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[Intervention Review]

# Biofeedback and/or sphincter exercises for the treatment of faecal incontinence in adults

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## ABSTRACT

### Background

Faecal incontinence is a particularly embarrassing and distressing condition with significant medical, social and economic implications. Anal sphincter exercises (pelvic floor muscle training) and biofeedback therapy have been used to treat the symptoms of people with faecal incontinence. However, standards of treatment are still lacking and the magnitude of alleged benefits has yet to be established.

### Objectives

To determine the effects of biofeedback and/or anal sphincter exercises/pelvic floor muscle training for the treatment of faecal incontinence in adults.

### Search methods

We searched the Cochrane Incontinence Group Specialised Trials Register (searched 24 January 2012) which contains trials from searching CENTRAL, MEDLINE and handsearching of conference proceedings; and the reference lists of relevant articles.

### Selection criteria

All randomised or quasi-randomised trials evaluating biofeedback and/or anal sphincter exercises in adults with faecal incontinence.

### Data collection and analysis

Two review authors assessed the risk of bias of eligible trials and two review authors independently extracted data from the included trials. A wide range of outcome measures were considered.

### Main results

Twenty one eligible studies were identified with a total of 1525 participants. About half of the trials had low risk of bias for randomisation and allocation concealment.

One small trial showed that biofeedback plus exercises was better than exercises alone (RR for failing to achieve full continence 0.70, 95% CI 0.52 to 0.94).

One small trial showed that adding biofeedback to electrical stimulation was better than electrical stimulation alone (RR for failing to achieve full continence 0.47, 95% CI 0.33 to 0.65).

The combined data of two trials showed that the number of people failing to achieve full continence was significantly lower when electrical stimulation was added to biofeedback compared against biofeedback alone (RR 0.60, 95% CI 0.46 to 0.78).

Sacral nerve stimulation was better than conservative management which included biofeedback and PFMT (at 12 months the incontinence episodes were significantly fewer with sacral nerve stimulation (MD 6.30, 95% CI 2.26 to 10.34).

There was not enough evidence as to whether there was a difference in outcome between any method of biofeedback or exercises. There are suggestions that rectal volume discrimination training improves continence more than sham training. Further conclusions are not warranted from the available data.

### Authors' conclusions

The limited number of identified trials together with methodological weaknesses of many do not allow a definitive assessment of the role of anal sphincter exercises and biofeedback therapy in the management of people with faecal incontinence. We found some evidence that biofeedback and electrical stimulation may enhance the outcome of treatment compared to electrical stimulation alone or exercises alone. Exercises appear to be less effective than an implanted sacral nerve stimulator. While there is a suggestion that some elements of biofeedback therapy and sphincter exercises may have a therapeutic effect, this is not certain. Larger well-designed trials are needed to enable safe conclusions.

### PLAIN LANGUAGE SUMMARY

#### **Exercises of the muscles around the anus with or without biofeedback (aids for knowing when the muscles are contracting) for the treatment of faecal incontinence in adults**

Faecal incontinence (inability to control bowel movements or leaking stool) can be a very embarrassing and socially restricting problem. There are many possible causes, including childbirth damage to the muscles which control bowel movements. Exercises to strengthen these muscles and 'biofeedback', where equipment is used to show people how to use the muscles properly, are often recommended. There was some evidence from trials suggesting that these treatments are helpful. If patients who have tried and failed other simpler treatments, such as changing their diet or using medications, are selected then biofeedback using computer equipment or rectal balloon is more beneficial than exercises alone. Exercises and electrical stimulation used in the anus may be more helpful than vaginal exercises for women with faecal incontinence after childbirth. About half of the 21 trials were at low risk of bias. They compared different combinations of treatments and different outcome measures, making comparison between them difficult. However, a small number of the larger recent trials provide better evidence.