

Effect of 4 weeks of whole-body vibration training in treating stress urinary incontinence after prostate cancer surgery : a randomised controlled trial

<https://doi.org/10.1016/j.physio.2018.07.013>

Abstract

Background

Stress urinary incontinence is common in men after prostate cancer surgery. Rehabilitative interventions incorporate pelvic floor muscle training, biofeedback, electrical stimulation, lifestyle changes, or a combination of these strategies. However, little is known about the physiological impact of whole-body vibration for stress urinary incontinence after radical prostatectomy.

Objective

To investigate the effect of whole-body vibration training on stress urinary incontinence after prostate cancer surgery.

Design

Randomised controlled trial.

Setting

Tertiary university hospitals.

Participants

Sixty-one patients with mild stress urinary incontinence after radical prostatectomy.

Intervention

Group 1 included 30 patients who performed pelvic floor muscle training and whole-body vibration training with a frequency and amplitude of 20 Hz/2 mm for the first two sessions and 40 Hz/4 mm for the rest of the intervention. Group 2 included 31 patients who performed pelvic floor muscle training alone. The intervention in both groups was conducted three times per week for 4 weeks.

Main outcomes

Incontinence Visual Analogue Scale (I-VAS) score, International Consultation on Incontinence Questionnaire-Urinary Incontinence-Short Form (ICIQ-UI-SF) score and 24-hour pad test result.

Results

I-VAS score, ICIQ-UI-SF score and 24-hour pad test result showed significant within-group differences at each assessment with the exception of the baseline and post-intervention I-VAS score in Group 2. For example, Group 1 I-VAS score had a median difference of 3.9 cm [95% confidence interval (CI) -4.0 to -3.8] from baseline to first follow-up, and a median difference of -2.0 cm (95% CI -2.2 to -1.8) at 4-week follow-up. Comparisons between the groups demonstrated significant differences in favour of Group 1 after 4 weeks of intervention and at follow-up for all measured parameters.

Conclusion

Whole-body vibration training is an effective modality for treating patients with stress urinary incontinence after prostatectomy.

Trial registration

[Clinicaltrial.gov \(NCT03325660\)](https://clinicaltrials.gov/ct2/show/study/NCT03325660).
