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Effects of Manipulating Rest Periods Within a Lower-Body Resistance Training Program

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PURPOSE: To investigate physiological and cognitive changes following a resistance training protocol. **METHODS**: Eight healthy men volunteered to participate in a 6-week protocol consisting of 3 sets of 5 repetitions at 85% of 1-repetition maximum for the squat and deadlift. The two groups were 90-seconds (n= 5) and 3-minutes (n= 3) rest. **RESULTS**: Analysis of variance (ANOVA) revealed a main effect of time for the squat (p = 0.026), and main effect of group for vertical jump (p = 0.041). The 3-minute group increased squat performance (p = 0.020), while the 90-second group improved vertical jump (p = 0.031). Group by time interactions were observed for Interference (p = 0.048), Word-Color (p = 0.050), and TMD (p = 0.004). Despite the trending increase of executive function in the 3-minute group, a worsened mood post-intervention was observed (p = 0.008). **CONCLUSION**: Minimal rest improved power within the 90-second group while the 3-minute group significantly improved lower body strength. Cognitive function only appeared to improve in the 3-minute rest group. Despite no increase in strength for the 90-second group, it appears minimal rest is advantageous for athletes looking to enhance power performance, although further research is necessary.