

Pelvic floor muscle training can improve symptoms in women with pelvic organ prolapse and may help to reverse prolapse

Synopsis

Summary of: Braekken IH, et al (2010) Can pelvic floor muscle training reverse pelvic organ prolapse and reduce prolapse symptoms? An assessor-blinded, randomized, controlled trial. *Am J Obstet Gynecol* 203: 170.e1–7. [Prepared by Nicholas Taylor, CAP Co-ordinator.]

Question: Does pelvic floor muscle training reverse pelvic organ prolapse and improve symptoms in women with pelvic organ prolapse? **Design:** Randomised, controlled trial with concealed allocation and blinded outcome assessment. **Setting:** A university hospital and physiotherapy clinic in Norway. **Participants:** Women with pelvic organ prolapse were included. Key exclusion criteria were pelvic organ prolapse stage IV (complete vaginal eversion), inability to contract the pelvic floor muscles, and previous pelvic organ prolapse surgery. Randomisation of 109 participants allocated 59 to the intervention group and 50 to a control group. **Interventions:** Both groups received lifestyle advice and were taught how to contract their pelvic floor muscles before and during increases in abdominal pressure ('the Knack'). In addition, the intervention group completed pelvic floor muscle training over 6 months. Women received up to 18 sessions supervised by a physiotherapist, a booklet and DVD showing the program, and were advised to do 3 sets of 8 to 12 close to maximum pelvic floor muscle contractions per day at home. The control group received no other intervention. **Outcome measures:** The primary

outcomes assessed at 6 months were: change in severity of pelvic organ prolapse according to the pelvic organ prolapse classification (POP-Q) system, stage 0 (no prolapse) to stage IV; position of bladder and rectum assessed by ultrasound; and improvement in frequency and bother of prolapse symptoms (feeling of vaginal bulging/heaviness) assessed on 4-point scales by questionnaire. **Results:** 107 participants completed the study. Women in the intervention group adhered to 89% of prescribed exercise sessions and no adverse events were reported. At 6 months, more women in the intervention group (11, 19%) compared with the control group (4, 8%) had improved POP-Q stage, (Number needed to treat [NNT] 10, 95% CI > 4.2). At 6 months, women in the intervention group had a greater elevation of the bladder (mean difference 3.0 mm, 95% CI 1.5 to 4.4) and rectum (mean difference 5.5 mm 95% CI 1.4 to 7.3) compared with the control group. At 6 months more women in the intervention group had reduced frequency (NNT 3, 95% CI 1.5 to 4.6) and bother of prolapse symptoms (NNT 4, 95% CI 2.1 to 65.0). **Conclusion:** Daily pelvic floor muscle training over 6 months can improve symptoms in women with pelvic organ prolapse and may help to reverse the development of the prolapse.

[Number needed to treat and 95% CIs calculated by the CAP Co-ordinator.]

Commentary

This is an important study for physiotherapists who treat women with pelvic organ prolapse. While physiotherapy treatment of prolapse is common (Hagen et al 2004), robust evidence to support this intervention has been lacking (Hagen et al 2006) and surgery remains the traditional treatment. This trial provides the strongest evidence yet that an effective pelvic floor muscle (PFMT) strength training program can improve prolapse symptom bother – which is the ultimate goal of the patient – as well as reduce the measured anatomical descent of the prolapse.

Clinicians may have confidence in these findings due to the rigorous study design. Clinicians may also easily access valid and reliable prolapse symptom-bother questionnaires to verify the effect of their own intervention. By measuring anatomical prolapse before and after the intervention, the authors have demonstrated morphological changes in pelvic floor tissues to explain the effect of the intervention, and to show that PFMT can reduce worsening of prolapse, thus demonstrating a secondary prevention effect. Access to the primary outcome measure used in this study, the POP-Q, will be problematic for physiotherapists not working with gynaecologists, as the POP-Q scoring system is currently not used routinely by physiotherapists. In addition, 3D real-time ultrasound, the other quantifiable measure of change

in prolapse descent used in this study, is not in routine use by clinicians. A limitation to replication of the study design in the present Australian health care setting may be the frequency of physiotherapy treatments: in this study, participants attended up to 18 treatment sessions, higher than the average attendance in private or public settings in this country. However the intervention appears dose-dependant; providing a less intensive intervention may result in a less effective outcome. The challenge is for clinicians to provide effective treatment, and motivate their patients sufficiently well and for long enough for the intervention to reach a therapeutic dosage.

This study provides strong evidence to support physiotherapy-supervised PFMT as an effective intervention which may delay, or ultimately prevent, the need for surgery, when delivered at an effective dosage.

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References

- Hagen S et al (2004) *Physiotherapy* 90: 19–26.
Hagen S et al (2006) *Cochrane Database of Syst Rev* CD003882.