

Bladder training for urinary tract symptoms in Parkinson disease

A randomized controlled trial

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Study objective and summary result

This trial examined the efficacy of bladder training (BT) for troublesome lower urinary tract symptoms (LUTS) in patients with Parkinson disease (PD), and the results showed that BT may be beneficial for patients with PD and troublesome LUTS.

Classification of evidence

Class III.

What is known and what this paper adds

BT can improve bladder control and continence in the general population, and a pilot study recently provided preliminary evidence for BT's efficacy in patients with PD and LUTS. This trial's results provide further evidence for BT's efficacy in this population.

Participants and setting

The investigators recruited 38 patients with PD and troublesome LUTS through 4 movement disorders clinics in northern England between May and September of 2017.

Design, size, and duration

The investigators used computerized randomization with stratification by sex to assign the participants to groups that received conservative advice (CA) only (n = 18) or CA plus BT (n = 20) over the 12-week study period. BT included instructions on urge suppression and distraction techniques, pelvic floor exercise training, a personalized voiding schedule, and a training DVD. The participants completed 3-day bladder diaries at baseline and in week 12, and the investigators reviewed the diaries to determine changes in urgency episode frequencies. In week 12, a blinded examiner had the participants report their perceived degrees of improvement on a visual analogue scale.

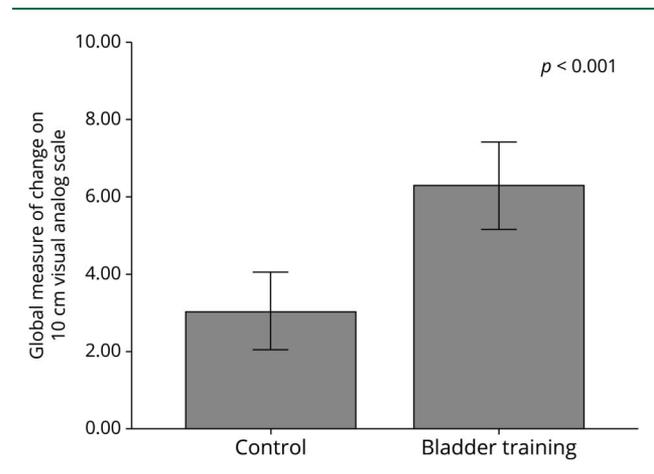
Primary outcome measures

The primary outcomes were from-baseline changes in urgency episode frequencies and the participants' perceptions of improvements in week 12.

Main results and the role of chance

Relative to the CA only group, the BT group reported greater perceived improvements ($p = 0.001$) but had

Figure Group-specific perceptions of improvement. Higher scores reflect greater perceived improvements



comparable changes in urgency episode frequencies ($p = 0.629$).

Harms

Most BT group members found adherence to the program tolerable.

Bias, confounding, and other reasons for caution

The BT group members were slightly younger than the CA only group members ($p = 0.016$).

Generalizability to other populations

The present study's reliance on participants from England may limit the generalizability of the results to residents of dissimilar places.

Study funding/potential competing interests

This study was funded by Parkinson's UK and the UK National Institute for Health Research. The authors report no competing interests. Go to [Neurology.org/N](https://doi.org/10.1212/WNL.0000000000008931) for full disclosures.

Trial registration number

1321791 in the International Standard Randomised Controlled Trial Number registry.

A draft of the short-form article was written by M. Dalefield, a writer with Editage, a division of Cactus Communications. The corresponding author(s) of the full-length article and the journal editors edited and approved the final version.

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