

# Self-administered behavioral training was equal to training plus biofeedback or verbal feedback in urge incontinence

Burgio KL, Goode PS, Locher JL, et al. Behavioral training with and without biofeedback in the treatment of urge incontinence in older women: a randomized controlled trial. *JAMA*. 2002;288:2293-9.

## QUESTION

In community-dwelling older women with urge incontinence, is behavioral training (BT) by nurse practitioners plus biofeedback or verbal feedback more effective than self-administered BT for reducing the frequency of urge incontinence?

## DESIGN

Randomized (unclear allocation concealment\*), unblinded,\* controlled trial with 10-week follow-up.

## SETTING

University outpatient continence clinic in the United States.

## PATIENTS

222 ambulatory, mentally competent, community-dwelling women 55 to 92 years of age (mean age 65 y) who had persistent (for  $\geq 3$  mo) urge incontinence or mixed incontinence with urge as the predominant pattern that occurred  $\geq 2$  times per week (on average) with urodynamic evidence of bladder dysfunction. Exclusion criteria included continual leakage and postvoid residual urine volume  $> 150$  mL. Follow-up was 88%.

## INTERVENTION

Patients were allocated to BT plus biofeedback (biofeedback group,  $n = 73$ ), BT plus

verbal feedback based on vaginal palpation (verbal feedback group,  $n = 74$ ), or self-administered BT using a self-help booklet (self-help group,  $n = 75$ ) for 8 weeks. Patients in the biofeedback and verbal feedback groups visited the clinic 4 times at 2-week intervals in the 8-week period to receive training from nurse practitioners. The BT program consisted of learning skills and strategies for preventing incontinence. The content of the self-help booklet was identical to the BT program. Patients in the self-help group were asked to complete and return bladder diaries every 2 weeks and to return for an appointment after 8 weeks.

## MAIN OUTCOME MEASURES

Change (reduction) from baseline in the frequency of incontinence episodes.

## MAIN RESULTS

Analysis was by intention to treat. The 3 groups did not differ for change (reduction) from baseline in the frequency of incontinence episodes (Table).

## CONCLUSION

In community-dwelling older women with urge incontinence, behavioral training by nurses plus biofeedback or verbal feedback was not more effective than self-administered behavioral training for reducing the frequency of incontinence episodes.

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\*See Glossary.

### Behavioral training by nurses plus biofeedback or verbal feedback vs self-administered behavioral treatment (self-help) in older women with urge incontinence at 10 weeks†

Outcome	Biofeedback	Verbal feedback	Self-help	P value‡
Mean (SD) percentage reduction from baseline in frequency of incontinence episodes	63.1 (42.7)	69.4 (32.7)	58.6 (38.8)	0.23

†SD = standard deviation.

‡Differences between groups are not statistically significant (analysis of covariance with bladder capacity as the covariate).

## COMMENTARY

Urinary incontinence is a common problem, especially among older women. Overactive bladder includes urinary urgency and frequency as well as urge incontinence (1).

The study by Burgio and colleagues compared 3 behavioral therapies for urge incontinence or mixed incontinence (with urge as the predominant pattern) in older women. Wyman and colleagues (2) have already shown that a combination of biofeedback and bladder training provides relief sooner than other behavioral therapies but is no more effective than other behavioral therapies after 3 months. Interestingly, in the study by Burgio and colleagues, BT by nurses with biofeedback or verbal feedback was no more effective than the less costly, self-administered training in reducing the frequency of urinary episodes. This confirms the value of self-help as first-line therapy.

The authors make no recommendation about when pharmacotherapy should be used. An initial 3- to 5-day trial of timed voiding while keeping a bladder diary should be used as first-line treatment for overactive bladder and can be followed by pharmacotherapy if needed.

For  $> 3$  decades, antimuscarinic drugs have been used successfully in patients with more severe urge incontinence symptoms. Frequent side effects, however, are a substantial problem. 2 new medications promise to be more tolerable: extended-release oxybutynin chloride and tolterodine (3). Local vaginal estrogen therapy can be offered to women with

atrophic vaginitis or recurrent urinary tract infections. Before treatment is offered, urinalysis and evaluation of postvoid residual volumes should be obtained to exclude infection or obstruction.

Specific biofeedback should be reserved for women with more complex pelvic floor muscular dysfunction or mixed incontinence. Women who have no self-awareness of *levator ani* pelvic musculature or who do not respond to a self-help program and antimuscarinic therapies should be referred for more specialized evaluation and therapy. Other drug therapies, electrical stimulation, and selective surgical procedures should be reserved for more difficult conditions.

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## References

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