

Abstract

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The effect of a high-intensity interval training program on high-density lipoprotein cholesterol in young men.

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OBJECTIVE: This study examined the impact of an 8-week program of high-intensity interval training on high-density lipoprotein cholesterol (HDL-C), total cholesterol (TC), and the atherogenic index (TC/HDL-C) in 36 untrained men ages 21-36 years.

METHODS: Participants were randomly assigned to an interval training group (n = 20) or a control group (n = 16). Participants in the experimental group performed 3.2 km of interval running (1:1 work:rest ratio) 3 times a week for 8 weeks at an intensity of 90% of maximal heart rate (approximately 423 kcal per session).

RESULTS: Results indicated significant pre- to posttraining changes in HDL-C (1.1 vs. 1.3 mmol/L, $p < 0.0001$) and TC/HDL-C (3.8 vs. 3.1, $p < 0.0001$) but no significant changes in TC (3.9 vs. 3.8 mmol/L, $p > 0.05$) with interval training. It was concluded that an 8-week program of high-intensity interval training is effective in eliciting favorable changes in HDL-C and TC/HDL-C but not TC in young adult men with normal TC levels.

CONCLUSIONS: Our findings support the recommendations of high-intensity interval training as an alternative mode of exercise to improve blood lipid profiles for individuals with acceptable physical fitness levels.

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