Pelvic organ prolapse is a type of hernia. It occurs when the muscles, ligaments and fascia (a network of supporting tissue) that hold the pelvic organs in their correct positions become weakened or tear. This allows one or more of the pelvic organs to drop, or herniate, into the vagina. The pelvic organs consist of the uterus, vagina, bowel and bladder. Many women have a minor degree of prolapse with only minor (or no) symptoms that may not require surgery. However, symptoms can be distressing, so about one woman in five with prolapse will seek surgical treatment.

Causes of prolapse

- Pregnancy and childbirth are considered to be the main causes. The main factor is damage to pelvic floor muscles due to over-stretching or tearing. Prolapse affects about one in three women who have had one or more children. Prolapse may occur during or shortly after the pregnancy or may take many years to develop.
- Obesity, weight gain, chronic cough, chronic constipation, heavy lifting and smoking may be risk factors.
- Inherited weakness of pelvic-floor connective tissues may be a factor.

Types of prolapse

Prolapse is a type of hernia where one or more pelvic organs drop from their normal position. Prolapse may arise in the front wall of the vagina, back wall of the vagina, or the top of the vagina (vaginal vault). Often a prolapse involves a combination of all these areas.

Prolapse of the front wall of the vagina

- A cysto-urethrocele occurs when the bladder and urethra protrude into the vagina.
- A cystocele occurs when the bladder moves downward into the vagina, creating a bulge that can be felt on the inside of the vagina at the front.

Prolapse of the back wall of the vagina

- A rectocele occurs when the lower part of the large bowel (rectum) bulges through the back wall of the vagina.
- An enterocele occurs when part of the small intestine that normally lies behind the uterus slips down between the back wall of the vagina and the rectum.

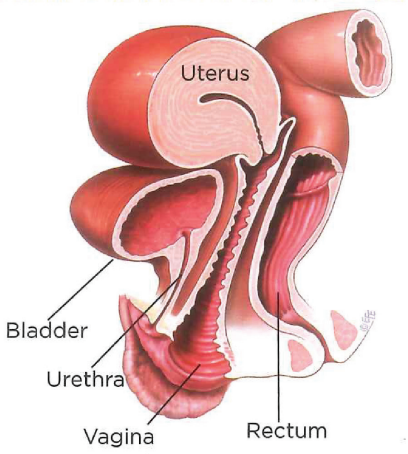
Prolapse of the uterus

This occurs when the uterus moves downward into the vagina.

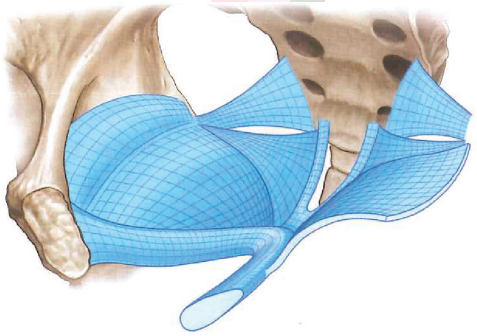
The degree to which the uterus drops is divided into four grades:

- **Grade 1 -** the uterus has moved into the lower half of the vagina.
- **Grade 2 -** the uterus has moved lower into the vagina, and the cervix is near the opening of the vagina.
- **Grade 3 -** the vagina, uterus and cervix are protruding partially outside the vaginal opening.
- **Grade 4 -** this is the most severe form of uterine prolapse where the vagina, uterus and cervix have completely fallen outside the vaginal opening.
- Prolapse of the vaginal vault
- Women who have had a hysterectomy can develop a prolapse of the vaginal vault, where the top part of the vagina collapses into itself and may fall outside the vaginal opening.

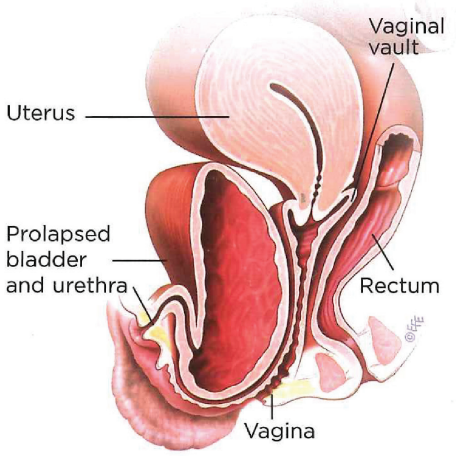
Normal Anatomy of the Pelvis



Pelvic Floor Muscles



Cysto-Urethrocele



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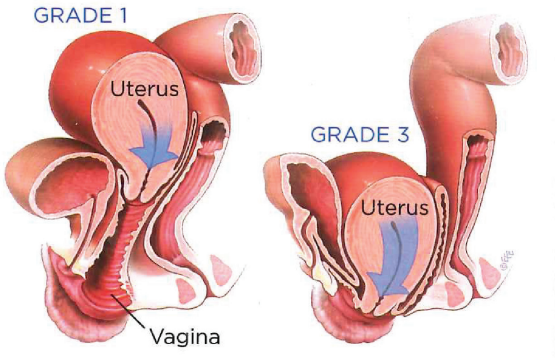
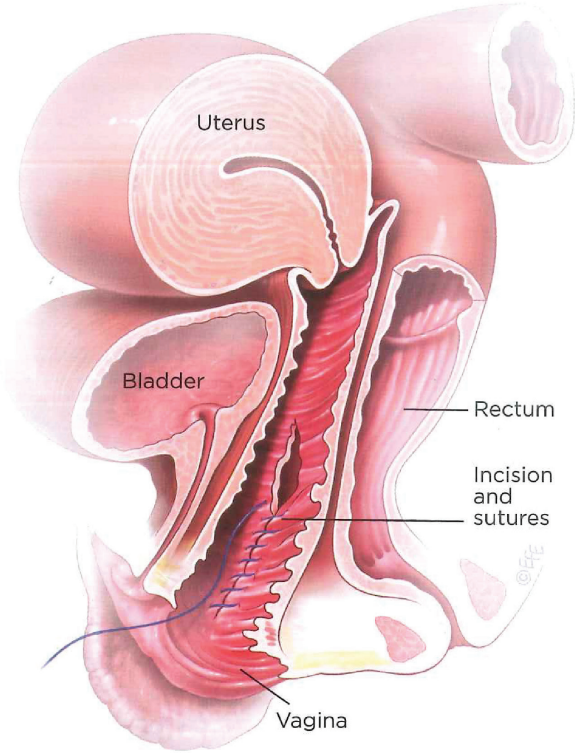
Prolapse of the Uterus



Repair of posterior (back) vaginal wall prolapse

A posterior colporrhaphy is used to repair weakness in the back wall of the vagina that has caused a prolapse of the rectum or small intestine. An incision is made in the back wall of the vagina. The rectum and small intestine are pushed back into place. Excess vaginal wall tissue is removed, and the vagina is repaired with slowly dissolving sutures.

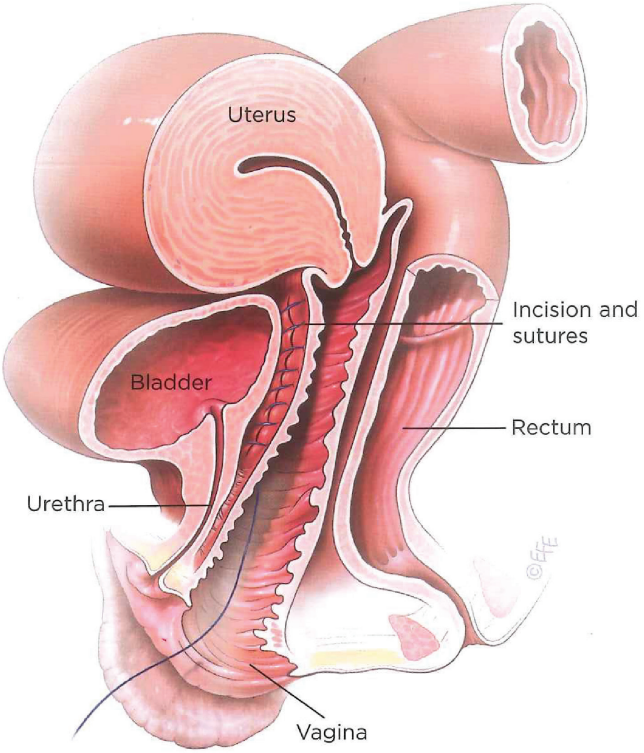


Hysterectomy to treat uterine prolapse

In women who have completed child-bearing, a hysterectomy (removal of the uterus) is an effective way to resolve prolapse of the uterus. However, it will not necessarily treat all prolapse and often needs to be combined with one or more of the other surgical procedures if the front and back vaginal walls are prolapsing.

Repair of anterior (front) vaginal wall prolapse

An anterior colporrhaphy is performed to repair a prolapse of the front wall of the vagina involving the bladder, the urethra, or both. A cut is made in the front wall of the vagina to expose the weakened tissue that normally supports the bladder and urethra. This tissue is reinforced and sutured together. The vaginal wall is then sutured over the repair.



Paravaginal repair

Weakness in the sides of the front vaginal wall may be treated using an operation called a paravaginal repair. The procedure is similar to an anterior colporrhaphy (above) except that additional support is provided to the side walls of the vagina.

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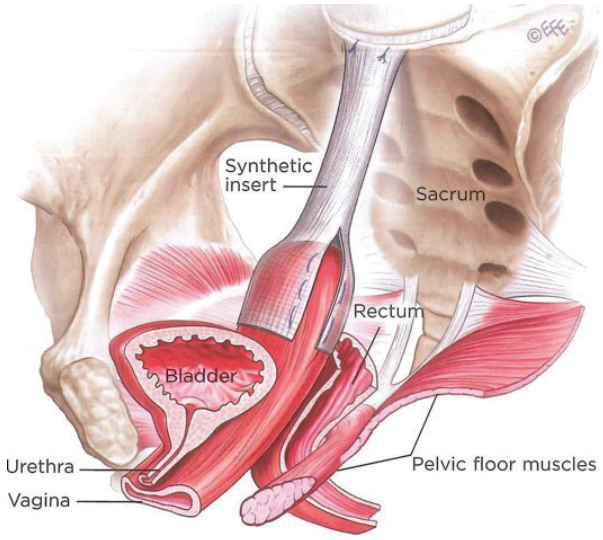
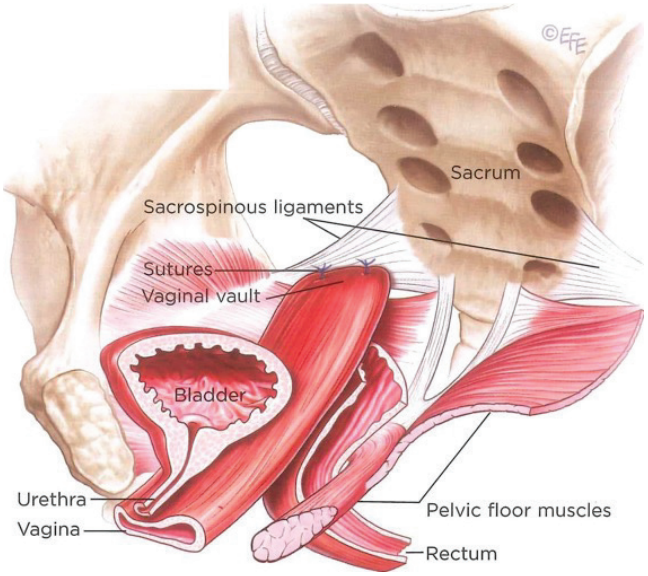
Sacrocolpopexy

In women with a vaginal-vault prolapse after hysterectomy, one end of a synthetic insert can be sutured to the top of the vagina and the other end sututed to the bone at the end of the spine, called the sacrum. While this procedure is highly effective, it is significantly invasive, with the surgical approach being through the abdomen. There may be a slower recovery and a higher risk of complications. In selected cases, it may be performed laparoscopically.



Sacrospinous fixation

This surgery restores support of the uterus or vaginal vault (if the uterus has been removed) using the strong sacrospinous ligament. To access the ligament, the surgeon makes an incision in the back wall of the vagina, similar to a posterior vaginal wall repair (see page 2). Sutures are inserted to affix the ligament to the cervix (if present) or the vaginal vault. The sutures may be placed in either the right or left ligament (unilateral fixation) or in both ligaments (bilateral fixation). Both techniques are effective.



Uterosacral ligament fixation

The uterosacral ligaments can be used to treat vaginal-vault prolapse after hysterectomy. Similar techniques are used by different surgeons. One example is a McCall culdoplasty. The prolapse is repaired by suturing the top of the vagina to the two uterosacral ligaments that originally supported the uterus.

Symptoms

Symptoms depend on which organs are affected and the severity of the prolapse. Symptoms include:

- sensation of a lump in the vagina.
- a heavy, dragging sensation in the lower pelvic area (similar to period pain) or lower back, which is worsened when coughing, sneezing, exercising, late in the day, or after standing for some time.
- urinary problems, such as repeated urinary infections, a poor stream, or incomplete emptying of the bladder may occur. Emptying can be difficult.
- difficulty in emptying the bowel.
- interference with sexual enjoyment if the prolapse prevents comfortable inter course or causes a decrease in sensation.

vaginal flatus (vaginal "wind").

Principles of surgery

The aims of surgery are to restore normal anatomy and sexual function, as much as possible. Assessment of damage will help the gynaecologist to plan the best type of surgery to restore normal anatomy and reduce the likelihood of recurrence. Your gynaecologist will discuss which surgery is best suited to your condition. Different methods may be used.

Surgery can be performed:

- via the vagina
- using laparoscopic (keyhole) surgery
- through an incision in the abdominal wall (laparotomy).

Before surgery

The gynaecologist needs your complete medical history. An internal pelvic examination is necessary and maybe a rectal examination. Urodynamic and imaging studies may be recommended, even if the patient has no urinary symptoms. As prolapse can mask symptoms of stress incontinence, surgery may expose symptoms of incontinence afterwards. Tell your doctor about health problems because some may interfere with the surgery, anaesthesia or recovery. Tell your doctor if you have or have had:

- allergy to antibiotics, suture materials, surgical dressings, anaesthetic drugs, or any other medicines
- prolonged bleeding or excessive bruising when injured.

Give your doctor a list of ALL medicines you are taking or have recently taken. Include medicines prescribed and those bought "over the counter". Include long-term drugs such as blood thinners, aspirin, arthritis medication or insulin.

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Your doctor may ask you to stop taking some medicines before surgery, or you may be given an alternative dose. Discuss this carefully with your surgeon, particularly if you take any blood thinner, such as warfarin or clopidogrel, among others. Some gynaecologists prescribe oestrogens to help strengthen genital tissue prior to surgery.

Recovery after surgery

Recovery depends on many factors, including the patient's age, general health, and especially the type of operation. After laparoscopy, pain and discomfort may be felt in one or both shoulders. This is thought to be due to the carbon dioxide gas used to inflate the abdomen during the laparoscopy. Most women have a catheter inserted in the bladder to drain urine. This is removed as soon as possible after surgery. After a general anaesthetic, cough and breathe deeply to keep the lungs clear. To reduce the risk of a blood clot forming in a deep vein in a leg (deep vein thrombosis, DVT), walk soon after surgery to improve blood circulation through your legs. You may have gas pains, nausea or other discomfort while your digestive system returns to normal, so eat foods that are easy to digest. Drink plenty of water once your doctor recommends it. You can help your recovery by observing the following.

- No heavy pushing, pulling or lifting for at least six weeks. Afterwards, avoid heavy lifting and straining.
- No vigorous exercise for at least six weeks.
- Follow your doctor's advice on driving and returning to work.
- Pain medication can cause temporary changes in bowel habits.

Your doctor will check on your progress after surgery, answer any questions and arrange follow-up for the removal of any sutures or taples, if necessary.

It may be possible to return to normal sexual activity between three and eight weeks after surgery, provided there have been no complications. Check with your surgeon. Some women prefer to wait until after the six-week check-up. Women who have had a vaginal repair may notice tightness to begin with, but usually sexual function remains unchanged.

Possible complications of pelvic organ prolapse surgery

As with all surgical procedures, pelvic organ prolapse surgery does have risks, despite the highest standards of practice. While your gynaecologist makes every attempt to *minimise* risks, complications may occur that have permanent effects. It is not usual for a gynaecologist to outline every possible side effect or rare complication of a surgical procedure. However, it is important that you have enough information about possible complications to fully weigh up the benefits, risks and limitations of surgery.
Any discussion of frequency of risks or benefits (for example, one patient in 100, or "rare" and so on) can only be estimates as the outcomes of clinical research can vary widely. Such outcomes can depend on many factors, such as the surgical methods, equipment, surgeons' experience and data collection, among others.
The following possible complications are listed to inform and not to alarm you. There may be ocher complications that are not listed. Smoking, obesity, diabetes and other significant medical problems can cause greater risks of complications.

General risks of surgery

- Cardiovascular risks such as heart attack, blood clots or stroke.
- Infection of the wounds, which is usually treated with antibiotics.
- Bleeding chat may require a return to theatre or a transfusion (about one patient in 100).
- Anaesthetic risks.

Specific risks of prolapse surgery

- Depending on the type of prolapse, the type of operation and the patient, prolapse surgery can fail in about 10 to 50 women in 100.
- Prolapse may recur. Up to 30 women in 100 require another operation over the ensuring years. Prolapse in other areas of the vagina can develop later.
- Between one and 10 women in 100 may develop stress incontinence, which was not present before surgery.
- About 15 women in 100 may have difficulty passing urine after an anterior repair. This may require the use of a urinary catheter for a week or so.
- A urinary tract infection may develop in about one to 10 women in 100.
- For patients in whom surgical mesh has been used, complications of the mesh affect about one in 10 to 20 women, such as failure of tissues to heal over the mesh, vaginal scarring or stricture, pain, bleeding and urinary problems. Rarely, the mesh can erode into nearby organs such as the bowel or bladder and cause pain during intercourse. If a complication is severe, the mesh may need to be removed (either totally or partially).
- Injury to the urethra or bladder during surgery is uncommon and is repaired during the procedure. If damage is not detected, a fistula (connecting channel between bladder and vagina) may occur that requires surgical repair. This affects about two patients in 1,000.
- A number of women will continue to have problems with bowel emptying after posterior prolapse repair.
- Intercourse may be painful for between one and five women in 100.
- Uncommonly, damage to the rectum or small intestine may require further surgery.
- During laparoscopy, a gas embolism (a bubble of carbon dioxide in the blood) can rarely occur. It can be life threatening but usually can be quickly treated by the anaesthetist and surgeon.
- Other rare complications include blood transfusion and damage to a ureter.

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Pregnancy after pelvic prolapse repair
There is a risk chat labour and childbirth can damage the prolapse repair. To reduce this risk, women are usually advised to delay prolapse repair until after their families are complete. Women who become pregnant are usually advised to have a caesarean section for delivery.

Report to your gynaecologist
- Notify your gynaecologist at once if you notice any of the following:
- nausea or vomiting that worsens
- persisting and increasing abdominal pain, lower back pain, and pain not reduced by painkillers
- persistent bleeding from the vagina that smells bad or becomes heavier than a normal period
- persistent redness, pain, pus or swelling around the incisions, or a fever more than 3gsc or chills, which may indicate infection
- pain or burning on passing urine, the need to pass it frequently, or increasing difficulty emptying the bladder
- feeling faint, dizzy or short of breath
- any concern you may have about your surgery
  If you have any problems or questions please call the team at ASC Gynaecology.

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