# The Effect of Perceptually Regulated Recovery on Lift Quality of Females during Different Resistance Training Conditions

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ABSTRACT

Substantial variances in mean self-selected recovery time between male and female has recently been reported when completing resistance exercise intended to improve muscular strength. These finding suggested females recover quicker than males, and the current standardized intrasession rest recommendations may necessitate adjustments to account for sex specific responses. **PURPOSE:** The goal of the current investigate was to examine female lift quality responses to perceptually regulated intrasession recovery during various resistance training protocols. **METHODS**: Participants (n = 10 females; 7 control, 7 experimental) completed nine resistance exercise sessions. Session one involved one-repetition maximum (1RM) testing for squat (SQ) and deadlift (DL). Participants performed eight subsequent working sessions utilizing intensity, set, repetition, and intrasession recovery schemes for DL & SQ targeting the four primary resistance training goals: hypertrophy (HP), strength (ST), endurance (ED), and power (PW). A minimum of 48 hours rest was required between sessions. Control group utilized standardized rest intervals between sets. Experimental group utilized the Perceived Recovery Status (PRS) scale to guide their recovery. Rating of perceived exertion (RPE) using the OMNI RPE scale for resistance training was recorded after each set. Lift quality (LQ), defined as repetitions completed, was recorded for each set. **RESULTS**: A One-sample T-Test ($p$ <.05) identified mean control PRS scores for the ED DL and SQ (5.56 ± 1.51; 5.11 ± 1.45, respectfully) sessions were significantly higher than the assigned experimental PRS score (4.0) ($p$=0.02; $p$=0.05). Mean experiment group times for the PW SQ and DL (105.73s ± 18.13; 100.73s ± 26.80, respectfully) sessions were significantly lower than the standardized time (120s) ($p$=0.04; $p$=0.03). Mean experimental group times for the HP SQ (46 ± 17.57, respectfully) session was significant lower then the standardized time (60s), ($p$=0.04). All other PRS and time comparison were not significantly different. Repeated Measures ANOVA indicated no significant main effect in LQ across all sessions, nor group RPE for HP, ST, and PW sessions. A significant main effect ($p$ = .046) was identified between group reported RPE during the ME session. **CONCLUSION**: These results suggest the utilization of perceptually regulated recover yields lift performance comparable to the usage of standardized recovery. The control group reported significantly higher perceived recover during ME sessions than the experiment group, and experimental group rest times were significantly lower during HP session, suggesting the current standardized rest time recommendation for ME and HP training may necessitation an alternation (decrease for females) to account for sex specific responses. Interestingly, the control group reported significantly higher perceived exertion when placed under time restricted recovery (standardized recovery) during ME training. The researchers suggest future investigations examine the practical resistance training efficacy of the PRS scale for females.