PROCEDURE

Simple prostatectomy

Simple prostatectomy removes enlarged inner prostate tissue that is blocking urine flow.

PURPOSE
Relieve urinary blockage caused by a very enlarged prostate

PROCEDURE TYPE
Therapeutic surgery, open or minimally invasive

WHERE IT IS DONE
Operating theatre

ANAESTHESIA
General

HOW LONG IT TAKES
About 2 to 4 hours

PREPARATION
Fasting, medication review, urine and blood tests

RECOVERY
Hospital stay; no driving until comfortable and medicines allow

MAIN RISKS
Bleeding, infection, urine leakage, ejaculatory changes

RESULTS
Urine flow improves after catheter removal; pathology takes several days

Overview

A simple prostatectomy is surgery to remove the enlarged inner part of the prostate. It is usually used to treat severe urinary blockage caused by benign prostatic hyperplasia, or BPH. BPH is noncancerous enlargement of the prostate.

Despite its name, this is a major operation. "Simple" distinguishes it from a radical prostatectomy, which removes the entire prostate and nearby tissues to treat prostate cancer. A simple prostatectomy leaves the prostate's outer shell in place.

The operation may be performed through one larger incision in the lower abdomen. This is called open surgery. It can also be done through several small incisions using laparoscopic or robotic instruments. The best approach is influenced by prostate size, other bladder conditions, previous surgery, and the experience of the surgical team.

Why the procedure is performed

Simple prostatectomy is mainly offered when a very enlarged prostate is pressing on the urethra, the tube that carries urine out of the bladder. It may be considered when symptoms are severe, medicines have not helped enough, or another procedure is unlikely to remove enough tissue.

Reasons for offering surgery may include:

This operation may be combined with treatment for bladder stones or a bladder pouch called a diverticulum.

- Repeated inability to urinate
- Bladder stones caused by poor bladder emptying
- Repeated urinary infections related to blockage
- Kidney or bladder damage from backed-up urine
- Ongoing blood in the urine attributed to BPH
- Bothersome symptoms that substantially affect daily life

Who should and should not have it

You may be offered a simple prostatectomy if your prostate is very large and you are healthy enough for major surgery and anaesthesia. It can remove more tissue than many procedures performed through the urethra.

It may not be the right choice if your symptoms are mild, medicines are controlling them, or a less invasive procedure can provide similar relief. It is not a treatment for prostate cancer.

Surgery may need to be avoided or delayed if you have:

Age alone does not decide whether you can have the procedure. Your overall health, goals, prostate anatomy, and the expected benefits and risks are more important.

- An active urinary infection
- An unstable heart, lung, or other serious medical condition
- A bleeding problem that has not been controlled
- Blood-thinning treatment that cannot be safely adjusted
- A need for further tests to assess possible prostate or bladder cancer

How to prepare

Your treating facility's own instructions take priority because preparation can differ by surgical approach and anaesthetic plan.

You will usually have blood and urine tests. You may also need an electrocardiogram, or ECG, to check your heart. A urine infection is normally treated before surgery.

Give the team a complete list of your medicines, vitamins, and supplements. Medicines that affect clotting may need to be changed temporarily. These include anticoagulants like warfarin or apixaban , antiplatelet medicines, and some anti-inflammatory pain medicines. Do not stop a prescribed blood thinner unless the clinician responsible for it gives you a plan.

Follow the facility's instructions about when to stop eating and drinking. Arrange help at home after discharge and transport from the hospital. You will not be able to drive yourself home.

Ask whether you are likely to leave with a urinary catheter. This is a flexible tube that drains urine from the bladder into a bag. Learning how to manage it before discharge can make recovery easier.

What happens during the procedure

You will usually be given a general anaesthetic, so you are unconscious and do not feel the operation. Compression devices and, when appropriate, medication may be used to reduce the risk of blood clots.

The surgeon reaches the prostate through an abdominal incision or several small keyhole incisions. In robotic surgery, the surgeon controls instruments from a nearby console; the robot does not operate by itself.

The surgeon opens the prostate capsule or bladder and separates the enlarged inner tissue from the outer prostate. The remaining space is checked for bleeding and closed. Removed tissue is sent to a laboratory for examination.

A catheter is placed to drain urine while the area heals. Fluid may run through the catheter for a time to wash blood and small clots from the bladder. A temporary surgical drain may also be placed near the operation site.

Recovery and what to expect afterward

Pain is usually strongest around the incisions during the first few days. Bladder spasms can

cause cramping or a sudden urge to urinate even while the catheter is draining. Your team can provide pain relief and, if needed, treatment for spasms.

You will usually begin with fluids and return to normal food as your bowel function recovers. Drinking enough fluid can help keep urine flowing, unless you have been told to limit fluids for another medical reason.

Walking soon after surgery helps reduce blood clots and chest complications. Avoid heavy lifting, strenuous exercise, and straining until your surgeon says the tissues have healed. Preventing constipation can reduce pressure on the surgical area.

Do not drive while taking opioid or other sedating pain medicine. You should also wait until you can sit comfortably, move freely, and perform an emergency stop safely. Ask whether having a catheter affects local driving or insurance rules.

Time away from work is often several weeks, especially for physical jobs. Desk work may be possible sooner if pain is controlled and catheter care is manageable.

Blood-tinged urine is expected for a while and may briefly increase after activity. Urinary urgency or leakage can occur after the catheter is removed and usually improves as the bladder adjusts.

Risks and possible complications

Your surgeon should explain how the risks apply to your health and the planned approach. Possible complications include:

After standard simple prostatectomy, semen often travels backward into the bladder instead of leaving through the penis. This is called retrograde ejaculation. Orgasms can still occur, but they may be dry or produce less semen. This affects fertility.

Erections are often preserved, but sexual function can change after surgery. Discuss fertility and sexual concerns before consenting.

- Bleeding that may require treatment or a blood transfusion
- Urinary or wound infection
- Blood clots in a leg or lung
- Leakage from the bladder or surgical repair
- Temporary or, less often, lasting loss of urine control
- Scar tissue that later narrows the bladder outlet or urethra

- Injury to nearby structures
- Need for another procedure if blockage returns

Results and follow up

The catheter usually remains until the surgical area has healed enough to pass urine safely. Removal may occur before discharge or at a later appointment. The timing is based on the operation and your recovery.

Urine flow often improves after catheter removal, although urgency, frequent urination, and leakage may take longer to settle. A bladder that has been blocked for a long time may not recover fully.

Laboratory examination of the removed tissue usually takes several days. Although the operation is performed for presumed benign enlargement, this examination can occasionally identify an unexpected abnormality that needs further discussion.

Routine follow-up checks wound healing, catheter removal, urine flow, bladder emptying, and the pathology result. Because some prostate tissue remains, you may still need future prostate assessment based on your age, health, and preferences.

Alternatives

The main alternatives offer different balances between symptom relief, recovery, side effects, and the chance of needing further treatment.

- Observation and lifestyle changes: Avoids treatment risks but does not remove the blockage. It may suit mild symptoms without complications.
- Medicines: Alpha blockers relax the prostate outlet, while 5-alpha-reductase inhibitors can gradually shrink some enlarged prostates. Medicines are less invasive but may cause side effects and may not relieve severe blockage.
- Laser enucleation, such as HoLEP: Removes obstructing tissue through the urethra without an abdominal incision. Recovery is often faster, but it requires specialised equipment and experience.
- Transurethral resection of the prostate, or TURP: Removes tissue through the urethra. It is established treatment but may be less suitable for a very large prostate.

- Aquablation or other transurethral procedures: Avoids abdominal incisions, but suitability is influenced by prostate size, anatomy, availability, and long-term treatment goals.
- Prostate artery embolisation: Blocks part of the prostate's blood supply through a catheter placed in an artery. It is less invasive, but symptom relief may be less predictable and further treatment may be needed.
- Long-term catheter drainage: Can bypass the blockage when surgery is not suitable, but it requires ongoing care and carries infection and catheter-blockage risks.

When to call your healthcare team

Contact your healthcare team promptly for fever, worsening incision redness, pus-like drainage, increasing pain, persistent vomiting, or urine that becomes more bloody rather than gradually clearing.

Seek urgent advice if the catheter stops draining, especially if you have increasing lower abdominal pain or bladder pressure. Do not remove or flush it unless you have been trained and told to do so.

Seek emergency care for heavy bleeding with large clots, severe breathing difficulty, chest pain, fainting, confusion, or a painful swollen leg. These are different from routine soreness, mild blood-tinged urine, or temporary urinary urgency.

Common questions

Will I be asleep?

Usually, yes. Simple prostatectomy is generally performed under general anaesthesia, which means you are unconscious throughout the operation.

Can I drive home?

No. Someone else must take you home. Do not drive until you are off sedating medicines and can control the vehicle comfortably and safely.

How painful is it?

Incision pain and bladder spasms are common during early recovery. Pain should gradually improve and can usually be managed with the treatment plan provided at discharge.

How long will I need a catheter?

It may be needed for several days or longer. The timing depends on the surgical approach and

how well the bladder and repair are healing.

When will I know if it worked?

Improved flow may be noticeable after catheter removal. Urgency, frequency, or leakage can take weeks or longer to settle.

When will I know the tissue results?

The pathology report is usually available within several days, although timing differs between laboratories. Your team will explain the findings at follow-up or contact you sooner if needed.

Sources

- American Urological Association. Benign Prostatic Hyperplasia: Surgical Management Guideline, including 2023 amendment -guideline)
- European Association of Urology. Guidelines on the Management of Non-neurogenic Male Lower Urinary Tract Symptoms: Disease Management
- National Institute for Health and Care Excellence. Lower urinary tract symptoms in men: management, Clinical Guideline CG97
- National Institute of Diabetes and Digestive and Kidney Diseases. Enlarged Prostate (Benign Prostatic Hyperplasia): Treatment
- British Association of Urological Surgeons. Open prostatectomy for benign disease: patient information