ClinicalEvidence

Genital prolapse in women

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ABSTRACT

INTRODUCTION: Prolapse of the uterus or vagina is usually the result of loss of pelvic support, and causes mainly non-specific symptoms. It may affect over half of women aged 50 to 59 years, but spontaneous regression may occur. Risks of genital prolapse increase with advancing parity and age, increasing weight of the largest baby delivered, and hysterectomy. METHODS AND OUTCOMES: We conducted a systematic review and aimed to answer the following clinical questions: What are the effects of non-surgical treatments in women with genital prolapse? What are the effects of surgical treatments in women with anterior vaginal wall prolapse? What are the effects of surgical treatments in women with posterior vaginal wall prolapse? What are the effects of surgical treatments in women with upper vaginal wall prolapse? What are the effects of using different surgical materials in women with genital prolapse? We searched: Medline, Embase, The Cochrane Library, and other important databases up to August 2011 (Clinical Evidence reviews are updated periodically; please check our website for the most up-to-date version of this review). We included harms alerts from relevant organisations such as the US Food and Drug Administration (FDA) and the UK Medicines and Healthcare products Regulatory Agency (MHRA). RESULTS: We found 15 systematic reviews, RCTs, or observational studies that met our inclusion criteria. We performed a GRADE evaluation of the quality of evidence for interventions. CONCLUSIONS: In this systematic review, we present information relating to the effectiveness and safety of the following interventions: abdominal Burch colposuspension; abdominal sacral colpopexy; abdominal sacrohysteropexy; anterior colporrhaphy with mesh reinforcement; laparoscopic surgery; mesh or synthetic grafts; native (autologous) tissue; open abdominal surgery; pelvic floor muscle exercises; posterior colporrhaphy (with or without mesh reinforcement); posterior intravaginal slingplasty (infracoccygeal sacropexy); sacrospinous colpopexy (vaginal sacral colpopexy); sutures; traditional anterior colporrhaphy; transanal repair; ultralateral anterior colporrhaphy alone or with cadaveric fascia patch; vaginal hysterectomy; vaginal oestrogen; vaginal pessaries; and vaginal sacrospinous colpopexy.

QUESTIONS

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What are the effects of surgical treatments in women with anterior vaginal wall prolapse? 8

What are the effects of surgical treatments in women with posterior vaginal wall prolapse? 19

What are the effects of surgical treatments in women with upper vaginal wall prolapse? 23

What are the effects of using different surgical materials in women with genital prolapse? 31

INTERVENTIONS

NON-SURGICAL TREATMENTS

Likely to be beneficial

Vaginal pessaries* 4

Unknown effectiveness

Pelvic floor muscle exercises 5

Vaginal oestrogen 5

SURGICAL TREATMENTS IN WOMEN WITH ANTERIOR VAGINAL WALL PROLAPSE

Beneficial

Traditional anterior colporrhaphy versus abdominal Burch colposuspension in women with anterior vaginal wall prolapse 8

Anterior colporrhaphy with mesh reinforcement versus traditional anterior colporrhaphy in women with anterior vaginal wall prolapse 10

Likely to be beneficial

Ultralateral anterior colporrhaphy versus traditional anterior colporrhaphy (both are likely to be beneficial but unclear how they compare with each other) 17

Unknown effectiveness

Surgical versus non-surgical treatment in women with anterior vaginal wall prolapse 19

SURGICAL TREATMENTS IN WOMEN WITH POSTERIOR WALL PROLAPSE

Beneficial

Posterior colporrhaphy versus transanal repair in women with posterior vaginal wall prolapse 19

Unknown effectiveness

Posterior colporrhaphy with mesh versus posterior colporrhaphy without mesh reinforcement in women with posterior vaginal wall prolapse 21

Surgical versus non-surgical treatment in women with posterior vaginal wall prolapse 23

SURGICAL TREATMENTS IN WOMEN WITH UPPER VAGINAL WALL PROLAPSE

Beneficial

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Likely to be beneficial

Vaginal hysterectomy and repair versus abdominal sacrohysteropexy for upper vaginal wall prolapse . . 26

Posterior intravaginal slingplasty (infracoccygeal sacropexy) versus vaginal sacrospinous colpopexy for upper vaginal wall prolapse (both are likely to be beneficial but unclear how they compare with each other) . . 28

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Unknown effectiveness

Open abdominal surgery versus laparoscopic surgery 30

Surgical versus non-surgical treatment in women with upper vaginal wall prolapse 30

DIFFERENT SURGICAL MATERIALS IN WOMEN WITH GENITAL PROLAPSE

Unknown effectiveness

Different types of suture versus each other 31

Mesh or synthetic grafts versus native (autologous) tissue 32

Covered elsewhere in Clinical Evidence

See Urinary stress incontinence

Footnote

*Consensus regards vaginal pessaries as effective.

Key points

- Prolapse of the uterus or vagina is usually the result of loss of pelvic support, and causes mainly non-specific symptoms. It may affect over half of women aged 50 to 59 years, but spontaneous regression may occur.

  Risks of genital prolapse increase with advancing parity and age, increasing weight of the largest baby delivered, and hysterectomy.
- We don't know whether pelvic floor muscle exercises or vaginal oestrogen improve symptoms in women with genital prolapse, as we found few studies of adequate quality.

  The consensus is that vaginal pessaries are effective for relief of symptoms in women waiting for surgery, or in whom surgery is contraindicated, but we don't know this for sure.
- In women with anterior vaginal wall prolapse, anterior vaginal wall repair may be more effective than Burch colposuspension at reducing recurrence, and adding mesh reinforcement to anterior colporrhaphy can reduce recurrence.

  Burch colposuspension may be more effective than anterior vaginal wall repair at reducing stress incontinence.
- In women with posterior vaginal wall prolapse, posterior colporrhaphy is more likely to prevent recurrence compared with transanal repair of rectocoele or enterocoele.

  We don't know whether adding mesh reinforcement improves success rates in women having posterior colporrhaphy.
- In women with upper vaginal wall prolapse, abdominal sacral colpopexy reduces the risk of recurrent prolapse, and of postoperative dyspareunia and stress incontinence compared with sacrospinous colpopexy.

  Posterior intravaginal slingplasty may be as effective as vaginal sacrospinous colpopexy at preventing recurrent prolapse.

  Vaginal hysterectomy and repair may reduce the need for re-operation and may be more effective at reducing symptoms, compared with abdominal sacrohysteropexy.
- We don't know how surgical treatment compares with non-surgical treatment in women with prolapse of the upper, anterior, or posterior vaginal wall.

DEFINITION

Genital prolapse (also known as pelvic organ prolapse) refers to uterine, uterovaginal, or vaginal prolapse. Genital prolapse has several causes but occurs primarily from loss of support in the pelvic region. For ease of understanding, in this review we have attempted to use the most common and descriptive terminology. In uterine prolapse the uterus descends into the vaginal canal with the cervix at its leading edge; this may, in turn, pull down the vagina, in which case it may be referred to as uterovaginal prolapse. In the case of vaginal prolapse, one or more regions of the vaginal wall protrude into the vaginal canal. Vaginal prolapse is classified according to the region of the vaginal wall that is affected: a cystocoele involves the upper anterior vaginal wall; urethrocoele the lower anterior vaginal wall; rectocoele the lower posterior vaginal wall; and enterocoele the upper posterior vaginal wall. After hysterectomy, the apex of the vagina may prolapse as a vault prolapse. This usually pulls down the anterior and posterior vaginal walls as well. The two main systems for grading the severity of genital prolapse, the Baden–Walker halfway system [1] and the Pelvic Organ Prolapse Quantification (POPQ) system, [2] are summarised in table 1, p 35 . Mild genital prolapse may be asymptomatic. Symptoms of genital prolapse are mainly non-specific. Common symptoms include pelvic heaviness, genital bulge, and difficulties during sexual intercourse, such as loss of vaginal sensation. Symptoms that may be more commonly associated with specific forms of prolapse include: urinary incontinence, which is associated with cystocoele; incomplete urinary emptying, which is associated with cystocoele or uterine prolapse, or both; and the need to apply digital pressure to the perineum or posterior vaginal wall for defecation, which is associated with rectocoele. [3]

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INCIDENCE/ PREVALENCE

Prevalence estimates vary widely, depending on the population and the way in which women were recruited into studies. One study conducted in the US (497 women aged 18–82 years attending a routine general gynaecology clinic) found that 93.6% had some degree of genital prolapse (43.3% POPQ stage 1, 47.7% POPQ stage 2, 2.6% POPQ stage 3, and 0% POPQ stage 4). [4] The incidence of clinically relevant prolapse (POPQ stage 2 or higher) was found to increase with advancing parity: non-parous, 14.6%; one to three births, 48.0%; and more than three births, 71.2%. One Swedish study (487 women) found that 30.8% of women between the ages of 20 and 59 years had some degree of genital prolapse on clinical assessment. [5] The prevalence of genital prolapse increased with age, from 6.6% in women aged 20 to 29 years to 55.6% in women aged 50 to 59 years. A cross-sectional study (241 perimenopausal women aged 45–55 years seeking to enter a trial of HRT) found that 23% had POPQ stage 1 genital prolapse, 4% had POPQ stage 2 prolapse, and no women had POPQ stage 3 or 4 prolapse. [6] One cross-sectional study conducted in the UK (285 perimenopausal and postmenopausal women attending a menopause clinic with climacteric symptoms) found that 20% had some degree of uterovaginal or vault prolapse, 51% some degree of anterior wall vaginal prolapse, and 27% some degree of posterior wall vaginal prolapse. [7] Severe prolapse (equivalent to POPQ stage 3 or 4) was found in 6% of women. One prospective study (412 postmenopausal women aged 50–79 years) found that the baseline prevalence of cystocoele was 24.6% (prevalence was 14% for grade 1 [in vagina], 10% for grade 2 [to introitus], and 1% for grade 3 [outside vagina]), the baseline prevalence of rectocoele was 12.9% (prevalence was 7.8% for grade 1 and 5.1% for grade 2), and the baseline prevalence of uterine prolapse was 3.8% (prevalence was 3.3% for grade 1 and 0.6% for grade 2). [8] Among women who entered the study, the annual incidence of cystocoele was 9%, rectocoele was 6%, and uterine prolapse was 2%.

AETIOLOGY/ RISK FACTORS

The strongest risk factor for pelvic organ prolapse is parity, [9] because childbirth can cause damage to the pudendal nerves, [10] fascia, and supporting structures, as well as muscle. [11] A Swedish population-based study found that the prevalence of genital prolapse was higher in parous women (44%) than in non-parous women (5.8%). In addition, it found an association with pelvic floor muscle tone and genital prolapse. [5] One case-control study found that other strong risk factors for severe (POPQ stages 3 or 4) genital prolapse are increasing age (OR 1.12 for each additional year, 95% CI 1.09 to 1.15), increasing weight of largest baby delivered vaginally (OR 1.24 for each additional 1 lb [450 g], 95% CI 1.06 to 1.44), previous hysterectomy (OR 2.37, 95% CI 1.16 to 4.86), and previous surgery for genital prolapse (OR 5.09, 95% CI 1.49 to 17.26). [12] The study found no significant association between severe genital prolapse and chronic medical conditions such as obesity, hypertension, or COPD.

PROGNOSIS

We found no reliable information about the natural history of untreated mild genital prolapse (POPQ stages 1 and 2, Baden–Walker grades 1 and 2). We found one prospective study on the progression of genital prolapse in women who were treated or untreated with HRT (oestrogen plus progesterone). [8] However, the results were not reported separately by treatment group and therefore they may not apply to untreated women. In addition, the investigators used an examination technique of which the reliability, reproducibility, and ability to discriminate between absence of prolapse and mild prolapse was not known. It found that, over 1 year, cystocoeles progressed from grade 1 to grades 2 or 3 in 9% of cases, regressed from grades 2 or 3 to grade 0 in 9%, and regressed from grade 1 to grade 0 in 23%. Rectocoeles progressed from grade 1 to grades 2 or 3 in 1%, but regressed from grades 2 or 3 to grade 0 in 3%, and from grade 1 to grade 0 in 2%. Uterine prolapse regressed from grade 1 to grade 0 in 48%. The incidence of morbidity associated with genital prolapse is also difficult to estimate. The annual incidence of hospital admission for prolapse in the UK has been estimated at 2.04 per 1000 women under the age of 60 years. [9] Genital prolapse is also a major cause of gynaecological surgery.

AIMS OF INTERVENTION

To relieve symptoms; to remove the vaginal mass; to improve urinary incontinence, poor flow, or urinary retention; to alleviate problems with sexual intercourse (usually related to access or sensation) or emptying the bowel with minimal adverse effects of treatment.

OUTCOMES

Symptom relief: symptom scores, **recurrence of prolapse or persistence of symptoms** such as stress incontinence; **re-operation**; **hospital stay/length of operation**; **quality of life:** measured by scores such as the Prolapse Quality-of-Life Questionnaire; [13] and **postoperative complications/adverse effects** of treatment; postoperative dyspareunia and de novo postoperative stress incontinence.

METHODS

Clinical Evidence search and appraisal August 2011. The following databases were used to identify studies for this systematic review: Medline 1966 to August 2011, Embase 1980 to August 2011, and The Cochrane Database of Systematic Reviews 2011, Issue 2. An additional search within The Cochrane Library was carried out for the Database of Abstracts of Reviews of Effects (DARE)

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and Health Technology Assessment (HTA). We also searched for retractions of studies included in the review. Abstracts of the studies retrieved from the initial search were assessed by an information specialist. Selected studies were then sent to the contributor for additional assessment, using predetermined criteria to identify relevant studies. Study design criteria for inclusion in this review were: published systematic reviews of RCTs and RCTs in any language. We also included cohort studies for the options listed in the first question of this review. Open studies have been included. Studies contain >20 individuals of whom >80% were followed up. The minimum length of follow-up was 1 year. We included systematic reviews of RCTs and RCTs where harms of an included intervention were studied applying the same study design criteria for inclusion as we did for benefits. In addition we use a regular surveillance protocol to capture harms alerts from organisations such as the FDA and the MHRA, which are added to the reviews as required. To aid readability of the numerical data in our reviews, we round many percentages to the nearest whole number. Readers should be aware of this when relating percentages to summary statistics such as relative risks (RRs) and odds ratios (ORs). We have performed a GRADE evaluation of the quality of evidence for interventions included in this review (see table, p 36). The categorisation of the quality of the evidence (high, moderate, low, or very low) reflects the quality of evidence available for our chosen outcomes in our defined populations of interest. These categorisations are not necessarily a reflection of the overall methodological quality of any individual study, because the Clinical Evidence population and outcome of choice may represent only a small subset of the total outcomes reported, and population included, in any individual trial. For further details of how we perform the GRADE evaluation and the scoring system we use, please see our website (www.clinicalevidence.com).

QUESTION What are the effects of non-surgical treatments in women with genital prolapse?

OPTION VAGINAL PESSARIES

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- The consensus is that vaginal pessaries are effective for relief of symptoms in women waiting for surgery, or in whom surgery is contraindicated.

Benefits and harms

Vaginal pessaries versus no treatment:

We found one systematic review (search date 2003; search partially updated in 2005 for some sources), which identified no RCTs. [14] We found no observational studies of sufficient quality.

Vaginal pessaries versus surgical treatment:

We found one systematic review, which identified no RCTs. [14] We found no observational studies of sufficient quality.

Further information on studies

Comment:

Clinical guide:

Consensus suggests that vaginal pessaries are effective as a short-term option to relieve symptoms of genital prolapse during the preoperative waiting period, or over the long term if surgical treatment is contraindicated. Women with severe (Baden–Walker grades 3 and 4) prolapse are more likely than women with less severe prolapse (grades 1 and 2) to continue long-term use because they are more likely to find them helpful and because they must continue long-term use to alleviate symptoms. [15] Regular surveillance involving removing the pessary and inspecting the vaginal wall for evidence of erosion is required. [14]

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OPTION PELVIC FLOOR MUSCLE EXERCISES

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know whether pelvic floor muscle exercises improve symptoms in women with genital prolapse, as we found no studies of adequate quality.

Benefits and harms

Pelvic floor muscle exercises versus no treatment:

We found one systematic review (search date 2005), which identified no RCTs satisfying *Clinical Evidence* inclusion criteria (see comment below). [16] We found no RCTs or observational studies of sufficient quality.

Pelvic floor muscle exercises versus surgical treatment:

We found one systematic review (search date 2005), which identified no RCTs. [16] We found no subsequent RCTs or observational studies of sufficient quality.

Further information on studies

Comment: The review identified three RCTs comparing pelvic floor muscle exercises versus no treatment/control that did not meet *Clinical Evidence* inclusion criteria. One RCT (47 women) with unpublished results (later published in full) [17] compared pelvic floor muscle training plus lifestyle advice versus lifestyle advice alone. This RCT was excluded because of short follow-up. It found that pelvic floor muscle training plus lifestyle advice significantly improved prolapse symptom scores from baseline to 26 weeks compared with lifestyle advice alone. Another RCT identified by the review compared pelvic floor muscle exercises versus no treatment in older women in Thailand. [18] This RCT was excluded because it did not use a standard system for grading prolapse, did not assess the effects of treatments on the symptoms of prolapse or quality of life, and had high loss to follow-up (28%). The third RCT only followed up women for 6 months. It found that a significantly larger proportion of women in the active-treatment group improved compared with control (improvement: 11/58 [19%] with pelvic floor muscle training *v* 4/50 [8%] with control; P = 0.035) and that women in the pelvic floor muscle training group had significantly reduced frequency of symptoms compared with women in the control group (P = 0.015). [19]

Clinical guide:
Although pelvic floor muscle exercises seem effective at reducing the symptoms of urinary stress incontinence (see benefits of pelvic floor muscle exercises in review on stress incontinence), there is insufficient evidence on their usefulness in the treatment of genital prolapse.

OPTION VAGINAL OESTROGEN

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We found insufficient evidence to judge whether vaginal oestrogen improves symptoms in women with genital prolapse.

Benefits and harms

Vaginal oestrogen versus placebo:

We found one systematic review (search date 2010), [20] which identified one RCT of 48 postmenopausal women awaiting vaginal surgery for pelvic organ prolapse. The review identified a second RCT in women with pelvic organ prolapse and urinary incontinence that had no usable data.

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Symptom relief

Compared with placebo We don't know whether vaginal oestrogen is more effective at reducing the need for vaginal surgery in postmenopausal women (very low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Reduced need for prolapse surgery					
[20] Systematic review	48 post-menopausal women awaiting vaginal surgery for pelvic organ prolapse Data from 1 RCT	**Proportion of women with no need for prolapse surgery** 2/24 (8%) with vaginal oestradiol tablets 25 micrograms 1/24 (4%) with placebo vaginal tablets The review reported that the RCT did not specify its method of allocation	Significance not assessed		

Recurrence of prolapse or persistence of symptoms

Compared with placebo We don't know whether vaginal oestrogen is more effective at reducing recurrent prolapse or cystitis at 3 years in postmenopausal women having vaginal surgery for prolapse (low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence of prolapse or persistence of symptoms					
[20] Systematic review	48 post-menopausal women awaiting vaginal surgery for pelvic organ prolapse Data from 1 RCT	**Proportion of women with recurrence of pelvic organ prolapse , 3 years** 5/21 (24%) with vaginal oestradiol tablets 25 micrograms 5/19 (26%) with placebo vaginal tablets The review reported that the RCT did not specify its method of allocation	RR 0.9 95% CI 0.31 to 2.65	⟷	Not significant
[20] Systematic review	48 post-menopausal women awaiting vaginal surgery for pelvic organ prolapse Data from 1 RCT	**Proportion of women with recurrence of cystitis , 3 years** 2/22 (9%) with vaginal oestradiol tablets 25 micrograms 8/23 (35%) with placebo vaginal tablets The review reported that the RCT did not specify its method of allocation	Reported as not significant No further data reported	⟷	Not significant

Re-operation

No data from the following reference on this outcome. [20]

Quality of life

No data from the following reference on this outcome. [20]

Hospital stay/length of operation

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No data from the following reference on this outcome. [20]

Postoperative complications

Compared with placebo Vaginal oestrogen may be more effective at reducing postoperative cystitis at 4 weeks in postmenopausal women having vaginal surgery for prolapse, although evidence is weak (low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[20] Systematic review	48 post-menopausal women awaiting vaginal surgery for pelvic organ prolapse Data from 1 RCT	**Proportion of women with postoperative cystitis , 4 weeks** 2/22 (9%) with vaginal oestradiol tablets 25 micrograms 10/23 (43%) with placebo vaginal tablets The review reported that the RCT did not specify its method of allocation	RR 0.21 95% CI 0.05 to 0.85	●●○	vaginal oestradiol tablets 25 micrograms
[20] Systematic review	48 post-menopausal women awaiting vaginal surgery for pelvic organ prolapse Data from 1 RCT	**Proportion of women with endometrial hyperplasia , at surgery** 2/22 (9%) with vaginal oestradiol tablets 25 micrograms 0/23 (0%) with placebo vaginal tablets The review reported that the RCT did not specify its method of allocation	RR 5.22 95% CI 0.26 to 102.93	↔	Not significant

Vaginal oestrogen versus no treatment:

We found one systematic review, which identified no RCTs or observational studies of sufficient quality. [20]

Vaginal oestrogen versus surgical treatment:

We found one systematic review, which identified no RCTs or observational studies of sufficient quality. [20]

Further information on studies

Comment:

Clinical guide:

There is currently no consensus on the efficacy of vaginal oestrogen in women with genital prolapse. Oestrogen deficiency may lead to a weakening of the connective tissue surrounding the uterus and vagina, and an increased risk of prolapse. [21] [22] In women with oestrogen deficiency, such as menopausal women, vaginal oestrogen might therefore strengthen the connective tissue or prevent further damage. However, there is insufficient evidence on the clinical effectiveness of this treatment.

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QUESTION What are the effects of surgical treatments in women with anterior vaginal wall prolapse?

OPTION TRADITIONAL ANTERIOR COLPORRHAPHY VERSUS ABDOMINAL COLPOSUSPENSION IN WOMEN WITH ANTERIOR VAGINAL WALL PROLAPSE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- In women with anterior vaginal wall prolapse, anterior vaginal wall repair may be more effective than Burch colposuspension at reducing recurrence.
- Burch colposuspension may be more effective at reducing stress incontinence.

Benefits and harms

Traditional anterior colporrhaphy versus abdominal Burch colposuspension:

We found one systematic review (search date 2009) comparing traditional anterior colporrhaphy with Burch colposuspension (see comment below). [23]

Symptom relief

Compared with abdominal Burch colposuspension Traditional anterior colporrhaphy may be as effective at reducing prolapse symptoms in women with urinary stress incontinence and prolapse (very low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptom relief					
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Proportion of women with prolapse symptoms (subjective failure)** 0/33 (0%) with traditional anterior colporrhaphy 6/35 (17%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation	RR 0.08 95% CI 0 to 1.39	↔	Not significant

Recurrence of prolapse or persistence of symptoms

Compared with abdominal Burch colposuspension Traditional anterior colporrhaphy seems more effective at reducing recurrent cystocoele rates in women with anterior vaginal wall prolapse and urinary stress incontinence, but less effective at reducing stress incontinence (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence					
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Proportion of women with recurrent cystocoeles , about 13 years** 1/33 (3%) with traditional anterior colporrhaphy 12/35 (34%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation	RR 0.09 95% CI 0.01 to 0.64	●●●	traditional anterior colporrhaphy
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence	**Proportion of women with postoperative stress urinary incontinence** 16/33 (48%) with traditional anterior colporrhaphy	RR 3.39 95% CI 1.40 to 8.22	●●○	Burch colposuspension

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
	Data from 1 RCT	5/35 (14%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation			

Re-operation

Compared with abdominal Burch colposuspension We don't know how traditional anterior colporrhaphy and abdominal Burch colposuspension compare at reducing the need for re-operation for recurrent prolapse or stress incontinence in women with anterior vaginal wall prolapse and urinary stress incontinence (very low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Re-operation					
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Re-operation rate for recurrent prolapse** with traditional anterior colporrhaphy with Burch colposuspension There were no re-operations for recurrent prolapse in either group The review reported that the randomisation method used in the RCT suggested quasi-randomisation	Significance not assessed		
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Re-operation rate for stress incontinence** 3/33 (9%) with traditional anterior colporrhaphy 1/35 (3%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation	RR 3.18 95% CI 0.35 to 29.08	⟷	Not significant

Quality of life

No data from the following reference on this outcome. [23]

Hospital stay/length of operation

No data from the following reference on this outcome. [23]

Adverse effects

Compared with abdominal Burch colposuspension Traditional anterior colporrhaphy and abdominal Burch colposuspension seem associated with similar rates of postoperative complications, although anterior colporrhaphy seems more likely to cause dyspareunia (moderate-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Proportion of women with postoperative complications** 0/33 (0%) with traditional anterior colporrhaphy 1/35 (3%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation	RR 0.35 95% CI 0.01 to 8.37	⟷	Not significant
[23] Systematic review	68 women with primary stage 2 or 3 cystocoele and concomitant urodynamic urinary stress incontinence Data from 1 RCT	**Proportion of women with dyspareunia** 13/23 (57%) with traditional anterior colporrhaphy 2/24 (8%) with Burch colposuspension The review reported that the randomisation method used in the RCT suggested quasi-randomisation	RR 6.78 95% CI 1.72 to 26.81	●●●	Burch colposuspension

Further information on studies

Comment: **Clinical guide:**
Anterior colporrhaphy is the basic treatment for anterior vaginal prolapse. Traditionally, a suburethral buttress was added to anterior colporrhaphy in women who also had stress incontinence, or as prevention against subsequent stress incontinence. However, this either proved ineffective, or any improvement was not sustained. Burch colposuspension was designed to treat stress incontinence. However, where there was an associated anterior vaginal wall prolapse, the prolapse worsened with Burch colposuspension. Ideally, women with both stress incontinence and anterior vaginal wall prolapse should have both operations at the same time, as anterior colporrhaphy improves anterior vaginal wall prolapse while Burch colposuspension improves stress incontinence. Performing only one operation in women with both problems will necessitate subsequent surgery.

OPTION ANTERIOR COLPORRHAPHY WITH MESH REINFORCEMENT VERSUS TRADITIONAL ANTERIOR COLPORRHAPHY IN WOMEN WITH ANTERIOR VAGINAL WALL PROLAPSE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- In women with anterior vaginal wall prolapse, adding mesh reinforcement to anterior colporrhaphy can reduce recurrence.

Benefits and harms

Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy:
We found one systematic review (search date 2009) [23] and 7 subsequent RCTs. [24] [25] [26] [27] [28] [29] [30] One of the subsequent RCTs [30] is a 3-year follow-up of a previously reported RCT that reported 1-year data [31] and that is now included in the systematic review. [23]

Symptom relief

Anterior colporrhaphy with mesh reinforcement compared with traditional anterior colporrhaphy Anterior colporrhaphy with mesh reinforcement seems as effective at reducing prolapse symptoms at 12 months (moderate-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptom relief					
[23] Systematic review	206 women Data from 1 RCT	**Proportion of women with prolapse symptoms (subjective failure)** 9/98 (9%) with anterior colporrhaphy with porcine skin collagen implant 13/103 (13%) with anterior colporrhaphy without implant	RR 1.37 95% CI 0.62 to 3.07 P = 0.44	⟷	Not significant
[31] RCT	202 women In review [23]	**Proportion of women with prolapse symptoms (subjective failure)** 27/104 (26%) with anterior colporrhaphy with mesh 35/96 (36%) with anterior colporrhaphy alone	RR 1.40 95% CI 0.92 to 2.13	⟷	Not significant
[24] RCT	61 women with stage 2 or higher (Ba point at least –1) cystocoele only, no other prolapse	**Proportion of women with prolapse symptoms (subjective failure) , 12 months** 1/28 (3.6%) with anterior colporrhaphy with porcine skin collagen implants 1/27 (3.7%) with anterior colporrhaphy alone	Significance not assessed		
[25] RCT	139 women with Pelvic Organ Prolapse Quantification (POPQ) stage 2 or higher with anterior and posterior prolapse	**Proportion of women aware of prolapse , 12 months** 3/61 (5%) with anterior colporrhaphy with mesh 7/62 (11%) with anterior colporrhaphy alone Patients were not blinded to the intervention	P = 0.32	⟷	Not significant

No data from the following reference on this outcome. [26] [27] [28] [29] [30]

Recurrence of prolapse or persistence of symptoms

Anterior colporrhaphy with mesh reinforcement compared with traditional anterior colporrhaphy Anterior colporrhaphy with mesh or graft reinforcement is more effective at reducing recurrent cystocoele rates in women with anterior vaginal wall prolapse (high-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence of prolapse or persistence of symptoms					
[23] Systematic review	487 women 4 RCTs in this analysis	**Proportion of women with recurrent cystocoele** 31/250 (12%) with anterior colporrhaphy with mesh 84/237 (35%) with anterior colporrhaphy	RR 2.85 95% CI 1.97 to 4.12 P <0.0001	●●○	anterior colporrhaphy with mesh
[23] Systematic review	162 women with anterior vaginal wall prolapse Data from 1 RCT	**Recurrent cystocoeles , median 13 months** 16/76 (21%) with anterior colporrhaphy with cadaveric fascia patch	RR 1.40 95% CI 0.80 to 2.44 P = 0.23	⟷	Not significant

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
		23/78 (29%) with anterior colporrhaphy alone			
[24] RCT	61 women with stage 2 or higher (Ba point at least –1) cystocoele only, no other prolapse	**Proportion of women with recurrent cystocoele , 12 months** 2/28 (7%) with anterior colporrhaphy with porcine skin collagen implants 4/26 (15%) with anterior colporrhaphy alone	P value not reported Reported as not significant	↔	Not significant
[25] RCT	139 women with Pelvic Organ Prolapse Quantification (POPQ) stage 2 or higher with anterior and posterior prolapse	**Proportion of women with recurrent prolapse , 12 months** 12/63 (19%) with anterior colporrhaphy with mesh 21/61 (34%) with anterior colporrhaphy alone Patients were not blinded to the intervention	P = 0.07	↔	Not significant
[26] RCT	94 women with POPQ stage 2 or more and Ba point at least –1 cystocoele	**Proportion of women with recurrent cystocoele , 12 months** 5/35 (14%) with anterior colporrhaphy with bovine pericardial graft 8/37 (22%) with anterior colporrhaphy alone 72/94 (77%) women completed 12-month follow-up	P = 0.35	↔	Not significant
[27] Pseudo-randomised trial	56 women with POPQ stage 2 or more and Ba point at least +1 cystocoele	**Proportion of women with recurrent cystocoele , 1 year** 4/29 (14%) with anterior colporrhaphy with small intestine submucosa (SIS) graft 11/27 (41%) with anterior colporrhaphy alone SIS graft group: cystocoele recurred in 3/22 (14%) women with primary prolapse and 1/7 (14%) women with recurrent prolapse Anterior colporrhaphy-alone group: cystocoele recurred in 7/20 (35%) women with primary prolapse and 4/7 (57%) women with recurrent prolapse	P = 0.03	○○○	anterior colporrhaphy with SIS graft
[30] RCT	202 women with symptomatic cystocoele to the hymen or beyond Further report of reference [31]	**Proportion of women with recurrent cystocoele , 3 years** 14/105 (13%) with anterior colporrhaphy with polypropylene mesh 40/97 (41%) with anterior colporrhaphy alone	P <0.0001	○○○	anterior colporrhaphy with polypropylene mesh
[29] RCT	194 women having anterior, posterior, or apical colporrhaphy Subgroup analysis	**Proportion of women with recurrent cystocoele , 1 year** 4/51 (8%) with trocar-guided mesh vaginal repair 27/49 (55%) with conventional vaginal repair Subgroup analysis of 100 women having anterior colporrhaphy	OR 14.4 95% CI 4.5 to 46.0 P <0.001	●●●	trocar-guided mesh vaginal repair

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse that was POPQ stage 2 or higher	**Proportion of women with composite outcome of POPQ stage 0 or 1 and positive subjective assessment , 1 year** 107/176 (61%) with anterior colporrhaphy with mesh repair 60/174 (34%) with anterior colporrhaphy alone Assessors were not blinded to treatment allocation	Treatment effect 26.3% 95% CI 15.6% to 37.0% P <0.0001	○○○	anterior colporrhaphy with mesh repair

Re-operation

Anterior colporrhaphy with mesh reinforcement compared with traditional anterior colporrhaphy We don't know how anterior colporrhaphy with mesh reinforcement compares with traditional anterior colporrhaphy at reducing the need for re-operation for prolapse or stress incontinence in women with anterior vaginal wall prolapse, but anterior colporrhaphy with mesh is more likely to necessitate revision of vaginal wound because of mesh exposure (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Re-operation					
[23] Systematic review	278 women 2 RCTs in this analysis	**Proportion of women having further prolapse surgery , 12 months** 1/141 (0.7%) with anterior colporrhaphy with mesh 2/134 (1.5%) with anterior colporrhaphy	RR 1.72 95% CI 0.23 to 12.99 P = 0.60	⟷	Not significant
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse that was Pelvic Organ Prolapse Quantification (POPQ) stage 2 or higher	**Proportion of women having further prolapse surgery , 1 year** 0/200 (0%) with anterior colporrhaphy with mesh repair 1/189 (0.5%) with anterior colporrhaphy alone Assessors were not blinded to treatment allocation	P = 0.49	⟷	Not significant
[23] Systematic review	275 women 2 RCTs in this analysis	**Proportion of women having further surgery for stress incontinence , 12 months** 5/141 (4%) with anterior colporrhaphy with mesh 7/134 (5%) with anterior colporrhaphy alone	RR 1.45 95% CI 0.50 to 4.27 P = 0.49	⟷	Not significant
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse that was POPQ stage 2 or higher	**Proportion of women having further surgery for stress incontinence , 1 year** 5/200 (3%) with anterior colporrhaphy with mesh repair 0/189 (0%) with anterior colporrhaphy alone Assessors were not blinded to treatment allocation	P = 0.06	⟷	Not significant
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse	**Proportion of women having revision of vaginal wound for mesh exposure , 1 year**	P = 0.03	○○○	anterior colporrhaphy alone

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
	that was POPQ stage 2 or higher	6/200 (3%) with anterior colporrhaphy with mesh repair 0/189 (0%) with anterior colporrhaphy alone Assessors were not blinded to treatment allocation			

No data from the following reference on this outcome. [24] [25] [26] [27] [29] [30] [31]

Quality of life

Anterior colporrhaphy with mesh reinforcement compared with traditional anterior colporrhaphy Anterior colporrhaphy with mesh reinforcement seems as effective at improving quality of life at 1 year (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Quality of life					
[23] Systematic review	76 women Data from 1 RCT	**Quality of life (assessed by the Pelvic Floor Distress Inventory [PFDI-20]; scale 0–300, with higher scores indicating greater distress) , 1 year** 34 with anterior colporrhaphy with mesh 45 with anterior colporrhaphy with no mesh	SMD +0.35 95% CI –0.11 to +0.80 P = 0.14	⟷	Not significant

No data from the following reference on this outcome. [24] [25] [26] [27] [28] [29] [30] [31]

Hospital stay/length of operation

Anterior colporrhaphy with mesh reinforcement compared with traditional anterior colporrhaphy Anterior colporrhaphy with mesh reinforcement seems associated with longer operative times (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Hospital stay					
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse that was Pelvic Organ Prolapse Quantification (POPQ) stage 2 or higher	**Mean operative time** 52.6 minutes with anterior colporrhaphy with mesh repair 33.5 minutes with anterior colporrhaphy alone Assessors were not blinded to treatment allocation	P <0.001	○○○	anterior colporrhaphy alone

No data from the following reference on this outcome. [23] [24] [25] [26] [27] [29] [30] [31]

Adverse effects

Anterior colporrhaphy with mesh or graft reinforcement compared with traditional anterior colporrhaphy Anterior colporrhaphy with mesh or graft reinforcement seems more likely to cause some postoperative complications, including mesh erosion, stress incontinence de novo, and the need for postoperative cystoscopy (moderate-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	70 women Data from 1 RCT	**Postoperative complication rates** 1/35 (3%) with anterior colporrhaphy with mesh reinforcement 1/35 (3%) with traditional anterior colporrhaphy	RR 1.00 95% CI 0.07 to 15.36	⟷	Not significant
[27] Pseudo-randomised trial	56 women with Pelvic Organ Prolapse Quantification (POPQ) stage 2 or more and Ba point at least +1 cystocoele	**Proportion of women with postoperative complications , 1 year** 20/29 (69%) with anterior colporrhaphy with small intestine submucosa (SIS) graft 9/27 (33%) with anterior colporrhaphy alone	P = 0.01	○○○	anterior colporrhaphy alone
[23] Systematic review	206 women Data from 1 RCT	**Proportion of women with graft rejection necessitating removal** 1/98 (1%) with anterior colporrhaphy with porcine skin collagen implant 0/103 (0%) with anterior colporrhaphy without implant	Significance not assessed		
[31] RCT	202 women In review [23]	**Proportion of women with mesh erosion , 1 year** 18/104 (17%) with anterior colporrhaphy with polypropylene mesh 0/96 (0%) with anterior colporrhaphy alone	RR 0.03 95% CI 0 to 0.48	●●●	anterior colporrhaphy alone
[30] RCT	202 women with symptomatic cystocoele to the hymen or beyond Further report of reference [31]	**Proportion of women with mesh erosion , 3 years** 5/95 (5%) with anterior colporrhaphy with polypropylene mesh 0/97 (0%) with anterior colporrhaphy alone	Significance not assessed		
[23] Systematic review	76 women Data from 1 RCT	**Proportion of women with vaginal mesh erosion , 1 year** 2/37 (5%) with anterior colporrhaphy with polypropylene mesh 0/38 (0%) with anterior colporrhaphy alone	RR 0.19 95% CI 0.01 to 3.93	⟷	Not significant
[25] RCT	139 women with POPQ stage 2 or higher with anterior and posterior prolapse	**Proportion of women with postoperative mesh exposure , 12 months** 4/69 (6%) with anterior colporrhaphy with mesh 0/70 (0%) with anterior colporrhaphy alone Patients were not blinded to the intervention	Significance not assessed		
[29] RCT	194 women	**Proportion of women with postoperative mesh exposure , 1 year** 14/83 (17%) with trocar-guided mesh vaginal repair 0/82 (0%) with conventional vaginal repair	P <0.001	○○○	conventional vaginal repair

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
[31] RCT	202 women In review [23]	**Proportion of women with stress incontinence de novo , 1 year** 23/104 (22%) with anterior colporrhaphy with polypropylene mesh 9/96 (9%) with anterior colporrhaphy alone	RR 0.42 95% CI 0.21 to 0.87	●●○	anterior colporrhaphy alone
[29] RCT	194 women Subgroup analysis	**Proportion of women with stress incontinence de novo , 1 year** 8/81 (10%) with trocar-guided mesh vaginal repair 8/88 (9%) with conventional vaginal repair	P = 0.86	⟷	Not significant
[23] Systematic review	95 women Data from 1 RCT	**Proportion of sexually active women reporting dyspareunia , 1 year** 7/47 (15%) with anterior colporrhaphy with polypropylene mesh 5/48 (10%) with anterior colporrhaphy alone	RR 0.70 95% CI 0.24 to 2.05 P = 0.51	⟷	Not significant
[23] Systematic review	52 women Data from 1 RCT	**Proportion of women reporting new-onset dyspareunia , 1 year** 2/22 (9%) with anterior colporrhaphy with polypropylene mesh 4/26 (15%) with anterior colporrhaphy alone	RR 1.69 95% CI 0.34 to 8.36	⟷	Not significant
[25] RCT	139 women with POPQ stage 2 or higher with anterior and posterior prolapse	**Proportion of sexually active women with postoperative dyspareunia , 12 months** 12/30 (40%) with anterior colporrhaphy with mesh 13/33 (39%) with anterior colporrhaphy alone Patients were not blinded to the intervention 63 sexually active women in this analysis	P = 1.0	⟷	Not significant
[29] RCT	194 women Subgroup analysis	**Proportion of sexually active women with postoperative de novo dyspareunia , 1 year** 3/37 (8%) with trocar-guided mesh vaginal repair 3/29 (10%) with conventional vaginal repair 12-month data were available for only 66/101 (65%) women in this subgroup	P = 0.75	⟷	Not significant
[23] Systematic review	76 women Data from 1 RCT	**Proportion of women requiring postoperative blood transfusion** 1/38 (2.6%) with anterior colporrhaphy with polypropylene mesh 1/38 (2.6%) with anterior colporrhaphy alone	P value not reported Reported as not significant	⟷	Not significant

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
[28] RCT	389 women with primary and recurrent anterior vaginal wall prolapse that was POPQ stage 2 or higher	**Proportion of women having intraoperative cystoscopy , 1 year** 11/200 (6%) with anterior colporrhaphy with mesh repair 1/189 (1%) with anterior colporrhaphy alone Assessors were not blinded to treatment allocation	P = 0.006	○○○	anterior colporrhaphy alone
[23] Systematic review	162 women with anterior vaginal wall prolapse Data from 1 RCT	**Proportion of women with postoperative voiding dysfunction symptoms** 21/72 (29%) with anterior colporrhaphy with cadaveric fascia patch 28/76 (37%) with anterior colporrhaphy alone	RR 1.26 95% CI 0.79 to 2.01	⟷	Not significant
[23] Systematic review	162 women with anterior vaginal wall prolapse Data from 1 RCT	**Proportion of women with persistent voiding dysfunction symptoms** 19/53 (36%) with anterior colporrhaphy with cadaveric fascia patch 22/52 (42%) with anterior colporrhaphy alone 105/162 (65%) women in this analysis	RR 1.18 95% CI 0.73 to 1.91 P = 0.50	⟷	Not significant

No data from the following reference on this outcome. [24] [26]

Further information on studies

[23] In the RCT identified by the review, the baseline stress incontinence rate was 22/100 (22%) for women with anterior colporrhaphy with porcine skin collagen implant and 18/106 (17%) for women without the graft.

Comment: Two RCTs acknowledge that their power calculation was suboptimal, leading to the possibility that the sample size was inadequate to detect small changes between anterior repair with or without porcine pericardium graft [24] or small intestine submucosa (SIS) graft. [27] One RCT acknowledged that the postoperative assessors were aware of the treatment assignments to anterior colporrhaphy with mesh repair versus anterior colporrhaphy alone, raising the possibility of bias based on the surgeons' opinions about mesh kits. [28]

OPTION ULTRALATERAL ANTERIOR COLPORRHAPHY VERSUS TRADITIONAL ANTERIOR COLPORRHAPHY

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know how ultralateral anterior colporrhaphy compares with traditional anterior colporrhaphy in women with anterior vaginal wall prolapse, but both are likely to be beneficial.

Benefits and harms

Ultralateral anterior colporrhaphy versus traditional anterior colporrhaphy:

We found one systematic review (search date 2009, 1 RCT). [23]

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Recurrence of prolapse or persistence of symptoms

Ultralateral anterior colporrhaphy compared with traditional anterior colporrhaphy We don't know whether ultralateral anterior colporrhaphy is more effective at decreasing the incidence of recurrent cystocoeles (low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrent cystocoeles					
[23] Systematic review	114 women, 26 lost to follow-up Data from 1 RCT 3-armed trial The remaining arm assessed anterior colporrhaphy with mesh reinforcement The number of women lost to follow-up was unequal in the 3 trial arms	**Recurrent cystocoeles , 23 months** 23/33 (70%) with traditional anterior colporrhaphy 13/24 (54%) with ultralateral anterior colporrhaphy 57 women in this analysis	RR 1.29 95% CI 0.84 to 1.98 The RCT may have been underpowered to detect small differences in cure rates	⟷	Not significant

Symptom relief

No data from the following reference on this outcome. [23]

Re-operation

No data from the following reference on this outcome. [23]

Quality of life

No data from the following reference on this outcome. [23]

Hospital stay/length of operation

No data from the following reference on this outcome. [23]

Postoperative complications

Ultralateral anterior colporrhaphy compared with traditional anterior colporrhaphy Ultralateral anterior colporrhaphy may have similar rates of postoperative complications (low-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	114 women Data from 1 RCT 3-armed trial The remaining arm evaluated anterior colporrhaphy with mesh reinforcement	**Postoperative complication rates** 1/35 (2.8%) with traditional anterior colporrhaphy 1/39 (2.6%) with ultralateral anterior colporrhaphy 74 women in this analysis	RR 1.11 95% CI 0.07 to 17.15	⟷	Not significant

Further information on studies

Comment: None.

OPTION **SURGICAL VERSUS NON-SURGICAL TREATMENT IN WOMEN WITH ANTERIOR VAGINAL WALL PROLAPSE**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know how surgical treatment compares with non-surgical treatment in women with prolapse of the anterior vaginal wall.

Benefits and harms

Surgical treatment versus no treatment:

We found one systematic review (search date 2009), which identified no RCTs. [23]

Surgical treatment versus non-surgical treatment:

We found no systematic review or RCTs.

Further information on studies

Comment: None.

QUESTION **What are the effects of surgical treatments in women with posterior vaginal wall prolapse?**

OPTION **POSTERIOR COLPORRHAPHY VERSUS TRANSANAL REPAIR IN WOMEN WITH POSTERIOR VAGINAL WALL PROLAPSE**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- In women with posterior vaginal wall prolapse, posterior colporrhaphy is more likely to prevent recurrence than transanal repair of rectocoele or enterocoele.

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Benefits and harms

Posterior colporrhaphy versus transanal repair:

We found one systematic review (search date 2009, 2 RCTs). [23]

Symptom relief

Compared with transanal repair Posterior colporrhaphy seems as effective as transanal repair at reducing the proportion of women with symptoms of prolapse at 12 to 25 months and at reducing rates of obstructed defecation/constipation (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptoms					
[23] Systematic review	87 women 2 RCTs in this analysis	**Proportion of women with prolapse symptoms (subjective failure) , 12 to 25 months** 4/39 (10%) with posterior colporrhaphy 14/48 (29%) with transanal repair	RR 0.36 95% CI 0.13 to 1.00 P = 0.05	⟷	Not significant
[23] Systematic review	44 women 2 RCTs in this analysis	**Proportion of women with obstructed defecation/constipation after surgery** 8/20 (40%) with posterior colporrhaphy 10/24 (42%) with transanal repair	RR 0.96 95% CI 0.47 to 1.96	⟷	Not significant

Recurrence of prolapse or persistence of symptoms

Compared with transanal repair Posterior colporrhaphy is more effective at reducing recurrence of posterior vaginal wall prolapse at 12 to 25 months in women with enterocoele and recurrent cystocoele (high-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence					
[23] Systematic review	87 women with either rectocoele or enterocoele 2 RCTs in this analysis	**Objective failure rates (proportion of women with prolapse) , 12 to 25 months** 4/39 (10%) with posterior colporrhaphy 20/48 (42%) with transanal repair	RR 0.24 95% CI 0.09 to 0.64 P = 0.0043	●●○	posterior colporrhaphy

Hospital stay/length of operation

Compared with transanal repair Posterior colporrhaphy may be less effective at reducing hospital stay but may be associated with similar operation duration (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Hospital stay					
[23] Systematic review	57 women Data from 1 RCT	**Mean length of hospital stay** 4 days with posterior colporrhaphy 3 days with transanal repair	Mean difference 1.00 day 95% CI 0.47 days to 1.53 days	○○○	transanal repair
Length of operation					
[23] Systematic review	87 women 2 RCTs in this analysis	**Operation duration** 39 minutes with posterior colporrhaphy 48 minutes with transanal repair	Mean difference: –3.64 minutes 95% CI –7.43 minutes to +0.15 minutes P = 0.06	⟷	Not significant

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Re-operation

No data from the following reference on this outcome. [23]

Quality of life

No data from the following reference on this outcome. [23]

Postoperative complications

Compared with transanal repair Posterior colporrhaphy seems to have similar rates of postoperative complications (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	87 women 2 RCTs in this analysis	**Postoperative complications** 5/39 (13%) with posterior colporrhaphy 1/48 (2%) with transanal repair	RR 3.56 95% CI 0.80 to 15.74	⟷	Not significant
[23] Systematic review	87 women 2 RCTs in this analysis	**Proportion of women with postoperative dyspareunia** 7/36 (19%) with posterior colporrhaphy 2/44 (5%) with transanal repair	RR 3.13 95% CI 0.87 to 11.23 P = 0.08	⟷	Not significant

Further information on studies

Comment: None.

OPTION **POSTERIOR COLPORRHAPHY WITH MESH VERSUS POSTERIOR COLPORRHAPHY WITHOUT MESH REINFORCEMENT IN WOMEN WITH POSTERIOR VAGINAL WALL PROLAPSE**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know whether adding mesh reinforcement improves success rates in women having posterior colporrhaphy.

Benefits and harms

Posterior colporrhaphy with mesh versus posterior colporrhaphy without mesh reinforcement:

We found one systematic review (search date 2009, 1 RCT), [23] and one subsequent RCT. [29]

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Recurrence of prolapse or persistence of symptoms

Posterior colporrhaphy compared with posterior colporrhaphy without mesh We don't know how posterior colporrhaphy with mesh and posterior colporrhaphy alone compare at decreasing the incidence of recurrent rectocoeles (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Rectocoele recurrence					
[23] Systematic review	132 women Data from 1 RCT	**Rectocoele recurrence rate , 1 year** 6/65 (9%) with posterior colporrhaphy with mesh reinforcement 7/67 (10%) with posterior colporrhaphy without mesh reinforcement	RR 1.13 95% CI 0.40 to 3.19	⟷	Not significant
[29] RCT	194 women having anterior, posterior, or apical colporrhaphy Subgroup analysis	**Proportion of women with recurrent rectocoele , 1 year** 2/49 (4%) with trocar-guided mesh vaginal repair 14/57 (25%) with conventional vaginal repair Subgroup analysis of 106 women having posterior colporrhaphy	OR 7.7 95% CI 1.6 to 36.0 P <0.003	●●●	trocar-guided mesh vaginal repair

Symptom relief

No data from the following reference on this outcome. [23]

Re-operation

No data from the following reference on this outcome. [23]

Quality of life

No data from the following reference on this outcome. [23]

Hospital stay/length of operation

No data from the following reference on this outcome. [23]

Adverse effects

No data from the following reference on this outcome. [23]

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Further information on studies

Comment: None.

OPTION **SURGICAL VERSUS NON-SURGICAL TREATMENT IN WOMEN WITH POSTERIOR VAGINAL WALL PROLAPSE**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We found no clinically important results from RCTs about surgical treatment compared with non-surgical treatment in women with posterior vaginal wall prolapse.

Benefits and harms

Surgical treatment versus no treatment:

We found one systematic review (search date 2009), which identified no RCTs. [23]

Surgical treatment versus non-surgical treatment:

We found no systematic review or RCTs.

Further information on studies

Comment: None.

QUESTION **What are the effects of surgical treatments in women with upper vaginal wall prolapse?**

OPTION **ABDOMINAL SACRAL COLPOPEXY VERSUS SACROSPINOUS COLPOPEXY (VAGINAL SACRAL COLPOPEXY) FOR UPPER VAGINAL WALL VAULT PROLAPSE**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- In women with upper vaginal wall prolapse, abdominal sacral colpopexy reduces the risk of recurrent prolapse, and of postoperative dyspareunia and stress incontinence compared with sacrospinous colpopexy.

Benefits and harms

Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy:

We found one systematic review (search date 2009, 3 RCTs, 287 women; see further information on studies below). [23]

Symptom relief

Abdominal sacral colpopexy compared with sacrospinous colpopexy (vaginal sacral colpopexy) We don't know whether abdominal sacral colpopexy is more effective at preventing prolapse symptoms in women with upper vaginal wall prolapse (moderate-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptoms					
[23] Systematic review	169 women 2 RCTs in this analysis	**Proportion of women with prolapse symptoms (subjective failure)** 9/84 (11%) with abdominal sacral colpopexy 18/85 (21%) with sacrospinous colpopexy	RR 0.53 95% CI 0.25 to 1.09	⟷	Not significant

Recurrence of prolapse or persistence of symptoms

Abdominal sacral colpopexy compared with sacrospinous colpopexy (vaginal sacral colpopexy) Abdominal sacral colpopexy is more effective at reducing recurrent vault prolapse in women with upper vaginal wall vault prolapse (high-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence					
[23] Systematic review	169 women with vaginal prolapse 2 RCTs in this analysis	**Proportion of women with recurrent vaginal vault prolapse** 3/84 (4%) with abdominal sacral colpopexy 13/85 (15%) with sacrospinous colpopexy	RR 0.23 95% CI 0.07 to 0.77	●●○	abdominal sacral colpopexy
[23] Systematic review	80 women Data from 1 RCT	**Mean time to recurrence of prolapse** –22.10 months with abdominal sacral colpopexy –11.20 months with sacrospinous colpopexy	WMD –10.90 months 95% CI –17.12 months to –4.68 months	○○○	abdominal sacral colpopexy

Re-operation

Abdominal sacral colpopexy compared with sacrospinous colpopexy (vaginal sacral colpopexy) We don't know whether abdominal sacral colpopexy is more effective at reducing the need for re-operation in women with upper vaginal wall vault prolapse (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Re-operation					
[23] Systematic review	169 women 2 RCTs in this analysis	**Re-operation rate for recurrent prolapse** 6/84 (7%) with abdominal sacral colpopexy 14/85 (16%) with sacrospinous colpopexy	RR 0.46 95% CI 0.19 to 1.11	⟷	Not significant
[23] Systematic review	287 women 2 RCTs in this analysis	**Re-operation rate for stress urinary incontinence** 5/136 (4%) with abdominal sacral colpopexy 9/151 (6%) with sacrospinous colpopexy	RR 0.60 95% CI 0.21 to 1.73	⟷	Not significant
[23] Systematic review	169 women 2 RCTs in this analysis	**Re-operation rate for further prolapse or for incontinence combined** 9/84 (11%) with abdominal sacral colpopexy	RR 0.47 95% CI 0.23 to 0.97	●●○	abdominal sacral colpopexy

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
		20/85 (23%) with sacrospinous colpopexy			

Hospital stay/length of operation

Abdominal sacral colpopexy compared with sacrospinous colpopexy (vaginal sacral colpopexy) Abdominal sacral colpopexy is less effective at reducing operating time in women with upper vaginal wall vault prolapse but is associated with similar duration of hospital stay (high-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Operating time/hospital stay					
[23] Systematic review	293 women 3 RCTs in this analysis	**Operating time** with abdominal sacral colpopexy with sacrospinous colpopexy Absolute results not reported	Mean difference 21.04 minutes 95% CI 12.15 minutes to 29.94 minutes P <0.0001	○○○	sacrospinous colpopexy
[23] Systematic review	293 women 3 RCTs in this analysis	**Length of hospital stay (days)** with abdominal sacral colpopexy with sacrospinous colpopexy Absolute results not reported	Mean difference +0.14 days 95% CI –0.25 days to +0.53 days P = 0.47	⟷	Not significant

Quality of life

No data from the following reference on this outcome. [23]

Adverse effects

Abdominal sacral colpopexy compared with sacrospinous colpopexy (vaginal sacral colpopexy) Abdominal sacral colpopexy seems more effective at preventing postoperative dyspareunia and stress incontinence in women with upper vaginal wall vault prolapse but seems associated with similar rates of adverse effects (not otherwise specified) (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	287 women 3 RCTs in this analysis	**Adverse effects** 15/136 (11%) with abdominal sacral colpopexy 13/151 (9%) with vaginal sacral colpopexy	RR 1.30 95% CI 0.63 to 2.69	⟷	Not significant
[23] Systematic review	155 women 2 RCTs in this analysis	**Proportion of women with postoperative stress urinary incontinence** 14/74 (19%) with abdominal sacral colpopexy 28/81 (35%) with sacrospinous colpopexy	RR 0.55 95% CI 0.32 to 0.95 P = 0.033	●○○	abdominal sacral colpopexy
[23] Systematic review	106 women 3 RCTs in this analysis	**Proportion of women with postoperative dyspareunia** 7/45 (16%) with abdominal sacral colpopexy	RR 0.39 95% CI 0.18 to 0.86 P = 0.019	●●○	abdominal sacral colpopexy

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
		22/61 (36%) with sacrospinous colpopexy			

Further information on studies

[23] In most RCTs comparing these techniques, women also had additional surgery as needed. Women with uterovaginal prolapse also had hysterectomy and women with at least stage 3 prolapse also had anterior or posterior repairs or abdominal or vaginal hysterectomy. In two RCTs within the review, some women had vaginal sacral colpopexy in addition to abdominal colposuspension, paravaginal repair, or a vaginally performed posterior vaginal wall repair as required. In the vaginal arm of one of these RCTs, a bilateral vaginal sacrospinous colpopexy was performed; in the other, a unilateral sacropinous colpopexy was performed.

Comment: None.

OPTION VAGINAL HYSTERECTOMY AND REPAIR VERSUS ABDOMINAL SACROHYSTEROPEXY FOR UPPER VAGINAL WALL PROLAPSE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- Vaginal hysterectomy and repair may reduce the need for re-operation and may be more effective at reducing symptoms, compared with abdominal sacrohysteropexy.

Benefits and harms

Vaginal hysterectomy and repair (with the vault being fixed to the uterosacral cardinal ligament complex) versus abdominal sacrohysteropexy with uterine preservation:

We found one systematic review (search date 2009, 1 RCT) comparing vaginal hysterectomy and repair versus abdominal sacrohysteropexy (see further information on studies). [23]

Symptom relief

Compared with abdominal sacrohysteropexy with uterine preservation Vaginal hysterectomy and repair seems more effective at reducing symptoms at 1 year in women with uterine prolapse (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptoms					
[23] Systematic review	82 women Data from 1 RCT	**Proportion of women with symptoms , 1 year** 5/41 (12%) with vaginal hysterectomy and repair 16/41 (39%) with abdominal sacrohysteropexy	RR 3.20 95% CI 1.29 to 7.92	●●○	vaginal hysterectomy and repair

Re-operation

Compared with abdominal sacrohysteropexy with uterine preservation Vaginal hysterectomy and repair is more effective at reducing the need for re-operation in women with uterine prolapse at 1 year, but not at 8 years (high-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Re-operation					
[23] Systematic review	82 women Data from 1 RCT	**Re-operation , 1 year** 1/41 (2%) with vaginal hysterectomy and repair 9/41 (22%) with abdominal sacrohysteropexy	RR 9.00 95% CI 1.19 to 67.85 P = 0.033	●●●	vaginal hysterectomy and repair
[23] Systematic review	84 women Data from 1 RCT	**Re-operation , 8 years** 6/42 (14%) with vaginal hysterectomy and repair 11/42 (26%) with abdominal sacrohysteropexy	RR 1.83 95% CI 0.75 to 4.50 P = 0.19	↔	Not significant

Hospital stay/length of operation

Compared with abdominal sacrohysteropexy with uterine preservation Vaginal hysterectomy and repair takes longer, but we don't know whether it is more effective at reducing hospital stay (low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Length of hospital stay					
[23] Systematic review	82 women Data from 1 RCT	**Length of hospital stay** 7.6 days with vaginal hysterectomy and repair 7.7 days with abdominal sacrohysteropexy	WMD +0.1 day 95% CI –0.01 days to +0.21 days	↔	Not significant
Operation duration					
[23] Systematic review	82 women Data from 1 RCT	**Operation duration** 107 minutes with vaginal hysterectomy and repair 97 minutes with abdominal sacrohysteropexy	WMD –10 minutes 95% CI –11.91 minutes to –8.19 minutes	○○○	abdominal sacrohysteropexy

Recurrence of prolapse or persistence of symptoms

No data from the following reference on this outcome. [23]

Quality of life

No data from the following reference on this outcome. [23]

Adverse effects

Compared with abdominal sacrohysteropexy with uterine preservation Vaginal hysterectomy and repair may be associated with similar rates of adverse effects (low-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Adverse effects					
[23] Systematic review	82 women Data from 1 RCT	**Adverse effects** 5/41 (12%) with vaginal hysterectomy and repair 6/41 (15%) with abdominal sacrohysteropexy	RR 1.20 95% CI 0.40 to 3.62	⟷	Not significant

Further information on studies

[23] Women in the vaginal group did not have sacrospinous colpopexy; instead the vaginal vault was fixed to the uterosacral cardinal ligament complex. Women in the abdominal group had uterine preservation.

Comment: None.

OPTION POSTERIOR INTRAVAGINAL SLINGPLASTY (INFRACOCCYGEAL SACROPEXY) VERSUS VAGINAL SACROSPINOUS COLPOPEXY FOR UPPER VAGINAL WALL PROLAPSE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- In women with upper vaginal wall prolapse, posterior intravaginal slingplasty may be as effective as vaginal sacrospinous colpopexy at preventing recurrent prolapse.

Benefits and harms

Posterior intravaginal slingplasty (infracoccygeal sacropexy) versus vaginal sacrospinous colpopexy:

We found one systematic review (search date 2004), which identified one RCT reported as a conference abstract. [32]

Recurrence of prolapse or persistence of symptoms

Compared with vaginal sacrospinous colpopexy We don't know whether posterior intravaginal slingplasty (infracoccygeal sacropexy) is more effective at 17 to 19 months at reducing recurrent vault prolapse in women with upper vaginal wall vault prolapse (low-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Recurrence rates					
[32] Systematic review 1 RCT identified; reported as a conference abstract	66 women Data from 1 RCT	**Proportion of women with a satisfactory result , 17 to 19 months** 19/33 (58%) with posterior intravaginal slingplasty 21/33 (64%) with vaginal sacrospinous colpopexy	P = 0.96	⟷	Not significant

Hospital stay/length of operation

Compared with vaginal sacrospinous colpopexy We don't know whether posterior intravaginal slingplasty (infracoccygeal sacropexy) is more effective at reducing duration of surgery or hospital stay in women with upper vaginal wall vault prolapse (low-quality evidence).

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Length of hospital stay					
[32] Systematic review 1 RCT identified; reported as a conference abstract	66 women Data from 1 RCT	**Length of hospital stay** 4 days with posterior intravaginal slingplasty 3 days with vaginal sacrospinous colpopexy	Significance of difference between groups not reported		
Duration of operation					
[32] Systematic review 1 RCT identified; reported as a conference abstract	66 women Data from 1 RCT	**Duration of operation** 58 minutes with posterior intravaginal slingplasty 64 minutes with vaginal sacrospinous colpopexy	Significance of difference between groups not reported		

Symptom relief

No data from the following reference on this outcome. [32]

Re-operation

No data from the following reference on this outcome. [32]

Quality of life

No data from the following reference on this outcome. [32]

Adverse effects

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Adverse effects					
[32] Systematic review 1 RCT identified; reported as a conference abstract	66 women Data from 1 RCT	**Adverse effects** with posterior intravaginal slingplasty with vaginal sacrospinal colpopexy Posterior intravaginal slingplasty was associated with pararectal pain (3/33 [9%]), pararectal abscess (1/33 [3%]), and vaginal vault tape erosion (1/33 [3%]). Vaginal sacrospinous colpopexy was associated with buttock pain			

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Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
		(4/33 [12%]) and persistent severe dyspareunia (1/33 [3%])			

Further information on studies

Comment: None.

OPTION OPEN ABDOMINAL SURGERY VERSUS LAPAROSCOPIC SURGERY

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know how open abdominal surgery compares with laparoscopic surgery in women with genital prolapse.

Benefits and harms

Open abdominal surgery versus laparoscopic surgery:

We found one systematic review (search date 2009), which identified no RCTs. [23]

Further information on studies

Comment: None.

OPTION SURGICAL VERSUS NON-SURGICAL TREATMENT IN WOMEN WITH UPPER VAGINAL WALL PROLAPSE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know how surgical treatment compares with non-surgical treatment in women with prolapse of the upper vaginal wall.

Benefits and harms

Surgical treatment versus no treatment:

We found one systematic review (search date 2009), which identified no RCTs. [23]

Surgical treatment versus non-surgical treatment:

We found no systematic review or RCTs.

Further information on studies

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Comment: None.

QUESTION **What are the effects of using different surgical materials in women with genital prolapse?**

OPTION **DIFFERENT TYPES OF SUTURE VERSUS EACH OTHER**

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We don't know whether one type of suture is more effective than another in the treatment of genital prolapse in women.

Benefits and harms

Different types of suture versus each other:

We found one systematic review (search date 2006), which identified one ongoing RCT (see comment below). [23]

Symptom relief

Polydioxanone (PDS) suture compared with polyglactin suture We don't know whether PDS suture is more effective at reducing prolapse symptoms during anterior and posterior vaginal repair (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Symptom relief					
[23] Systematic review	66 women with cystocoele, rectocoele, or both Data from 1 RCT	**Proportion of women with prolapse symptoms , 1 to 5 years** 21/26 (81%) with polydioxanone sutures 19/28 (68%) with polyglactin sutures 54 women in this analysis	RR 1.19 95% CI 0.87 to 1.63	⟷	Not significant

Recurrence of prolapse or persistence of symptoms

No data from the following reference on this outcome. [23]

Re-operation

No data from the following reference on this outcome. [23]

Quality of life

No data from the following reference on this outcome. [23]

Hospital stay/length of operation

No data from the following reference on this outcome. [23]

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Adverse effects

Polydioxanone (PDS) suture compared with polyglactin suture We don't know whether PDS suture is more effective at reducing postoperative complications after anterior and posterior vaginal repair (moderate-quality evidence).

Ref (type)	Population	Outcome, Interventions	Results and statistical analysis	Effect size	Favours
Postoperative complications					
[23] Systematic review	66 women with cystocoele, rectocoele, or both Data from 1 RCT	**Proportion of women with urinary incontinence , 1 to 5 years** 16/23 (70%) with polydioxanone sutures 18/26 (69%) with polyglactin sutures 49 women in this analysis	RR 1.00 95% CI 0.69 to 1.46	⟷	Not significant
[23] Systematic review	66 women with cystocoele, rectocoele, or both Data from 1 RCT	**Proportion of women with dyspareunia , 1 to 5 years** 16/23 (70%) with polydioxanone sutures 18/26 (69%) with polyglactin sutures 49 women in this analysis	RR 0.45 95% CI 0.10 to 1.97	⟷	Not significant

Further information on studies

Comment: The RCT identified by the review [23] is limited because of its small size, and may have lacked power to identify important differences in the comparisons.

OPTION MESH OR SYNTHETIC GRAFTS VERSUS NATIVE (AUTOLOGOUS) TISSUE

- For GRADE evaluation of interventions for Genital prolapse in women, see table, p 36 .
- We found no clinically important results from RCTs comparing mesh or synthetic grafts with native tissue in surgical procedures for genital prolapse in women.

Benefits and harms

Mesh or synthetic grafts versus native (autologous tissue):

We found one systematic review (search date 2009), which identified no RCTs. [23]

Further information on studies

Comment: None.

GLOSSARY

High-quality evidence Further research is very unlikely to change our confidence in the estimate of effect.

Low-quality evidence Further research is very likely to have an important impact on our confidence in the estimate of effect and is likely to change the estimate.

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Moderate-quality evidence Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate.

Traditional anterior colporrhaphy Mid-line plication without tension suturing.

Ultralateral anterior colporrhaphy Procedure involving dissection to the pubic rami laterally with plication of paravaginal tissues and tension suturing.

Very low-quality evidence Any estimate of effect is very uncertain.

SUBSTANTIVE CHANGES

Abdominal sacral colpopexy versus sacrospinous colpopexy One Cochrane systematic review updated. New data added. [23] Categorisation unchanged (Beneficial).

Anterior colporrhaphy with mesh reinforcement versus traditional anterior colporrhaphy in women with anterior vaginal wall prolapse New evidence added, [24] [25] [26] [27] [28] and one Cochrane systematic review updated. [23] Categorisation unchanged (Beneficial).

Different types of suture versus each other One systematic review updated. New data added. [23] Categorisation unchanged (Unknown effectiveness).

Traditional anterior colporrhaphy versus abdominal Burch colposuspension in women with anterior vaginal wall prolapse One systematic review updated, new data added. [23] Categorisation unchanged (Beneficial).

Vaginal oestrogen One Cochrane systematic review added. [20] Categorisation unchanged (Unknown effectiveness), as there remains insufficient evidence to assess the effectiveness of this intervention.

Posterior colporrhaphy with mesh versus posterior colporrhaphy without mesh reinforcement in women with posterior vaginal wall prolapse New evidence added, [29] including one updated Cochrane systematic review, which added no new trials. [23] Categorisation changed from Unlikely to be beneficial to Unknown Effectiveness.

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Genital prolapse in women

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TABLE 1 **Standard grading systems for the severity of genital prolapse**

Baden–Walker halfway system [1]		POPQ system* [2]	
Grade	**Position of prolapse site†**	**Stage**	**Position of prolapse site†**
0	No prolapse	0	No prolapse
1	Halfway to hymen	1	>1 cm above the hymen
2	To hymen	2	1 cm or less proximal or distal to the plane of the hymen
3	Halfway past hymen	3	>1 cm below the plane of the hymen, but protrudes no further than 2 cm less than the total vaginal length
4	Maximum descent	4	Eversion of the lower genital tract is complete

*The Pelvic Organ Prolapse Quantification (POPQ) system is an adaptation of the Baden–Walker halfway system. [2] Since 1996, the POPQ has been internationally recognised as a standard classification system for genital prolapse. The POPQ is more accurate than the Baden–Walker system because it measures, in centimetres, the positions of 9 sites of the vagina and the perineal body in relation to the hymen, to create a tandem vaginal profile before assigning site specific ordinal stages. The main limitation of the POPQ system is that it is more complex to learn and communicate verbally than the original Baden–Walker system.
†Both systems measure the position of the most distal portion of the prolapse site during the Valsalva manoeuvre.

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GRADE **Evaluation of interventions for Genital prolapse in women.**

Important outcomes	Adverse effects, Hospital stay/length of operation, Postoperative complications, Quality of life, Re-operation, Recurrence of prolapse or persistence of symptoms, Symptom relief								
Studies (Participants)	**Outcome**	**Comparison**	**Type of evidence**	**Quality**	**Consistency**	**Directness**	**Effect size**	**GRADE**	**Comment**
What are the effects of non-surgical treatments in women with genital prolapse?									
1 (48) [20]	Symptom relief	Vaginal oestrogen versus placebo	4	–3	0	0	0	Very low	Quality points deducted for sparse data, unclear allocation method, and low event rate
1 (45) [20]	Recurrence of prolapse or persistence of symptoms	Vaginal oestrogen versus placebo	4	–2	0	0	0	Low	Quality points deducted for sparse data and unclear allocation method
1 (45) [20]	Postoperative complications	Vaginal oestrogen versus placebo	4	–2	0	0	0	Low	Quality points deducted for sparse data and unclear allocation method
What are the effects of surgical treatments in women with anterior vaginal wall prolapse?									
1 (68) [23]	Symptom relief	Traditional anterior colporrhaphy versus abdominal Burch colposuspension	4	–2	0	–1	0	Very low	Quality points deducted for sparse data and randomisation flaws. Directness point deducted for narrow inclusion criteria
1 (68) [23]	Recurrence of prolapse or persistence of symptoms	Traditional anterior colporrhaphy versus abdominal Burch colposuspension	4	–2	0	–1	+2	Moderate	Quality points deducted for sparse data and randomisation flaws. Directness point deducted for narrow inclusion criteria. Effect-size points added for RR <0.2 and RR >2
1 (68) [23]	Re-operation	Traditional anterior colporrhaphy versus abdominal Burch colposuspension	4	–2	0	–1	0	Very low	Quality points deducted for sparse data and randomisation flaws. Directness point deducted for narrow inclusion criteria
1 (68) [23]	Adverse effects	Traditional anterior colporrhaphy versus abdominal Burch colposuspension	4	–2	0	–1	+2	Moderate	Quality points deducted for sparse data and randomisation flaws. Directness point deducted for narrow inclusion criteria. Effect-size points added for RR >5
4 (581) [23] [24] [25] [31]	Symptom relief	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	0	0	–1	0	Moderate	Directness point deducted for restricted population in some RCTs
10 (756) [23] [24] [25] [26] [27] [28] [29] [30] [31]	Recurrence of prolapse or persistence of symptoms	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	0	0	0	0	High	
3 (664) [23] [28]	Re-operation	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	–1	0	0	0	Moderate	Quality point deducted for low event rate in some outcomes

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Important outcomes	Adverse effects, Hospital stay/length of operation, Postoperative complications, Quality of life, Re-operation, Recurrence of prolapse or persistence of symptoms, Symptom relief								
Studies (Participants)	**Outcome**	**Comparison**	**Type of evidence**	**Quality**	**Consistency**	**Directness**	**Effect size**	**GRADE**	**Comment**
1 (76) [23]	Quality of life	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
1 (389) [28]	Hospital stay/length of operation	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	–1	0	0	0	Moderate	Quality point deducted for lack of blinding
11 (1525) [23] [25] [27] [28] [29] [30] [31]	Adverse effects	Anterior colporrhaphy with mesh or graft reinforcement versus traditional anterior colporrhaphy	4	–1	0	0	0	Moderate	Quality point deducted for low event rate for some comparisons
1 (57) [23]	Recurrence of prolapse or persistence of symptoms	Ultralateral anterior colporrhaphy versus traditional anterior colporrhaphy	4	–2	0	0	0	Low	Quality points deducted for sparse data and poor follow-up
1 (74) [23]	Postoperative complications	Ultralateral anterior colporrhaphy versus traditional anterior colporrhaphy	4	–2	0	0	0	Low	Quality points deducted for sparse data and poor follow-up
What are the effects of surgical treatments in women with posterior vaginal wall prolapse?									
3 (131) [23]	Symptom relief	Posterior colporrhaphy versus transanal repair	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
2 (87) [23]	Recurrence of prolapse or persistence of symptoms	Posterior colporrhaphy versus transanal repair	4	–1	0	0	+1	High	Quality point deducted for sparse data. Effect-size point added for RR <0.5
2 (87) [23]	Hospital stay/length of operation	Posterior colporrhaphy versus transanal repair	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
2 (87) [23]	Postoperative complications	Posterior colporrhaphy versus transanal repair	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
2 (238) [23] [29]	Recurrence of prolapse or persistence of symptoms	Posterior colporrhaphy with mesh versus posterior colporrhaphy without mesh reinforcement	4	0	0	–1	0	Moderate	Directness point deducted for conflicting results
What are the effects of surgical treatments in women with upper vaginal wall prolapse?									
2 (169) [23]	Symptom relief	Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
3 (249) [23]	Recurrence of prolapse or persistence of symptoms	Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy	4	0	0	0	0	High	
4 (456) [23]	Re-operation	Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy	4	0	0	–1	0	Moderate	Directness point deducted for composite outcome
3 (293) [23]	Hospital stay/length of operation	Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy	4	0	0	0	0	High	

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Important outcomes	Adverse effects, Hospital stay/length of operation, Postoperative complications, Quality of life, Re-operation, Recurrence of prolapse or persistence of symptoms, Symptom relief								
Studies (Participants)	**Outcome**	**Comparison**	**Type of evidence**	**Quality**	**Consistency**	**Directness**	**Effect size**	**GRADE**	**Comment**
at least 3 (at least 287) [23]	Adverse effects	Abdominal sacral colpopexy versus vaginal sacrospinous colpopexy	4	–1	0	0	0	Moderate	Quality point deducted for incomplete reporting (not reporting types of adverse effects)
1 (82) [23]	Symptom relief	Vaginal hysterectomy and repair (with the vault being fixed to the uterosacral cardinal ligament complex) versus abdominal sacrohysteropexy with uterine preservation	4	–1	0	–1	+1	Moderate	Quality point deducted for sparse data. Directness point deducted for differences in disease state. Effect size point added for RR >2
1 (82) [23]	Re-operation	Vaginal hysterectomy and repair (with the vault being fixed to the uterosacral cardinal ligament complex) versus abdominal sacrohysteropexy with uterine preservation	4	–1	0	–1	+2	High	Quality point deducted for sparse data. Directness point deducted for differences in disease state. Effect-size points added for RR >5
1 (82) [23]	Hospital stay/length of operation	Vaginal hysterectomy and repair (with the vault being fixed to the uterosacral cardinal ligament complex) versus abdominal sacrohysteropexy with uterine preservation	4	–1	0	–1	0	Low	Quality point deducted for sparse data. Directness point deducted for differences in disease state
1 (82) [23]	Adverse effects	Vaginal hysterectomy and repair (with the vault being fixed to the uterosacral cardinal ligament complex) versus abdominal sacrohysteropexy with uterine preservation	4	–2	0	0	0	Low	Quality points deducted for sparse data and for incomplete reporting (not reporting types of adverse effects)
1 (66) [32]	Recurrence of prolapse or persistence of symptoms	Posterior intravaginal slingplasty (infracoccygeal sacropexy) versus vaginal sacrospinous colpopexy	4	–2	0	0	0	Low	Quality points deducted for sparse data and incomplete reporting of results
1 (66) [32]	Hospital stay/length of operation	Posterior intravaginal slingplasty (infracoccygeal sacropexy) versus vaginal sacrospinous colpopexy	4	–2	0	0	0	Low	Quality points deducted for sparse data and incomplete reporting of results
What are the effects of using different surgical materials in women with genital prolapse?									
1 (54) [23]	Symptom relief	Different types of suture versus each other	4	–1	0	0	0	Moderate	Quality point deducted for sparse data
1 (49) [23]	Adverse effects	Different types of suture versus each other	4	–1	0	0	0	Moderate	Quality point deducted for sparse data

We initially allocate 4 points to evidence from RCTs, and 2 points to evidence from observational studies. To attain the final GRADE score for a given comparison, points are deducted or added from this initial score based on preset criteria relating to the categories of quality, directness, consistency, and effect size. Quality: based on issues affecting methodological rigour (e.g., incomplete reporting of results, quasi-randomisation, sparse data [<200 people in the analysis]). Consistency: based on similarity of results across studies. Directness: based on generalisability of population or outcomes. Effect size: based on magnitude of effect as measured by statistics such as relative risk, odds ratio, or hazard ratio.

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