

عنوان مقاله:

Effect of ۸-Week Short-Term Sprint Interval Training on Serum Levels of Adipokines, Inflammatory Markers and Lipid Profile in Overweight Boys

محل انتشار:

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خلاصه مقاله:

Purpose: the etiology of children obesity can be varied. Adipose tissue is an active tissue that secretes proteins such as TNF- α , IL- ϵ , leptin, and adiponectin. The purpose of this study was to investigate the effect of short-term sprint interval training on serum levels of adiponectin, leptin, TNF- α , IL- ϵ , insulin, and lipid profile in overweight boys. **Method:** a number of ۳۰ overweight male students (with a mean age of 9.93 ± 0.2 and BMI of 27.73 ± 0.2) were randomly assigned to the control group ($n=15$) and sprint interval training ($n=15$). The subjects of the experimental group did the training for eight weeks, as the control group was engaged in doing their daily activities without intervention. Measurement of anthropometric indices and fasting blood collection were performed (to measure insulin, leptin, adiponectin, TNF- α , IL- ϵ , cholesterol, LDL, HDL and TG) one day before and one day after the training program. **Results:** the results of the present study indicated that ۸ weeks of sprint interval training significantly decreased weight and BMI in overweight children ($P < 0.001$). In addition to weight and BMI reduction, levels of TNF- α , IL- ϵ , leptin, insulin, cholesterol, triglyceride, and LDL significantly reduce the following eight weeks of the sprint interval workout ($P < 0.001$ for all), while adiponectin and HDL levels increase ($P < 0.001$, $P < 0.01$, respectively). **Conclusions:** in general, the present study demonstrate that sprint interval training which is a new way of physical activity exerted a positive effect on most of components contributing to children obesity.

کلمات کلیدی:

Overweight, Sprint interval training, Leptin, Adiponectin, TNF- α , IL- ϵ

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