Physiological and Psychological Effects of Low-Volume High-Intensity Interval Training

Background
Physical fitness has been directly linked to many health benefits, physical and psychological. However, many people cannot find the time to engage in a traditional endurance-based program making a shortened, effective fitness program more appealing. Exercise, in general, is one of the best preventive actions to fight illness and maintain health. Low-volume high intensity training (HIIT) program has been shown to have advantageous results to one’s health in a reduced amount of time, as well as being perceived as enjoyable. HIIT also has had positive effects on those with type II diabetes, evidencing a reduced 24hr glucose concentration and improved insulin sensitivity. HIIT’s varied nature generates larger variance in exercise pace for participants allowing their systems to respond to change more effectively than those who experience less variance through the course of traditional, endurance-based exercise. This study, because it focuses on a very low-volume HIIT protocol, has the potential to contribute to the literature and to overall population wellness as protocols like this one are translated into practice and integrated into employee wellness programs, and other efforts to improve population health.

Purpose
The purpose of the Physiological and Psychological Effects of Low-Volume High-Intensity Interval Training study is to quantify the physiological and psychological effects of a low-volume high intensity interval training (HIIT) program and compare a moderate intensity program for participants in a professional environment (health care organization), as well as a nonprofessional setting (e.g., at home). We plan to measure heart rate recovery for the physiological portion, and a lifestyle self-management test will be used to quantify the psychological effects.

The long term goal of this study is to provide a shortened fitness program to prompt a better, holistic feeling of health as well as aid those struggling with chronic illness, such as type II diabetes, hypertension, and heart failure.

References