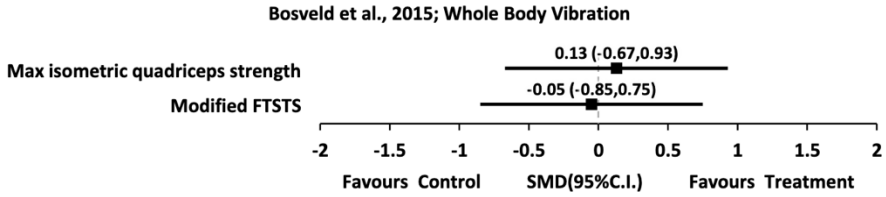
Author Year Country Research Design Score Total Sample Size	Methods	Outcome
In et al. 2018 Republic of Korea RCT PEDro = 7 Level 1 N = 28	**Population:** 28 participants with cervical (level C6 or C7) SCI; 19 males and 9 females; mean age 48 years; AIS D; and mean time since injury 14 months. **Treatment:** All patients were randomly assigned to two groups: • Whole-body vibration (WBV) group (n = 14): Participants received 16 min of WBV training, twice a day, 5 days a week for 8 weeks. The frequency was set at 30 Hz, and a vertical displacement was 2–4 mm. Patients were required to stand on the platform and were instructed to hold a semi-squatting position. WBV training consisted of four sets of 45 s of stimulation, and a minute break between each session. • Control group (n = 14): Participants received the same WBV procedure but without vibration (placebo). Both groups were treated with a conventional physical therapy protocol consisting of ROM and mat exercises, and gait training for 30 min per day. **Outcome Measures:** Postural imbalance (analyzed based on postural sway length using a force plate device) and walking ability (by 10MWT) were assessed at baseline and at post training.	1. Both groups showed significant improvements in walking ability. 2. The WBV group improved on the 10MWT significantly more than the control group (3.5±2.3 vs 1.3±1.4; p = 0.005).
Estes et al. 2018 USA	**Population:** 34 participants with SCI and at least mild spasticity affecting leg muscles; 28 males and 6 females; mean age 46.3 years; injury level C1 (n	1. 29 participants completed all sessions. 2. Mean baseline walking speed was not different among any of the

RCT crossover PEDro = 4 Level 1 N = 34	= 1), C3 (n = 4), C4 (n = 4), C5 (n = 6), C7 (n = 5), C8 (n =1), T1 (n = 1), T3 (n = 1), T4 (n = 1), T6 (n = 1), and T8 (n = 1); AIS C (n = 9) and AIS D (n = 25); and mean time since injury 6.1 years. **Treatment:** Participants received four different WBV frequency/duration dose conditions and one sham-control stimulation (single sessions): • Low frequency, short duration: 30 Hz; four 45-s bouts (180 s total). • High frequency, short duration: 50 Hz; four 45-s bouts (180 s total). • Low frequency, long duration: 30 Hz; eight 45-s bouts (360 s total). • High frequency, long duration: 50 Hz; eight 45-s bouts (360 s total). • Sham-control: ES with electrodes placed in the posterior thoracic region while standing; eight 45-s bouts. During each WBV session, participants stood on the vibration platform with knees slightly flexed. **Outcome Measures:** 10MWT was measured at three time points during each session: (1) prior to the start of the intervention (baseline), (2) immediately after intervention (immediate), and (3) 45 min after the conclusion of the intervention (45-min delayed).	five intervention sessions (p = 0.992). 3. The change in walking speed from baseline to either of the two postintervention assessment time points (immediate and 45-min delayed) was not different when comparing each WBV frequency/duration dose condition to the sham-control at each of the time points. 4. When participants were stratified according to baseline spasticity, there were no significant differences in the change in walking speed from baseline to either of the two post-intervention assessments when comparing each WBV frequency/duration dose condition to the sham-control in either the high spasticity or low spasticity subgroups.
Bosveld & Field-Fote 2015 USA RCT PEDro = 8 Level 1 N = 25	**Population**: 25 participants; chronic SCI; age =49.7 ± 12.5 years; years post injury= >1y. **Treatment**: Participants were randomized into two groups. Group 1 (*n* = 13) received WBV treatment (frequency: 50 Hz, amplitude: 2 mm) comprising of four 45-s bouts with 1-min rest periods after each bout. Group 2 (*n* = 12) received sham ES. Maximal voluntary isometric quadriceps force was measured with a fixed dynamometer. A modified FTSTS	1. When comparing the pre-test and immediate post-test data, the difference in mean quadriceps strength between the two groups approached significance (P = 0.10). However, between the pre-test and delayed post-test, there were no significant difference between groups (P = 0.82). 2. The within-group change for the WBV group was significant with a

	test was used to assess functional lower extremity strength. Measures were made at pre-test, immediate post-test, and delayed post-test 20 min later. **Outcome Measures:** Maximal voluntary isometric quadriceps force, modified FTSTS test.	moderate effect size (P = 0.05; ES = 0.60). 3. Between the pre-test and immediate post-test, the time from sit to stand between the two groups approached significance (P = 0.10). Between the pre-test and delayed post-test, there was no significant difference between groups (P = 0.32).
	Effect Sizes: Forest plot of standardized mean differences (SMD ± 95%C.I.) as calculated from pre- and post-intervention data. 	
Ness & Field-Fote 2009 USA Pre-Post N = 17	**Population:** 3 women, 14 men; aged 28-65 years; all participants had a motor-incomplete SCI; C3-T8 lesion level; ≥1 year duration. **Treatment:** WBV 3 days/week for 4 weeks with four 45 s bouts of 50 Hz frequency and 2-4mm intensity each session, while standing on a vibration platform with one minute of seated rest in between. **Outcome Measures:** 3-D motion capture system used to measure walking function (walking speed; step length; cadence (steps/min); hip-knee intralimb coordination).	1. Walking speed significantly increased by mean (SD) 0.062 (0.011) m/s from 0.259 ± 0.248 m/s in the initial test to 0.321 ± 0.260 m/s in the final test ($p<0.001$). 2. All participants tolerated the 12-session of WBV, were able to maintain the standing posture for the 45-s bouts of WBV, and reported no adverse effects.