

Preeyalak Konongbua 2008: The Effect of Aerobic Exercise Intensities on Antioxidants Capacity. Master of Science (Sports Science), Major Field: Sports Science, Interdisciplinary Graduate Program. Thesis Advisor: Assistant Professor Apilak Teantong, MSc. 115 pages.

This study was undertaken to investigate the effect of moderate intensity aerobic exercise and high intensity aerobic exercise on total antioxidant capacity (TAC) and the level of lipid peroxidation using a malondialdehyde (MDA) level as an indicator. Studied subjects included 30 healthy women from Thaksin University, Phattalung Campus, who had not been engaged in regular aerobic exercise. Subjects were divided into 3 groups: 1) the control group (n = 10) was assigned to perform regular activities; 2) the experimental group I (n = 10) was trained with a moderate intensity exercise program; and 3) the experimental group II (n = 10) was trained with a high intensity exercise program. The training regime for both experimental groups I and II was conducted 3 days per week for a period of 10 weeks. The blood levels of TAC and MDA were then measured at the end of the training period.

Results showed that there were a significant increase of the TCA level and a significant decrease of the MDA level among subjects from the experimental group II when compared to the control group (both  $p < 0.05$ ). Subjects from the experimental group I also tended to have an increased level of TAC and a decreased level of MDA when compared to the control group.

The present study demonstrates that a regular aerobic exercise over the 10 week period can prevent the lipid peroxidation by increasing the TAC level. This study provides evidence supporting the importance of the aerobic exercise.

---

Student's signature

---

Thesis Advisor's signature