

Moderate Intensity Training versus High Intensity Interval Training

Current physical activity guidelines recommend 150 to greater than 250 minutes per week of moderate-intensity training (MIT) such as brisk walking for a set period of time to maintain an optimal body weight. These physical activity guidelines are similar to those recommended by the World Health Organization for general health (1). MIT can be done on cycle, treadmill or outside and involves using a heart rate monitor. The optimal heart rate for MIT to burn fat and generally recommended for cardiorespiratory fitness is 70% of the maximum heart rate calculated by subtracting age from 220. This estimate is practical and roughly correlates with the measured oxygen consumption (VO_{2max}) using a specialized machine for this purpose. High-intensity interval training (HIIT) involves alternating brief 6 seconds to 4 minute bursts of high intensity (greater than 75% VO_{2max}) interrupted by lower intensity workloads or rest throughout an exercise session. This shorter duration of exercise has been proposed to be a more efficient alternative for eliciting fat loss than MIT. Studies in patients with metabolic diseases have consistently shown that HIIT (?12 weeks) performed on a cycle or treadmill ergometer is safe, and can result in greater improvements of cardiorespiratory fitness (VO_{2max}) versus MIT matched for training frequency and duration. While it is not established that HIIT is more effective for weight loss or maintenance than MIT, it appears to be a more time efficient way to get the same exercise benefit. On the other hand, the physical demands of HIIT may make it appropriate to stage individuals to MIT first followed by HIIT.

Cheema BS, Davies TB, Stewart M, Papalia S, Atlantis E. The feasibility and effectiveness of high-intensity boxing training versus moderate-intensity brisk walking in adults with abdominal obesity: a pilot study. *BMC Sports Sci Med Rehabil.* 2015 Jan 16;7:3.