

The Effects of High Intensity Interval Training, in Conjunction with Functional Training Equipment, on VO₂max and Peak Power in Recreationally Trained Individuals

CHRISTOPHER SATARAY

Laboratory of Exercise Physiology; Department of Health and Human Performance;
Texas A&M University - Commerce; Commerce, TX

Category: *Masters*

Advisor: *Bernhardt, Vipa (vipa.bernhardt@tamuc.edu)*

ABSTRACT

High Intensity Interval Training (HIIT) is a training style requiring maximal effort for a short duration of time followed by an even smaller period of minimal intensity exercise. High intensity interval training using functional training (HIIT-FT) equipment is an alternative mode of exercise than traditional workouts performed at a health club which is not only time saving, but also cost effective and can be performed without leaving home. It was hypothesized that a 6-week HIIT-FT exercise program would significantly increase maximal oxygen uptake and PP in recreationally active, college-aged adults compared to those who did not participate in this particular form of exercise. Twenty-five subjects (13W/12M, 23 ± 3 yr, 165.6 ± 8.7 cm, 72.8 ± 17.6 kg, VO₂max: 3.1 ± 0.9 L/min, PP: 1132.4 ± 356.2 W) were recruited and randomized into two groups: The HIIT-FT group (n = 13, 6W/7M) and a control group (n = 12, 7W/5M), who maintained their current level of recreational activity throughout the study period. All participants completed a VO₂max test on a treadmill (TrueOne 2400, Parvo Medics) and a Wingate test for PP (Velotron, RacerMate) before and after the intervention. The HIIT-FT group trained for 40 ± 8 min per session (including warm-up and cool-down), 3 times per week for a total of 18 sessions. Total exercise time per session was 11 ± 3 min. There were significant improvements (p = 0.002) after the training protocol in the HIIT-FT group in VO₂max (3.4 L/min, 7.7%), but not the control group (2.9L/min, -3.8%). PP increased in the HIIT-FT group (1194 W, 3.8%) and in the control group (1112 W, 2.4%) with no significant changes following the training protocol or between groups (p = 0.538). The results of the current study agree with other similar HIIT studies regarding VO₂max; however, the current study failed to demonstrate increases in PP. HIIT-FT is an effective method to improve aerobic fitness that is time-efficient, cheaper than traditional training programs, and can be performed without ever leaving home.