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Transurethral resection of the prostate (TURP)

An operation to cut away part of your enlarged prostate

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This information is based on *Clinical Evidence*, the *British Medical Journal's* worldwide survey of the best, most up-to-date medical research, used by doctors everywhere.

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This information tells you about an operation on the prostate called a transurethral resection of the prostate (TURP). It explains how the operation is done, how it can help, what the risks are and what to expect afterwards.

The benefits and risks described here are based on research studies and may be different in your hospital. You may want to talk about this with the doctors and nurses treating you.

What is a TURP?

If you have a TURP, a surgeon cuts away part of your prostate to stop it pinching the tube that carries urine from your bladder out through your penis. This tube is called the urethra.

Your prostate is usually about the size of a chestnut. It sits under your bladder and is partly wrapped around your urethra.

It makes the milky fluid (semen) that comes out of your penis when you have an orgasm.



The operation is called a transurethral resection because your surgeon will pass a tube through your urethra (transurethral) and cut away your prostate (resect it).

Why do I need a TURP?

It's common for men's prostates to get bigger as they get older.¹ Doctors call this **benign prostatic hyperplasia**, or BPH. Benign means it isn't cancer. Hyperplasia means extra growth of normal cells. Nobody knows exactly why it happens, but it's probably linked to changes in the amount of some hormones in your body.²

BPH isn't usually serious but if your prostate is enlarged it can press on your bladder and your urethra. This can cause problems when you urinate. You may:³

- Strain to urinate
- Make lots of trips to the toilet, and need to get up in the night
- Need to urinate urgently
- Have a weak urine flow or one that stops and starts
- Leak or dribble urine (some men wear pads to keep dry).

Not everyone who has BPH will need an operation. It's usually recommended if:⁴

- Your urethra is so blocked that your bladder often doesn't empty completely. The urine that's left can keep causing infections
- You suddenly can't urinate at all. This is called **acute urinary retention** and can damage your kidneys

- Your symptoms are causing you a lot of trouble, and drug treatments haven't helped
- You have large bladder stones. These can form if your bladder doesn't empty properly.

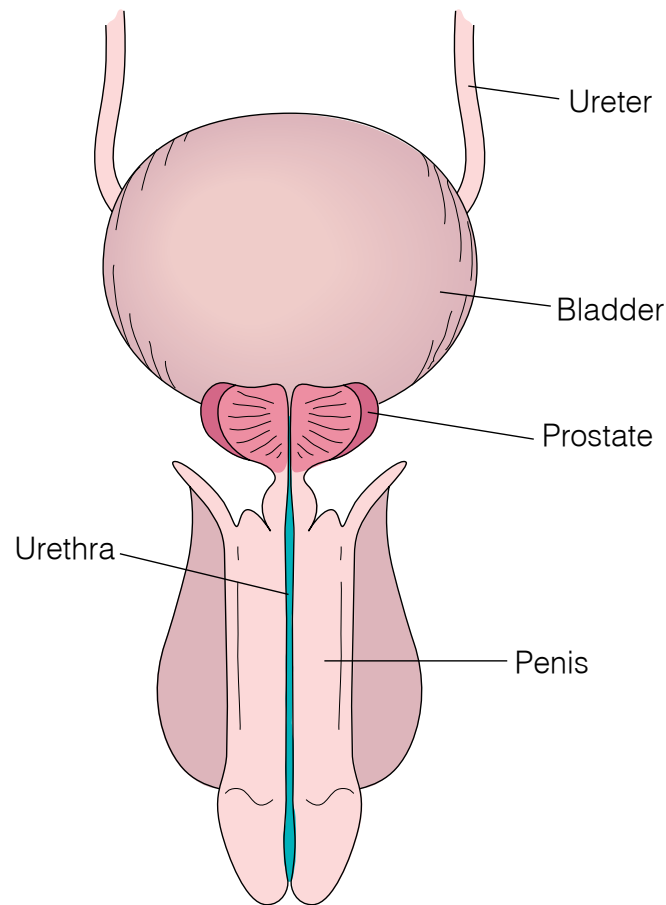
TURP is the most common type of operation for an enlarged prostate, although it's not as common as it used to be. About 40,000 of these operations are done each year in the UK.⁵

What happens during the operation?

A TURP usually takes between half an hour and an hour, depending on how much of the prostate needs to be removed. You'll be given either a **general anaesthetic** (a drug that makes you sleep) or an **epidural** (an injection into your spine). If you have an epidural, the lower part of your body will be numb. You won't be able to see the operation, but you'll be able to hear what's going on. Usually a nurse or the anaesthetist will talk to you during the operation.

A surgeon will put a thin tube into the opening of your penis and up your urethra to your prostate. The tube has a light and a tiny camera on the end. The tube also has a tiny looped wire attached to it. This is heated with an electric current and used to cut away the bit of your prostate that's blocking your urine. The pieces of prostate are flushed down the tube with water.

You won't be able to urinate properly straight after the operation because your urethra will be sore and swollen.



How can this operation help me?

There's good research to show that surgery helps with the symptoms of an enlarged prostate. In one study, 9 in 10 men said that their symptoms were still better three years after their operation. This compares with 4 in 10 men who waited to see what would happen rather than having treatment.⁶

- After the operation, you should have a stronger stream of urine, and you shouldn't have to strain or push to get your urine flowing.^{6,7}
- You may also have more control over when you urinate and need to go less often and less urgently.^{6,7}
- Your symptoms are less likely to interfere with your normal activities. So you may not need to rush to the bathroom or get up in the night as often as you did before. Many men say they can get back to doing things they enjoy, like outdoor sports and going to the cinema, without having to worry about being close to the toilet.

What are the risks?

All operations carry risks, and your surgeon should tell you about these before you have a TURP.

Anaesthetics can have side effects. You may feel sick after the operation. And you may have an **allergic reaction** to the anaesthetic. If you have any allergies, you must tell your doctor. Some people get breathing or heart problems. This is

A thin, flexible tube called a catheter is put into your urethra to drain your urine (and any bits of prostate that still haven't come out) into a jar or bag by your bed. The doctor may flush fluid through the catheter into your bladder to help clear any blood clots. The fluid then drains away with your urine. Men say this flushing feels as though their bladder is constantly full.

You won't need stitches or dressings after the operation.

serious but very rare. Your blood pressure, heartbeat, body temperature and breathing will be closely monitored.

You may bleed heavily during or after surgery. And you may get an infection. It's also possible to get a blood clot (known as a **deep vein thrombosis** or DVT) in a vein in your leg. This clot can break off and travel to your lungs where it may cause a blockage. You may need to wear tight elastic stockings during the operation to help prevent clots.

These extra problems are called **complications**. You may need further treatment for complications, such as surgery to stop bleeding or antibiotics to deal with an infection.

It's hard to say exactly how often problems happen because the research isn't very good. You can use the statistics we give below as a guide, but it's important to discuss with your doctor how often problems happen in your hospital.

Men over 80 have a higher risk of complications, especially if they also have other health problems.⁸

Problems that can happen straight after the operation

Bleeding: You may have heavy bleeding into your urine, but this should stop after a few days. In most studies, about 1 in 50 men need to be given extra blood (a blood transfusion) or need to go back into the operating theatre for the bleeding to be stopped.^{4 5 7} But some studies have found that the problem happens around twice as often as this. You may be less likely to bleed with newer operations than with TURP.⁹

Urine infection: There's a small chance that you'll get an infection in your urine.^{6 7 10}

TURP syndrome: This happens to about 1 in 50 men.⁴ It's most common in men whose operations last more than an hour. TURP syndrome can make you slightly unsteady, confused or queasy, or make you vomit. It can also raise your blood pressure or cause problems with your sight. These problems are triggered by your body absorbing the fluid that's used to wash away the bits of prostate removed during surgery. This upsets the balance of salts in your blood and is particularly harmful for men who have a heart problem or a kidney problem. TURP syndrome is easily treated.

Problems that can happen later

Dry climax: About 7 in 10 men get a problem called retrograde ejaculation (or 'dry climax') after a TURP.^{4 5 6 11} This means that, when they orgasm, no semen (or much less semen than usual) comes out of their penis.

If you have dry climax, you'll still be able to get erections and you'll still feel as though you climax during sex. So you should be able to enjoy sex as you did before the operation. However, you may not be able to father children through sexual intercourse.

Erection problems: The nerves that control erections are next to the prostate and can be damaged during surgery. But some studies show that TURP doesn't seem to cause erection problems.^{6 12}

In one study, men who had the surgery didn't get any more erection problems than men who didn't have a TURP.⁶ In another trial, many men who had this operation said that the quality of their erections actually improved.¹³

Losing control over your urine flow (incontinence): About 1 in 50 men can't hold on to their urine after they have a TURP.⁴
⁶ This is called incontinence. You may become incontinent if the ring of muscle (sphincter) at the neck of your bladder is damaged during the operation.

However, a study comparing men who had TURP with men who weren't treated didn't find that incontinence was more common in men who had surgery.^{6 12} So there's mixed evidence on whether you are at risk of becoming incontinent if you have this operation.

Problems passing urine again: About 1 in 25 men get scarring around the opening of their bladder or in their urethra. This makes it difficult and painful to pass urine. You may need another operation.^{4 6}

Needing another operation: About 1 in 100 men who have a TURP need another one in the future because their prostate gets bigger again.¹⁴

Dying from surgery: There's an extremely small chance that you could die from the surgery.¹⁴

What will happen if I choose not to have the operation?

Some men feel that the risks of TURP are too great. If your symptoms are mild and don't bother you much, you don't have much to gain from this operation. Even if your symptoms are severe, you can choose to put off the operation and wait to see what happens.⁴ Your doctor will keep monitoring your symptoms and give you advice on how to manage them. This is called 'watchful waiting' or 'active monitoring'. Your symptoms probably won't improve, but they may not get any worse for many years.¹⁵

Having a large prostate is unlikely to make you seriously ill and there's **no evidence that it causes prostate cancer.**^{16 17 18} The main problem is suddenly being unable to urinate at all (acute urinary retention). This can cause an infection or damage your kidneys. One study found that the average 60 year old man with a large prostate has a 1 in 5 chance of getting urinary retention within 20 years.¹⁹

How your condition develops often depends on how severe your symptoms are to start with. In one study of men who didn't have any treatment, those with mild symptoms usually didn't get severe symptoms or need surgery. Over the next four years, this is what happened to the men whose symptoms were worse:²⁰

- Half still had the same level of symptoms
- 1 in 4 had surgery
- 1 in 8 got severe symptoms

- 1 in 8 improved and had only mild symptoms.

Your doctor will talk to you about the risk of not having surgery. Older men, and men with very large prostates and high levels of PSA, are most likely to get worse.^{19 21} PSA is a substance that helps your semen stay liquid, so your sperm can swim. When something goes wrong with your prostate, large amounts of PSA enter your bloodstream. PSA stands for **prostate-specific antigen**.

What other treatments are there?

Medicines

Doctors advise most men to try drugs before surgery. There are two types available: **alpha-blockers** and **5-alpha-reductase inhibitors**.

Alpha-blockers improve the flow of urine by relaxing the muscles in your prostate and your bladder. They can reduce your symptoms by about 30 to 50 percent.^{22 23}

There are two 5-alpha-reductase inhibitors available. They're called finasteride and dutasteride. They both shrink your prostate, which should make it easier for you to urinate.^{24 25}
²⁶ They may not be as good at helping symptoms as alpha-blockers.^{27 28 29 30} But taking finasteride for four years can halve your chances of suddenly being unable to pass urine (acute urinary retention) and needing prostate surgery.²⁴

Both alpha-blockers and 5-alpha-reductase inhibitors can cause dry climax. Some men who take finasteride lose interest in sex and have problems getting or keeping an erection.^{28 31 32}

Drugs may not help your symptoms as much as surgery, and the effects may not last as long. But drugs have fewer risks than surgery. And after surgery you need several weeks to recover.

Newer types of surgery

There are several operations that are simpler and less serious than TURP. These use heat from an electric current, microwaves or laser beams to burn away part of your prostate. Another type of operation is called a **transurethral incision of the prostate (TUIP)**. In this operation, a surgeon makes small cuts where your bladder meets your prostate. This relieves the pressure on your urethra.

These operations may help with symptoms and make it easier for you to urinate.^{7 33} They have fewer side effects and cause less bleeding than TURP.^{10 33 34 35 36} Your stay in hospital will usually be shorter, and you may have to use a catheter for less time afterwards.^{7 37 38} But there's no research on whether the benefits of these newer operations last as long as the benefits of TURP.

Herbal remedies

Saw palmetto extract is one of several herbal remedies that some men find helpful. There's some evidence that saw palmetto extract can help men who have BPH.³⁹

What can I expect after the operation?

After your operation, you'll feel a bit sore and tired. You can take painkillers for any pain you have. If these don't work it's important to tell the nurse, as being in pain may slow your recovery. You may need a higher dose or a different type of painkiller.

You'll need to stay in hospital until the catheter (thin tube) draining your urine is removed. This is usually about two or three days. You may notice that your urine flows faster straight away. But it may take a while before you can urinate normally again. Some men need to come back to hospital and have the catheter put back in for a day or two.



When you get home, you may still feel the need to urinate often because your urethra takes time to heal after the operation. This problem will probably ease off during the six weeks after surgery. You may get a stinging feeling when you urinate, and you may notice some blood in your urine. This can last for a few weeks after the operation.

Most men are fit enough to get out and about within a week. But it may be two weeks to four weeks before you can return to work, depending on the job you do. It will probably be several weeks before you'll feel comfortable enough to have sex. It's also best to avoid strenuous activity, such as sport or

heavy lifting, for about six weeks until you've healed properly. Try to drink plenty of water. This helps prevent constipation and helps flush out any infections.

It may be a couple of months before you heal completely. Generally, the longer you had the problem before you were treated, the longer your recovery time will be.

The good news is that most men think their operation was a success.^{40 41} In one study, men were asked how they felt a year after their operation. Three-quarters of the men said that they felt much better and less anxious than they did before their operation.⁴⁰

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