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The Effect of Lifting Straps on Deadlift Performance in Females

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Using lifting straps while deadlifting may improve performance, but research in this area has only been conducted on males. **PURPOSE:** The aim of this study was to investigate the effects of lifting straps on the total number of repetitions, mean and peak barbell velocity, and grip strength during the deadlift exercise in females. **METHODS:** Eleven females (20.1 ± 1.1 y; 165.4 ± 5.6 cm, 68.9 ± 10.3 kg) with 3.2 ± 2.1 years resistance training experience participated in the study. After completing a 1-repetition maximum (1RM) test without lifting straps, subjects completed two protocols: performing three sets of as many repetitions as possible of 80% 1RM with lifting straps (WS) and without lifting straps (NS). During both protocols, mean and peak barbell velocity were measured during each set, and grip strength was recorded before deadlifting, and after each set. Repeated-measures ANOVAs were used to examine differences in the variables of interest with an alpha level of 0.05 used to establish statistical significance. **RESULTS:** The WS condition (10.6 ± 1.7) allowed participants to perform significantly ($p=0.001$) more reps than the NS condition (6.3 ± 1.4), while resulting in no statistically significant differences in mean (NS= 1.5 ± 0.01 , WS= 1.6 ± 0.01 , $p=0.10$) or peak barbell velocity (NS= 2.2 ± 0.01 , WS= 2.30 ± 0.01 , $p=0.36$). The magnitude of grip strength loss was significantly lower during WS condition (NS= 22.5 ± 4.1 , WS= 26.4 ± 1.2 , $p<0.05$). Results indicate that using lifting straps while deadlifting allows females to perform more repetitions with greater preserved grip strength, without negatively effecting barbell velocity. **CONCLUSION:** Thus, lifting straps appear to be beneficial for deadlift performance in females, and should be considered during resistance training involving the deadlift exercise.