

Recovery Methodologies and High-Intensity Interval Training

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ABSTRACT

As the implementation of high intensity interval training (HIIT) continues to grow among a variety of exercisers, as such, its optimization within a training program must be considered. As with any mode of exercise this necessitates adequate recovery to elicit optimal adaptation and understanding day-to-day recovery from HIIT will permit the greatest benefits for those who desire specific the outcomes from this training. **PURPOSE:** The purpose of this study was to determine day-to-day recovery from Tabata bodyweight HIIT exercise using different recovery assessment methodologies across 24- and 48-hour time intervals. **METHODS:** Participants (23.2 ± 3.1 years old, 163.1 ± 19.9 lbs., and 22.8 ± 9.6 % body fat) consisted of 3 females and 7 males (n=10). Individuals were recreationally trained (4+ days per week, 30+ minutes per day at moderate to vigorous intensity) and conducted both Trial A (24-hours between HIIT sessions) and Trial B (48-hours between HIIT sessions). Before and during each session, heart rate (HR), countermovement jump (CMJ), Perceived Recovery Status scale (PRS), perceived readiness (HIITRED), perceived soreness (PDOMS), Brunel Mood Scale Assessment (BRUMS), Ratings of Perceived Exertion (RPE), and number of repetitions. **RESULTS:** One-way analysis of variance was used to analyze RHR, HRavg, HRrecov, and repetitions completed. Wilcoxon Signed Ranks Test was used to analyze S-RPE, post-exercise RPE, PRS, HIIT readiness, PDOMS, and BRUMS. Significance for all analyses was set at $p \leq 0.05$. Two results displayed sensitivity to assessing recovery after conducting each HIIT session. The first was the Perceived Recovery Status scale (PRS) for both trials (A, $p = 0.005$. B, $p = 0.007$) and the second was the Brunel Mood Scale assessment within Trial B ($p = 0.012$). **DISCUSSION:** Although other methodologies did not display significant sensitivity to recovery, trends across session HR, PRS, HIITRED, PDOMS, and BRUMS indicate that participants were perceptually less recovered and ready for Day 2 Trial A than Day 2 Trial B. These results support the assertion that assessment of perceptions of recovery are sensitive methodologies in measuring recovery from Tabata bodyweight HIIT exercise.