

# Pelvic floor re-education reduced incontinence 1 year after radical prostatectomy

Van Kampen M, De Weerd W, Van Poppel H, et al. *Effect of pelvic-floor re-education on duration and degree of incontinence after radical prostatectomy: a randomised controlled trial. Lancet* 2000 Jan 8;355:98-102.

**QUESTION:** Does pelvic floor re-education reduce the duration and degree of urinary incontinence after radical prostatectomy for prostate cancer?

## Design

Randomised, (unclear allocation concealment), blinded (patients and outcome assessors), controlled trial with follow up to 1 year.

## Setting

A university hospital in KU Leuven, Belgium.

## Patients

102 men (mean age 65 y) who had radical retropubic prostatectomy (maintaining pelvic floor structures) for clinically localised prostate cancer, were incontinent 15 days after surgery (after catheter removal), and could regularly attend hospital appointments. Follow up was 96%.

## Intervention

Patient allocation was stratified by previous transurethral resection of the prostate and urine loss 1 day after catheter removal. 50 men were allocated to a pelvic floor re-education programme, which consisted of individual treatment in an outpatient clinic once a week for as long as incontinence persisted, up to 1 year. The training programme included education about the anatomy and function of the bladder and pelvic floor and active pelvic floor muscle (PFM) exercises and biofeedback. After patients learnt to do the exercises, they were instructed to do 90 contractions each day at home in standing, sitting, or supine positions and to integrate the contractions into their daily activities. 52 men were allocated to a placebo programme, which included information about the origin of their incontinence and placebo electrotherapy that was applied to the abdomen and thighs (but that could not affect pelvic floor function).

## Main outcome measures

Incontinence rate at 3 months. Continence was defined as a loss of  $\leq 2$  g of urine on both the 24 hour and 1 hour pad test (ie, difference in wet and dry pad weight). Secondary outcomes included incontinence at 1 year, duration of incontinence, and degree of incontinence (average urine loss per 24 h).

## Main results

Men in the treatment group attended an average of 8 outpatient sessions, whereas men in the placebo group attended an average of 16. Fewer men in the treatment group were still incontinent at 3 months and at 1 year compared with men in the placebo group (table). At 3 months, the duration of incontinence was shorter for men in the treatment group (log rank test  $p < 0.001$ ). At

1 year, the degree of incontinence was lower for men in the treatment group (Wald test  $p = 0.001$ ).

## Conclusion

Pelvic floor re-education, which included biofeedback and regular exercises, reduced urinary incontinence in men at 3 months and at 1 year after radical prostatectomy compared with placebo electrotherapy.

## COMMENTARY

The use of pelvic floor re-education to reduce incontinence has been evaluated in the treatment of incontinence in women. Limited research is available on its effectiveness in men after radical prostate surgery. Moore *et al* compared the effectiveness of 2 behavioural interventions, PFM exercises and PFM exercises plus electrical anal stimulation, with simple, brief verbal instructions on PFM exercises and found no group differences in regaining continence after radical prostatectomy.<sup>1</sup>

The main outcome measure in the study by Van Kampen *et al* was based on the 24 hour and 1 hour pad tests; participants in both groups were to record the test results throughout the duration of the study. The authors, however, did not report on participant compliance with this measurement, an important issue because the pad test provides, at best, only an estimate of urine loss.

One of the authors gave the intervention to participants in both the treatment and control groups. It would have been helpful to know what measures were taken to minimise the likelihood that this author provided more encouragement to the treatment group, because this could have contributed to the positive outcome in this group.

The effect of biofeedback in this study on PFM exercises is unclear. Biofeedback was done as a method of reinforcement in the teaching of PFM exercises. It may be that the outcomes actually reflect the effect of a patient's commitment to doing these exercises on a regular basis. Information about patient characteristics, such as the presence of comorbid conditions, would help readers to judge the applicability of this intervention to their own patients. Further research should examine the consistency of these promising results in other clinical settings.

The results are relevant to nurses who work in urology or incontinence clinic settings. They support the use of PFM exercises for treatment of incontinence after radical prostatectomy and may be taught by nurses with advanced practice training in continence care. An explicit and clear treatment protocol is needed to ensure proper replication of this intervention.

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1 Moore KN, Griffiths D, Hughton A. Urinary incontinence after radical prostatectomy: a randomized controlled trial comparing pelvic muscle exercises with or without electrical stimulation. *BJU Int* 1999;83:57-65.

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Pelvic floor re-education (PFR) v placebo after radical prostatectomy\*

Outcomes	PFR	Placebo	RRR (95% CI)	NNT (CI)
Incontinence at 3 months	10%	44%	77% (48 to 91)	3 (2 to 6)
Incontinence at 1 year	4%	17%	77% (11 to 94)	8 (4 to 72)

\*Abbreviations defined in glossary; all numbers calculated from data in article.