

## Effect of Isotonic Exercises on Antioxidant and Free Radical Status in Healthy Adults

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### Abstract

**Background:** It has been postulated that exercises if done in moderate intensity for a prolonged period irrespective of age helps in promoting antioxidant state of the body. **Aim:** To evaluate the effects of Isotonic exercises on oxidative state and antioxidant status in healthy adult males. **Materials & Methods:** 50 healthy male adults were divided into Group I and Group II (n=25). Group I was allowed to undergo training in Isotonic exercises under supervision for 6 weeks and Group II acted as controls. Blood samples were obtained prior and Post exercise training for comparison. **Results:** The mean value of Malondialdehyde (MDA) in Group I Prior to training was  $268.96 \pm 28.97$  nmol% and in Group II; it was  $253.12 \pm 21.74$  nmol% while post training readings were (Group I)  $428 \pm 63.95$  nmol% and (Group II)  $314.16 \pm 36.84$  nmol%. The p value was  $< 0.03$  which is significant. There were no significant differences in uric acid level in pre and post test in both the groups. **Conclusions:** It may be proposed that increase in oxidative stress with exercise is a necessary factor for muscle adaption to occur and long term exercises produces beneficial effects by causing better muscle adaptation. However isotonic exercises have only negligible effect in increase in antioxidant status.