



The effect of two weeks of curcumin supplementation on serum malondialdehyde and superoxide dismutase indices after an intense intermittent training session in overweight and obese girls

Poster Presentation

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Abstract

Introduction: In addition to the beneficial effects that exercise has on improving health-related indicators, improper exercise load can lead to a significant decline in these indicators and the occurrence of some diseases. On the one hand, increased oxidative stress due to exercise and the body's ability to cope with its complications creates different levels of health and disease in people. Therefore, the aim of this study was to evaluate the effect of two weeks of curcumin supplementation on serum malondialdehyde and superoxide dismutase indices after a period of intense intermittent training in overweight and obese girls.

Methods: 22 overweight and obese girls (age: 20 to 30 years; weight: 56.26 61 6.61; body mass index: 21.61 14 2.14) were purposefully selected to participate in the study. They were divided into two homogeneous and equal groups (experimental and placebo). The experimental group underwent intense acute intermittent activity intervention (shuttle thigh training protocol) and curcumin supplementation (80 mg daily after lunch). The results were extracted by repeated-measures analysis of variance, LSD at the level of $p < 0.05$.

Results: Intense periodic activity caused a significant increase in MDA ($p = 0.001$) and a significant decrease in SOD ($p = 0.001$). Also, 2 weeks of curcumin supplementation significantly reduced MDA ($p = 0.009$) and increased SOD was significant ($p = 0.01$). On the other hand, intense intermittent training and curcumin supplementation did not significantly change MDA ($p = 0.06$) and SOD ($p = 0.21$).

Conclusion: Two weeks of curcumin supplementation has some sedative effects on lipid peroxidation and may strengthen the intracellular antioxidant system.

Keywords

Intense Interval Exercise; Curcumin; Malondialdehyde; Superoxide Dismutase

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