

Table 19. Eccentric Resistance Exercise Using the Eccentron

Author Year Country Research Design Score Total Sample Size	Methods	Outcome
Stone et al. (2019); USA Pre-post Level 4 N=11	<p>Population: 11 participants; 7 males and 4 females; mean (\pm SD) age 39.0 (\pm 15.9) years; AIS B (n=4), AIS C (n=4), and AIS D (n=3); level of injury cervical (n=6), thoracic (n=4) and lumbar (n=1); and mean (\pm SD) time since injury 9.5 (\pm 4.7) years.</p> <p>Treatment: Participants trained twice a week for 12 weeks on an eccentrically biased recumbent stepper (Eccentron), which targets the gluteal, hamstring, and quadriceps muscles. Participants started training at 50% one-repetition maximum (intensity was individually adjusted) for 2 to 3 sets of 8 repetitions at 12 rpm.</p> <p>Outcome Measures: SCIM, TUG, 10MWT, and WISCI II during 10MWT were assessed at baseline, after 6 weeks, and after 12 weeks. Daily step physical activity on four consecutive days was also assessed.</p>	<ol style="list-style-type: none"> 1. There were no AEs or elevated pain associated with the eccentric resistance training. 2. There was a significant ($p=0.034$) eccentric resistance training effect on TUG performance from pre-test (158.36 ± 165.84 s) to post-test (56.31 ± 42.42 s). 3. Participants did not improve total SCIM scores from pre- test to post-test ($F(1.22, 12.20) = 0.87$, $MSE = 33.14$, $p=.20$), nor on mobility subscale of SCIM ($F(1.66, 16.56) = 2.75$, $P=0.10$).