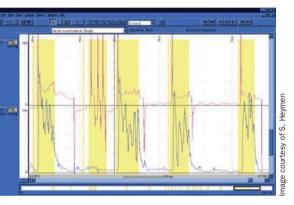
RESEARCH HIGHLIGHTS

FECAL INCONTINENCE

Efficacy of biofeedback

Biofeedback has long been proposed as an effective treatment for fecal incontinence, but evidence from welldesigned randomized controlled trials has been lacking. Now, Steve Heymen and colleagues from the University of North Carolina have bridged that gap and shown that biofeedback plus pelvic



floor exercises (PFE) is superior to PFE alone.

To control for nonspecific treatment effects, Heymen *et al.* included a run-in phase of education and conservative management. Only those patients who did not gain adequate relief progressed to the training phase of PFE alone or PFE plus instrument-assisted biofeedback with a solid-state manometry catheter and a balloon attachment.

Adequate relief of fecal incontinence symptoms was achieved in significantly more patients in the PFE plus biofeedback group than in the PFE only group (76% versus 41%). In addition, the severity of fecal incontinence was reduced to a significantly greater extent by PFE plus biofeedback. The addition of biofeedback to PFE also improved the strength of anal canal contractions and the relaxation of abdominal wall muscles

during contraction of the anal canal to a significantly greater extent than PFE alone.

The findings of this study are in contrast to those of two other randomized controlled trials, but those studies had different inclusion and exclusion criteria, and included patients with milder symptoms. Heymen suggests that education and medical management may be sufficient for such patients. Indeed, their "...surprisingly effective..." run-in intervention conferred adequate relief to 21% of patients, of whom 71% had lasting effects at 12 months. An improved version of the run-in intervention is currently being piloted by the authors.

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Original article Heymen, S. *et al.* Randomized, controlled trial shows biofeedback to be superior to pelvic floor exercises for fecal incontinence. *Dis. Colon Rectum* **52**, 1730–1737 (2009).