Muscle training for pelvic organ prolapse

A randomised controlled trial suggests that one-to-one pelvic floor muscle training may reduce the symptoms of pelvic organ prolapse.

**Overview:** Pelvic organ prolapse is bulging of one or more of the pelvic organs (the uterus, vagina, bowel and bladder) into the vagina. It is more common in women who have had children and those who are overweight, and the prevalence increases with age. Symptoms may include discomfort during sex or a sensation of a bulge or something coming down or out of the vagina. Pelvic organ prolapse can also cause problems with urinating, such as slow stream, incomplete voiding, needing to urinate more often and stress incontinence.

Treatments for pelvic organ prolapse include conservative treatments such as weight loss, use of a vaginal pessary, and exercises for the pelvic floor muscles. Pelvic floor exercise has been shown to improve urinary incontinence in women (Dumoulin et al. 2014). For more severe symptoms, surgical options include methods of supporting the prolapsed organs or hysterectomy.

**Current advice:** NICE guidance on urinary incontinence in women offers advice on pelvic floor muscle training for the treatment of urinary incontinence. The guidance recommends that a trial of supervised pelvic floor muscle training of at least 3 months’ duration should be offered as first-line treatment to women with stress or mixed urinary incontinence. Routine digital assessment should be used to confirm pelvic floor muscle contraction before the use of supervised pelvic floor muscle training. Women with urinary incontinence who have symptomatic prolapse visible at or below the vagina should be referred to a specialist.

NICE also has interventional procedure guidance covering several methods of surgery for pelvic organ prolapse. Eyes on Evidence has previously reported on sacrocolpopexy with burch colposuspension as a surgical technique to treat pelvic organ prolapse.

The NICE Pathway on urinary incontinence in women brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

**New evidence:** Hagen et al. (2013) reported a randomised controlled trial (n=447) of individualised pelvic floor muscle exercise (n=225) compared with lifestyle advice (n=222) in women with pelvic organ prolapse. The primary outcome was self-reported symptoms of prolapse at 12 months using the pelvic organ prolapse symptom score (range 0–28, with higher scores indicating worse symptoms). Participants and physiotherapists could not be blinded to treatment allocation, but all trial staff involved with data entry and interpretation were blinded to allocation.

Pelvic floor muscle training was delivered by a physiotherapist in 5 one-to-one appointments over 16 weeks. The exercise programme aimed to progress to 10 repetitions of a 10-second hold and 50 fast
contractions, repeated 3 times a day. Women were also taught to pre-contract pelvic floor muscles against increased intra-abdominal pressure (such as when coughing). All women received a leaflet with lifestyle advice on weight loss and avoiding heavy lifting, constipation, coughing and high-impact exercise. The exercise group were given the leaflet at their first appointment; the control group received the leaflet by post. Women had an appointment with their gynaecologist at 6 months, at which point they could be referred for further treatment.

At baseline, participating women had a mean age of 56.8 years (standard deviation [SD]=11.5 years) and a mean BMI of 27 kg/m\(^2\) (SD=5.1 kg/m\(^2\)). Most (93%) had at least 1 vaginal birth. Mean pelvic organ prolapse symptom score was 10.04 (SD=6.0) in the exercise group and 9.51 (SD=5.64) in the control group.

Analyses were adjusted for baseline prolapse symptom score, stage of prolapse, centre, and whether or not the woman wanted surgery. The mean reduction in self-reported symptoms of prolapse from baseline was 3.77 (SD=5.62) in the exercise group and 2.09 (SD=5.39) in the control group. The reduction in symptoms was significantly greater in the exercise group compared with the control group (1.52, 95% confidence interval 0.46 to 2.59, p=0.0053).

None of the 8 adverse events reported, all in the exercise group, were considered to be related to the study. Significantly more people in the control group had further prolapse treatment by 12 months (p<0.0001), which was mainly due to the large proportion of people referred for physiotherapy (27%) compared with the intervention group (1%, p=0.0001). However there was no significant difference between groups in the number of women who received surgery, vaginal pessary or other treatments.

**Commentary:** “This is a large, well run, well-coordinated study by experts in the field. Pelvic organ prolapse affects a great number of women, and the associated health costs to the NHS are large. Surgical correction is expensive, associated with a high recurrence rate, and, more recently, has been associated with mesh-related complications, debilitating symptoms, anxiety and expensive lawsuits. The authors should therefore be applauded on gathering high quality evidence on conservative, low-risk measures that may improve patient care and use of NHS resources.

“The trial raises some useful questions. Can physiotherapy achieve similar results if delivered in an alternative form; for example by an information leaflet, group sessions or less frequent sessions? At the end of 12 months, only 80% of women in this study were still undertaking pelvic floor exercises. Further follow-up of this group may provide answers on the feasibility and benefit to patients of performing this activity in the long term.

“Some questions about this trial are difficult to explain. Why, at the end of the study, was the number undergoing surgical treatment the same in both groups despite greater symptom improvement in the intervention arm? Why do symptoms improve despite no changes in the anatomical appearance of the prolapse? This issue is especially important given that surgical correction attempts to restore normal anatomy of the pelvic floor.

“The positive results in the study are in an intervention group that underwent intensive physiotherapy from specialised experts – the applicability of this approach in the modern NHS is questionable. However, such high quality evidence should be used to inform and change practice and divert funds to the appropriate healthcare setting. Sadly such decisions are often difficult and slow in the making.”

– Mr Nikesh Thiruchelvam, Consultant Urological Surgeon, Addenbrookes Hospital, Cambridge University Hospitals NHS Trust

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