

Evaluation of Recovery from High Intensity Functional Training

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ABSTRACT

As the implementation of frequent high intensity functional training (HIFT) participation continues to grow among a variety of individuals, recovery between bouts of training is important to consider to prevent overtraining. **PURPOSE:** The purpose of this study was to determine effective measures of recovery following an acute HIFT training session. **METHODS:** Participants (22.0 ± 2.8 years old, 173.6 ± 30.5 lbs., and $26.2 \pm 8.24\%$ body fat) consisted of 5 females and 3 males ($n = 8$), who were recreationally trained (30+ minutes moderate-vigorous exercise 4+ times/week) and had previous experience with HIFT training. Participants conducted a 20-minute, as many rounds as possible (AMRAP) exercise session. Data was collected prior to the exercise session and recovery was monitored for 30-minutes immediately post- and at 24-hours post-exercise. Before exercise and 24-hours post-exercise heart rate (HR), heart rate variability (HRV), vertical jump (VJ), upper body power (UBP), perceptual measures (PM) of recovery/exertion, and Altman Self-Rating Mania Scale (ASMR) were recorded. During exercise, heart rate, rating of perceived exertion, and the number of rounds completed were recorded. Data were evaluated using a Paired Samples T-test and Wilcoxon Signed-Ranks Test with significance set at $p \leq 0.05$ for all analysis. **RESULTS:** Paired samples T-tests did not indicate significant differences between pre- and post-exercise in HR, HRV, and UBP but did denote significant differences between pre- and post-exercise in VJ (21.4 ± 7.7 vs 19.9 ± 7.1 inches). Wilcoxon-Signed Ranks Tests did not demonstrate significant differences in PM or ASMR. **CONCLUSION:** Possible limitations of this research include the small sample size. Based on our data VJ and UBP were the only measures that demonstrated pre- to post-exercise differences and as a result these measurements appear to be parameters that are sensitive to detecting fatigue induced from an acute bout of HIFT.