This research aimed to investigate the effect of moderate intensity exercise on the adiponectin levels and visceral fat of overweight women. Forty volunteered female, aged 25-45 whose body fat was over 28 percent and whose waist to hip ratio was over 0.8 participated in the study. They were randomly assigned to two groups. The twenty participants in the control group were allowed to perform daily activities, while the 20 participants in the experimental group engaged in a 16 week exercise program. The exercise program consisted of 1) walking on a treadmill at 80-90% HRR, for 45 minutes 2) 30 minutes of core conditioning exercises with stability balls. Amounts of body and visceral fats, blood cholesterol, and adiponectin were evaluated before and afterwards. The effects of this intervention and the passage of time on these variables were statistically analyzed using Two-Way MANOVA with Repeated Measures, One-Way ANOVA, One-Way ANOVA with Repeated Measures and Paired Samples T-test, for post hoc test. For non normally distributed variables, non-parametric methods were employed. Statistical significance was set at .05

Sixteen weeks of aerobic walking at 80-90 %HRR combined with the core conditioning exercises reduced visceral fat, body fat and LDL-C but did not increase adiponectin level. However, a higher adiponectin level was found in the exercise group compared to the control group after the 16 week study.

---

Student's signature

---

Thesis Advisor's signature