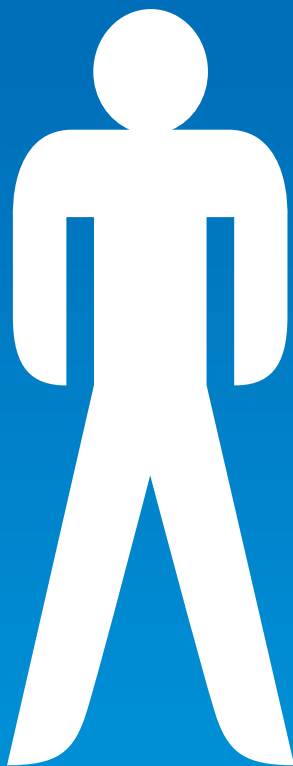


Enlarged prostate

A guide to diagnosis and treatment



**PROSTATE
CANCER UK**

About this booklet

This booklet is for men who want to know more about a condition called an enlarged prostate. You may also hear it called benign prostatic enlargement (BPE) or benign prostatic hyperplasia (BPH). It isn't cancer and it can be treated if it's causing you problems. Your partner, family or friends might also find this booklet helpful.

We explain the causes, symptoms, diagnosis and treatment of an enlarged prostate.

Each GP surgery or hospital will do things slightly differently. Use this booklet as a general guide and ask your doctor or nurse for more information. You can also call our Specialist Nurses, in confidence, on 0800 074 8383 for more information on any prostate problem.

The following symbols appear throughout the booklet:



Our Specialist Nurses




Our publications



Sections for you to fill in

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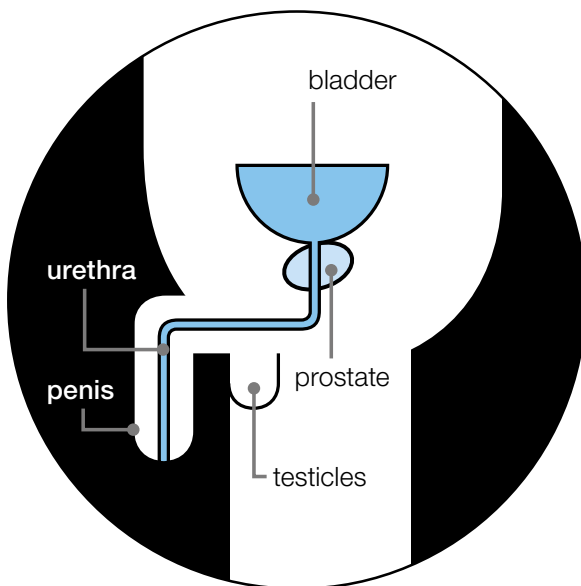


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What is the prostate?

Only men have a prostate. The prostate is usually the size and shape of a walnut. It sits underneath the bladder and surrounds the urethra, which is the tube men urinate (pee) and ejaculate through.

The prostate is a gland. Its main job is to help make semen – the fluid that carries sperm.



Enlarged prostate: an overview

This section describes the causes and symptoms of an enlarged prostate. We also explain how an enlarged prostate might affect your life.

Summary

- An enlarged prostate is an increase in the size of the prostate.
- It's common in men over the age of about 50.
- We don't really know what causes an enlarged prostate, but we know your chance of having it increases as you get older.
- An enlarged prostate is not prostate cancer, and it doesn't increase your risk of prostate cancer.
- An enlarged prostate may cause urinary problems, such as a weak flow and needing to urinate more often.
- A small number of men with an enlarged prostate may have trouble emptying their bladder properly (urine retention).

What is an enlarged prostate?

An enlarged prostate is an increase in the size of the prostate. It isn't caused by cancer. The medical name for an enlarged prostate is benign prostatic enlargement (BPE).

- Benign – not cancer.
- Prostatic – to do with the prostate.
- Enlargement – an increase in size.

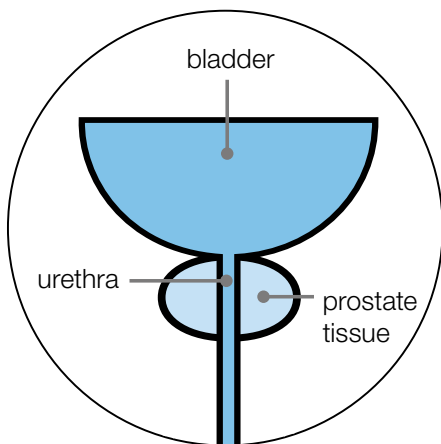
You might also hear it called benign prostatic hyperplasia (BPH). Hyperplasia means an increase in the number of cells. It is this increase in cells that makes the prostate bigger (see diagram below).

In this booklet we use the words 'enlarged prostate' to describe both BPE and BPH.

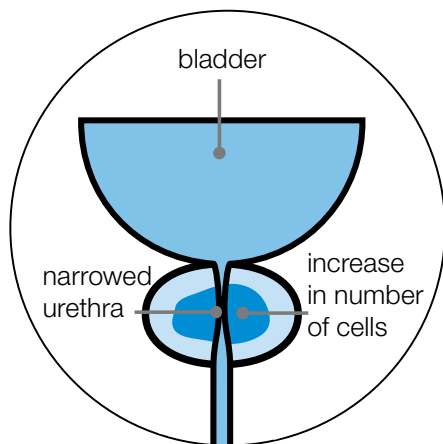
An enlarged prostate is very common in men over the age of about 50. Not all men with an enlarged prostate get symptoms. But as the prostate grows, it can press on the outside of the urethra, causing the urethra to become narrow. This can slow down or sometimes even stop the flow of urine when you try to urinate.

About 1 in 3 men over the age of 50 have urinary symptoms. The most common cause of these symptoms is an enlarged prostate.

A normal prostate



An enlarged prostate



Having an enlarged prostate is **not** the same as having cancer (see page 9).

What causes an enlarged prostate?

We still don't really know all the things that cause the prostate to grow. But we do know about two factors that can increase your risk of having an enlarged prostate.

Age

Your risk of having an enlarged prostate increases as you get older. Many men aged 50 or over have an enlarged prostate, but they don't all get symptoms. And some men have symptoms that don't bother them.

Hormone levels

The balance of hormones (oestrogen and testosterone) in your body changes as you get older. This may cause your prostate to grow.

Other factors

Some studies show that obese men and men who have diabetes may be more likely to develop an enlarged prostate. Regular exercise may help to reduce your risk of urinary problems. But we still need more studies into the causes of enlarged prostate to know for certain if, and how, we can prevent it.

There is also some research that suggests you may be more at risk of developing an enlarged prostate if your father or brother has one. Again, further studies are needed to confirm this.

What are the symptoms?

An enlarged prostate is the most common cause of urinary problems in men as they get older. Possible symptoms include:

- a weak flow when you urinate
- a feeling that your bladder hasn't emptied properly
- difficulty starting to urinate
- dribbling urine after you finish urinating
- needing to urinate more often than usual, especially at night
- a sudden urge to urinate – you may sometimes leak before you get to the toilet.

You may not get these symptoms, and some men with an enlarged prostate don't get any symptoms at all. These symptoms can also be caused by other things, such as cold weather, anxiety, other health problems, lifestyle factors, and some medicines. If you have any symptoms, visit your GP to find out what may be causing them.

Blood in your urine may be a symptom of an enlarged prostate. But this is rare and is usually caused by something else. Tell your doctor if you have blood in your urine.

Am I more likely to get prostate cancer if I have an enlarged prostate?

No, having an enlarged prostate **does not** increase your risk of getting prostate cancer. The two problems usually begin in different parts of the prostate. But men can have an enlarged prostate and prostate cancer at the same time.

If you're worried about prostate cancer, or want to find out about your risk and possible symptoms, talk to your GP, call our



Specialist Nurses or visit [prostatecanceruk.org](https://www.prostatecanceruk.org)

How might an enlarged prostate affect my life?

Having an enlarged prostate affects men in different ways. Some men can manage mild symptoms and don't need treatment. Other men find they need to stay near a toilet. This can make it difficult to work, drive, be outdoors and attend social events. If you need the toilet a lot during the night, this can affect your sleep and make you feel more tired during the day.

Some men with an enlarged prostate find their symptoms improve over time without treatment. But for most, the symptoms will stay the same or slowly start to cause more problems over time unless they have treatment.

What other problems might an enlarged prostate cause?

A small number of men may find it difficult to empty their bladder properly – this is called urine retention. If you've been diagnosed with an enlarged prostate, your doctor will look at your test results to see if you're at risk of urine retention. You may be more likely to get urine retention if:

- you're aged 70 or over
- your prostate is very large
- you have a raised prostate specific antigen (PSA) level (see page 16)
- you have severe urinary symptoms and a very slow flow.

Chronic urine retention

This is where you can't empty your bladder fully, but can still urinate a little. It usually develops slowly over time. Chronic means long-lasting. The first signs often include a weak flow when you urinate, or leaking urine at night. You may feel that your abdomen (stomach area) is swollen, or that you're not emptying your bladder fully.

Chronic urine retention is usually painless. But the pressure of the urine can slowly stretch your bladder muscle and make it weaker. This can cause urine to be left behind in the bladder when you urinate. If you don't empty your bladder fully, you might get a urine infection, need to urinate more often, leak urine at night, or get painful bladder stones. You might also see some blood in your urine. Chronic urine retention can damage your bladder and kidneys if it isn't treated.

There are several treatments for chronic urine retention, including:

- passing a thin, flexible tube called a catheter up your penis to drain urine from your bladder
- surgery to widen the urethra.

Acute urine retention

This is when you suddenly and painfully can't urinate at all. It needs treating straight away. If this happens, call your doctor or nurse, or go to your nearest accident and emergency (A&E) department. They may need to drain your bladder using a catheter. Before the catheter is removed, you may be offered a medicine called an alpha-blocker (see page 25). This may help stop you getting acute retention again.



Tests for an enlarged prostate

This section describes the tests you might have to find out if you have an enlarged prostate. Some of the tests can be done at your GP surgery. Your GP might also arrange for you to see a doctor who specialises in urinary problems (a urologist) or a specialist nurse at the hospital.

You may not need all of the tests we describe. Ask your GP to explain which tests you will have, where you will have them, and what they will involve. Or call our Specialist Nurses for more information.



Summary

- You may have several different tests to find out if you have an enlarged prostate.
- When you visit your GP, they may ask you to describe your symptoms and to keep a diary of what you are drinking and how often you urinate. You may also have a physical examination, a urine test and a blood test.
- Your GP may suggest ways to help manage your symptoms, or they may arrange for you to see a hospital specialist. The specialist may do other tests, such as a urine flow test and an ultrasound scan.
- Depending on your test results, you may have further tests at the hospital, such as a bladder pressure test, a flexible cystoscopy and a pad test.

What tests might I have at the GP surgery?

Symptom check

Your GP will ask about your symptoms, how long you've had them, whether they are getting worse over time, and how they are affecting your life.

Before you visit your GP, you might want to think about how often you've had symptoms over the last month. This may help you explain your symptoms to your GP. The next page has a list of possible symptoms, with space for you to write down how often you get each of them. You might also want to keep a diary of how much you drink and how often you urinate.

Your GP will check whether your symptoms might be caused by another health problem, such as diabetes, or by any medicines you are taking, such as blood pressure medicines, anti-depressants or herbal medicines. They will also check whether your symptoms could be caused by your lifestyle – for example, if you often drink large amounts of fluid, alcohol, or drinks containing caffeine (such as tea, coffee or cola).

What are my symptoms?

Use this space to record information about your symptoms – for example, how long you've had each symptom, how often you get them, and whether they've got worse over time. This may help you explain your symptoms to your GP.



- A weak flow when you urinate

- A feeling that your bladder hasn't emptied properly

- Needing to push or strain to start urinating

- Stopping and starting while urinating

- Needing to urinate more than once every two hours

- Getting up at night to urinate

- A sudden urge to urinate, and finding it difficult to wait

- Leaking urine before you get to the toilet

Bladder diary

Your GP may ask you to keep a diary for a few days to check how much you are drinking, what type of drinks you have, how much urine you pass, and how often and at what times you urinate. This can help your doctor to work out what may be causing your symptoms and how to treat them.

Urine test

Your GP may ask you for a urine sample to check for blood or any infection that could be causing your symptoms. You may need to give more than one sample. If you have an infection your GP will give you a course of antibiotics.

Blood tests

You may be offered a blood test to check your kidneys are working properly. You may also be offered a prostate specific antigen (PSA) blood test. PSA is a protein produced by cells in your prostate. If the PSA level is raised, there may be a problem with your prostate. An enlarged prostate can cause the amount of PSA in your blood to rise. A urine infection, inflammation and prostate cancer can also make your PSA level rise. Find out more about the PSA test in our booklet, **Understanding the PSA test: A guide for men concerned about prostate cancer**.

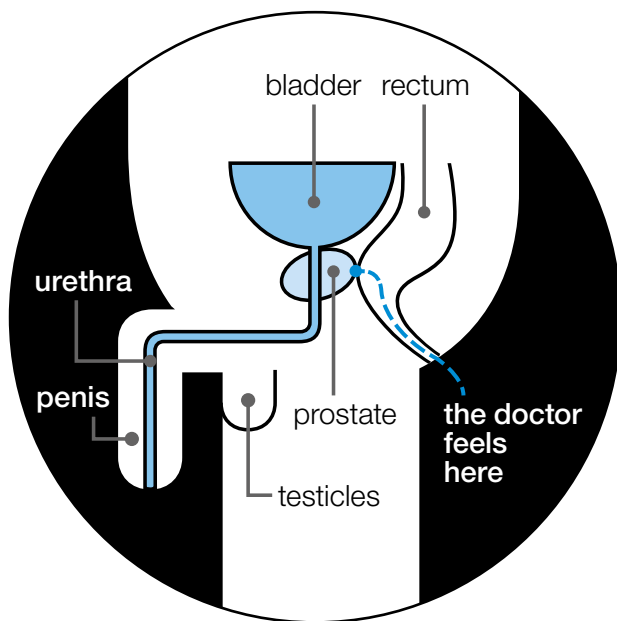


Physical examination

Your GP may examine your abdomen (stomach area) and penis. They may also feel your prostate through the wall of the back passage (rectum). This is called a digital rectal examination (DRE). If you have a DRE, the doctor will ask you to lie on your side on an examination table, with your knees brought up towards your chest. The doctor will slide a finger gently into your back passage. They'll wear gloves and put some gel on their finger to make it more comfortable.

The doctor will feel your prostate for any hard or lumpy areas and to get an idea of its size. If your prostate is larger than expected for your age, this could be a sign of an enlarged prostate. You may find the DRE slightly uncomfortable or embarrassing, but the test isn't usually painful and it doesn't take long.

The digital rectal examination (DRE)



What tests might I have at the hospital?

If you're given an appointment with a hospital specialist, they may do some of the tests you had at the GP surgery again. You may also have other tests, including the tests described below.

Symptom questionnaire

You might be asked to fill in a short questionnaire about your symptoms. This is called the International Prostate Symptom Score (IPSS) and is used to see how bad your symptoms are and how much they are bothering you.

Urine flow test

You'll be asked to urinate into a machine that measures the speed of your urine flow. Men with an enlarged prostate usually have a slower flow than other men. You'll need a full bladder for the test. The doctor or nurse will tell you how much to drink before you have the test. They may also ask you not to urinate for two to three hours before the test.

Ultrasound scan

This shows how much urine your bladder can hold, and if it is emptying properly. You may have the scan straight after the urine flow test to see how much urine is left in your bladder after you urinate. You may also have an ultrasound scan to look at your kidneys.

Further tests

Depending on your test results, you may have further tests to find out what is causing your symptoms.

- **Bladder pressure (urodynamic) test**

This shows how well your bladder is working. The doctor passes thin tubes up your penis and fills your bladder with a clear liquid. Thin tubes are also placed in your back passage. The tubes measure the pressure in your bladder, back passage and urethra. You will then be asked to empty your bladder, and the pressures will be measured again while you urinate.

You may have this test if you're thinking about having surgery to treat an enlarged prostate, or if you've had surgery but your symptoms haven't improved or are getting worse.

- **Flexible cystoscopy**

This shows whether you have a blockage or any abnormal tissue in your urethra or bladder. A doctor or specialist nurse will pass a thin tube up your penis into your bladder. You'll be able to feel the tube moving, but anaesthetic gel will be used to make the test more comfortable. The tube has a light and camera on the end so the doctor or nurse can see the inside of your urethra and bladder on a screen.

You may have this test if you have severe urinary symptoms, blood in your urine or pain, or if you often get urine infections. You may also have this test if your doctor thinks your urethra or the opening of your bladder may be too narrow – this is called a stricture.

- **Pad test**

You may have this test if you sometimes leak urine. Your doctor or nurse will ask you to wear an incontinence pad for a certain amount of time. They then weigh the pad to work out how much urine has leaked.



Treatment for an enlarged prostate

This section describes the three main types of treatment for an enlarged prostate, including their possible side effects.

Summary

- Your doctor or specialist nurse will explain your treatment options and help you decide what's right for you.
- If your enlarged prostate isn't causing problems, you may decide to wait and see if your symptoms get worse before having treatment.
- Lifestyle changes – such as drinking less alcohol, caffeine and fizzy drinks – may help your symptoms.
- If lifestyle changes don't control your symptoms, medicines may be an option.
- If lifestyle changes and medicines don't control your symptoms, or your symptoms are severe, your doctor may suggest surgery.
- If surgery isn't suitable for you, your doctor or nurse may recommend using a catheter to drain urine from your bladder.

What are my treatment options?

There are three main types of treatment for an enlarged prostate:

- lifestyle changes
- medicines
- surgery.

If tests show you have an enlarged prostate, your doctor or specialist nurse will look at your test results and medical history to see which treatments might be suitable. They will explain your treatment options and help you decide what's right for you. It's important to see how you feel about each treatment before making a decision.

Depending on the treatment you choose, you may have regular check ups with your GP, or with a specialist at the hospital. They may repeat some of the tests you've already had to see how well your treatment is working. If your symptoms don't improve or your treatment is causing side effects, you may be able to try a different treatment.

Lifestyle changes

If your enlarged prostate isn't causing problems, you may decide to wait and see if your symptoms get worse before having treatment. An enlarged prostate usually develops slowly, and your symptoms may never get any worse.

There are simple changes you can make to your lifestyle that might help your symptoms.

- **Drink less alcohol, caffeine, artificial sweeteners and fizzy drinks**

These can irritate the bladder and make urinary symptoms worse.

- **Drink less in the evening**

Try to drink less in the late afternoon and evening, so you're less likely to get up in the night. But make sure you drink enough during the day – 1.5 to 2 litres (3 to 4 pints) a day.

- **Empty your bladder before leaving the house**

Remember to use the toilet before long journeys, and find out where there are public toilets before leaving home.

- **Double voiding**

After you urinate, wait a few minutes and then try to go again. This can help to empty your bladder properly. But take care not to strain or push.

- **Check your medicines**

Ask your doctor whether any medicines you take, such as anti-depressants or decongestants (medicines for a blocked nose), may be making your urinary symptoms worse.

- **Eat more fruit and fibre**

This will help you avoid constipation (difficulty emptying your bowels), which can put pressure on the bladder and make urinary symptoms worse.

- **Keep a healthy weight**

If you're overweight, this can make your symptoms worse. Talk to your doctor if you're worried about your weight. They can help you think about ways to lose weight healthily.

- **Exercise regularly**

Regular exercise may help your symptoms. If you're not usually very active, speak to your doctor before starting any kind of exercise plan. They can talk with you about exercising safely.

- **Bladder retraining**

This technique can help you hold on for longer when you need to urinate. Ask your doctor or specialist nurse for more information.

- **Urethral massage**

This is a technique to squeeze out any urine that's left in your urethra and prevent dribbling. You might hear this called urethral milking. After you urinate, press gently upwards behind the base of your scrotum (the skin around your testicles) with your fingertips. You should be able to feel your urethra. Keep pressing gently as you move your fingers forward from the base of your penis to the tip. Ask your doctor or specialist nurse for more information.

- **Absorbent pads or urinary sheaths**

Absorbent pads and pants can be worn inside your underwear, or instead of underwear. They soak up any leaks. Urinary sheaths look like condoms with a tube attached to the end, which drains urine into a bag. The sheath fits tightly over your penis and you can strap the bag to your leg, under your clothes. Ask your doctor or specialist nurse for more information.

Medicines

If lifestyle changes don't control your symptoms, medicines may be an option. Make sure you tell your doctor about any medicines or herbal remedies you already use, in case they interfere with medicines for an enlarged prostate.

The main types of medicine for an enlarged prostate are:

- alpha-blockers
- 5-alpha-reductase inhibitors.

You might be given both types of medicine – this is known as a combination treatment (see page 29).

You'll have regular check ups to talk about your symptoms and any side effects you might be getting. These check ups may be with your GP or with a urologist or specialist nurse at the hospital.

Alpha-blockers

These are tablets that relax the muscles in the prostate and around the opening of the bladder, making it easier to urinate. They don't cure an enlarged prostate but they can help to relieve symptoms.

Alpha-blockers are usually the first type of medicine you will be offered, unless your prostate is very large. Symptoms may start to improve within a few hours or days, but you may need to take alpha-blockers for a few weeks before they work fully. Around 3 in every 5 men who take alpha-blockers find their symptoms improve within the first month of treatment. If your symptoms haven't improved after about four to six weeks, your doctor may suggest trying a higher dose or a different treatment. For most men, alpha-blockers continue to work for several years.

There are several alpha-blocker medicines available. They all work in the same way and are equally effective at managing symptoms of an enlarged prostate. The most common alpha-blockers are called:

- tamsulosin (Flomaxtra[®], Diffundox[®], Flomax Relief[®], Pinixel[®], Stronazon[®])
- alfuzosin (Xatral[®], Besavar[®])
- doxazosin (Cardura[®], Doxadura[®])
- terazosin (Hytrin[®]).

Like any medicine, alpha-blockers can cause side effects. These affect each man differently, and you may not get all of the possible side effects. Side effects usually stop if you stop taking the medicine. Possible side effects include:

- feeling dizzy or sick (nausea) or having a headache when you stand up – this usually stops after the first few doses
- tiredness or fatigue
- a blocked nose
- problems getting or keeping an erection (erectile dysfunction) – this affects around 3 in every 100 men (3 per cent)
- dry orgasm (where you release little or no semen when you orgasm) – this affects around 2 in every 100 men (2 per cent).

Read the information leaflet that comes with your medicine for more information on side effects, or speak to your doctor, specialist nurse or pharmacist. If you are having any eye surgery, make sure you tell your eye surgeon that you are taking alpha-blockers. This is because some alpha-blockers can cause problems during eye surgery.

5-alpha-reductase inhibitors (5ARIs)

These medicines slowly shrink the prostate so that it stops pressing on the urethra, making it easier to urinate. They can shrink the prostate by around a quarter after 6 to 12 months of treatment. They may shrink the prostate even more if taken for longer.

5-alpha-reductase inhibitors usually take at least six months to work fully, but they are effective at improving symptoms in the long term. Studies show that men's symptoms may continue to improve up to four years after starting treatment. 5-alpha-reductase inhibitors also help to prevent acute urine retention (see page 11) and the need for surgery.

You'll usually be offered 5-alpha-reductase inhibitors if your prostate is very large. This is because they work particularly well in men who have a larger prostate. You may also have to take them in combination with an alpha-blocker (see page 29).

There are two 5-alpha-reductase inhibitor medicines available:

- finasteride (generic finasteride or Proscar[®]), taken as a tablet once a day
- dutasteride (Avodart[®]), taken as a capsule once a day.

5-alpha-reductase inhibitors may cause side effects. These are most common during the first year of treatment. They usually stop if you stop taking the medicine. Possible side effects include:

- problems getting or keeping an erection – this affects around 7 in every 100 men (7 per cent)
- less desire for sex (low libido) – this affects around 5 in every 100 men (5 per cent)
- breast swelling or tenderness – this affects around 2 in every 100 men (2 per cent)
- changes in your ejaculation, such as dry orgasms or retrograde ejaculation (where semen doesn't come out straightaway when you orgasm, but leaves the body when you next urinate) – these changes affect around 2 in every 100 men (2 per cent).

Read the information leaflet that comes with your medicine for more information on side effects, or speak to your doctor, specialist nurse or pharmacist.

If you're taking 5-alpha-reductase inhibitors, you should use a condom during sex if there is a chance your partner is pregnant or could become pregnant. Pregnant women and children should avoid touching broken tablets or capsules. Ask your doctor or nurse for more information.

5-alpha-reductase inhibitors and your PSA level

5-alpha-reductase inhibitors reduce the amount of PSA in your blood. This means your doctor or nurse will need to change the way they look at any PSA tests you have, as your PSA levels will be lower than normal. If you have a PSA test, always tell your doctor or nurse if you are taking 5-alpha-reductase inhibitors. If your PSA level rises, your doctor should offer you further tests to find out why.

Other medicines

Your doctor may suggest other medicines, including the following.

- **Anticholinergics**, such as oxybutynin, tolterodine (Detrusitol XL[®]) and solifenacin (Vesicare[®]). These can help improve symptoms such as a sudden urge to urinate, needing to urinate more often than usual, and leaking before you reach the toilet. Anticholinergics can have similar side effects to alpha-blockers. They can also cause other side effects, such as dry eyes, a dry mouth and constipation.
- **Phosphodiesterase type 5 (PDE5) inhibitor**. You might be offered a PDE5 inhibitor tablet called tadalafil (Cialis[®]). Tadalafil relaxes the muscles in the prostate and around the opening of the bladder, making it easier to urinate. Symptoms may start to improve within the first week. Tadalafil is more commonly used to treat erection problems and is usually only given to men with an enlarged prostate as part of a clinical trial. It can cause side effects including headaches, indigestion, back pain, and itchiness or swelling in your nose (rhinitis). These side effects are usually mild and don't last long.

- **Mirabegron (Betmiga®)**. If anticholinergics aren't working, or you can't take anticholinergics, your doctor may recommend trying mirabegron tablets. Mirabegron is a new type of drug called a beta-3-adrenoceptor agonist. It can help if you need to urinate more often than usual or get sudden urges to urinate. Possible side effects include high blood pressure, urine infections and headaches.
- **Desmopressin**. If you urinate a lot during the night, your doctor may recommend taking a desmopressin tablet before you go to bed. This causes the kidneys to produce less urine for six to eight hours. You will have regular blood tests to monitor your kidney function. Desmopressin isn't usually an option if you're over 65 or have heart failure.
- **Loop diuretic**. This makes you urinate a lot before you go to bed, making it less likely that you'll need to get up during the night. You take it as a capsule in the late afternoon.

Combination treatments

Some men find that taking more than one type of medicine works better than taking a single medicine on its own. This is known as combination treatment. You might be given separate tablets, or you might be given a single tablet containing both medicines to take each day.

Alpha-blocker plus 5-alpha-reductase inhibitor

You may be offered an alpha-blocker together with a 5-alpha-reductase inhibitor if:

- your symptoms affect your day-to-day life, **and**
- you have a very large prostate **or** a PSA level of more than 1.4 ng/ml.

Alpha-blockers and 5-alpha-reductase inhibitors can both cause side effects, so you might get side effects from both medicines. Some side effects, such as less desire for sex, changes in your ejaculation and erection problems, are more common in men taking both medicines than in men who take either medicine on its own.

Alpha-blockers can start to work within a few hours or days, while 5-alpha-reductase inhibitors usually take at least six months to work fully. This means that men on combination treatment may be able to stop taking the alpha-blocker after around nine months, without making their treatment less effective.

Alpha-blocker plus anticholinergic

You may be offered an alpha-blocker together with an anticholinergic, if treatment with either medicine alone isn't working. Alpha-blockers and anticholinergics can both cause side effects, and these may be worse if you're taking both medicines at the same time. The most common side effects in men taking both medicines include a dry mouth, constipation and indigestion.



I was initially on one alpha-blocker but it stopped working so my doctor switched me to a different one, which helped.

A personal experience

Complementary therapies

Some men like to use herbal remedies, such as saw palmetto or red stinkwood (African plum). But studies suggest they're unlikely to improve symptoms of an enlarged prostate. We need more research before herbal remedies can be recommended as a treatment.

Not all herbal remedies in the UK are licensed, and the quality varies a lot. Be very careful when buying herbal remedies over the internet. Many are made outside the UK and may not be high-quality. Many companies make claims that aren't based on proper research. There may be no real evidence that their products work, and some may even be harmful. Remember that even if a product is 'natural', this doesn't mean it is safe.

At the moment, there's no evidence that acupuncture or homeopathy can help manage symptoms of an enlarged prostate.

It's important to tell your doctor about any complementary therapies you are using. Some may interfere with your enlarged prostate treatment or with other medicines you may be taking. Some herbal remedies may also affect your PSA level, making the PSA test unreliable. For more information about using herbal remedies safely, visit the MHRA website (www.mhra.gov.uk).

Surgery

Surgery may be an option if your symptoms don't improve with lifestyle changes or medicines, or if your symptoms are severe. Several different types of surgery can be used to treat an enlarged prostate. The main types used in the UK include:

- transurethral resection of the prostate (TURP)
- holmium laser enucleation of the prostate (HoLEP)
- GreenLight™ laser surgery
- prostatic urethral lift (UroLift®).

Your hospital might not offer all of these types of surgery. And the options available to you may depend on the size of your prostate and any other health problems you have. Your doctor or nurse will discuss the advantages and disadvantages of each type of surgery they offer, to help you decide what is right for you.

You can read a summary of the most common types of surgery for an enlarged prostate below. Your doctor or nurse can give you more information, or you can speak to our Specialist Nurses.



Transurethral resection of the prostate (TURP)

This is an operation to remove the parts of the prostate that have grown too large and are pressing on the urethra. It is the most common type of surgery for an enlarged prostate.

During the operation, the surgeon passes a thin tube up your penis into your urethra. They then pass an electrically-heated wire loop through the tube and use it to remove small pieces of prostate tissue.

Holmium laser enucleation of the prostate (HoLEP)

This is similar to TURP but uses a high-powered laser to remove the parts of the prostate that are blocking the urethra. Studies suggest that HoLEP is at least as effective as TURP at improving symptoms of an enlarged prostate, with similar side effects in the short term. HoLEP may be particularly useful in men with a very large prostate. You may also be less likely to need further surgery after HoLEP than after a TURP.

HoLEP uses specialist equipment and the surgeon needs to have had special training. This is why HoLEP is usually only available at specialist centres.

GreenLight™ laser surgery

This uses a high-energy laser to heat up and destroy the prostate tissue that is blocking the urethra. You might also hear it called photo-selective vaporisation of the prostate (PVP), GreenLight XPS™, or laser prostatectomy.

GreenLight™ laser surgery may be as effective as TURP, at least in the first two years after surgery. But we don't know how long it works for or about any long-term side effects.

Prostatic urethral lift (UroLift®)

This is a new type of surgery for an enlarged prostate. It involves putting small implants into the prostate. The implants pull the excess prostate tissue away from the urethra so that urine can flow more easily. This can help to improve symptoms without actually removing any tissue from the prostate.

It isn't available in all hospitals because the surgeon needs to have had special training. We don't yet know how long it works for, or the possible side effects in the long term (longer than five years).

Less common types of surgery

There are some other less common types of surgery, such as:

- prostate artery embolisation
- transurethral water vapour therapy (Rezūm®)
- transurethral vaporisation of the prostate (TUVP)
- simple prostatectomy
- bladder neck incision
- transurethral water jet therapy (Aquablation®).

These are rarely used to treat symptoms of an enlarged prostate in the UK. Your surgeon or nurse may be able to give you more information about them.

Possible side effects of surgery

As with most medical treatments, there is a risk of side effects after surgery to treat an enlarged prostate. Possible side effects include:

- needing to urinate more often or urgently
- leaking urine when you cough, sneeze, laugh or exercise
- blood in your urine
- urine infection
- a weak flow when you urinate
- retrograde ejaculation
- problems getting or keeping an erection.

Your chances of getting each of these side effects will depend on many things, including the type of surgery you choose.

What if I can't have surgery?

Surgery isn't always an option – you may not be fit or well enough for an operation, or you may not like the idea of it. If surgery isn't suitable for you and lifestyle changes and medicines haven't worked, your doctor or nurse may suggest using a catheter. This is a thin, flexible tube used to drain urine from your bladder. The catheter may be permanent or temporary.

A permanent catheter is passed up into the bladder through your penis, or through a small cut in your abdomen. The catheter is usually attached to a drainage bag, which you strap on to your body under your clothing. Your doctor or nurse will usually change your catheter every 12 weeks.

A temporary catheter (self-catheterisation) is where you put a catheter in yourself when you need to urinate, rather than leaving one in all the time. Your doctor or nurse will show you how to put the catheter in and tell you how often to use it. Some men can urinate quite well without a catheter and only use it once a day to make sure they empty their bladder regularly. Other men need to use a temporary catheter several times a day.

Urine infections are common in men who use a catheter. Your urine should usually be a pale yellow colour. If it becomes dark or cloudy with a strong smell, this could be a sign of a urine infection. Other signs of a possible infection include a fever (high temperature), a burning feeling when you urinate, and feeling unwell. Tell your doctor or nurse if you have any of these symptoms. They'll usually give you antibiotics to treat the infection.

You can lower your chances of getting a urine infection by keeping your catheter and the area around it clean. You may find the following tips helpful.

- Always wash your hands with warm, soapy water before and after touching your catheter or drainage bag.
- Wash the catheter and the area around it at least twice a day with warm water and unscented soap. Use one wash cloth for this and a different one for the rest of your body. Wipe downwards along the catheter, away from your body, and dry it carefully afterwards.
- Drink plenty of fluids (1.5 to 2 litres, or 3 to 4 pints a day).
- Eat plenty of foods containing fibre to avoid constipation, such as fruit, vegetables and wholemeal bread. Constipation can stop your catheter from draining properly.
- Let your nurse know if your catheter isn't draining properly. If urine hasn't drained from your bladder for 2 to 3 hours, contact your GP or district nurse straight away.

Questions to ask your doctor or nurse



How will an enlarged prostate affect my day-to-day life?

What can I do to help manage the symptoms myself?

What tests will I need to have?

Which treatment would be most suitable for me? And why?

What are the possible side effects of the treatments?

How quickly do I need to choose a treatment?

Medical words used in this booklet

Catheter

A thin, flexible tube used to drain urine from your bladder.

Digital rectal examination (DRE)

The doctor feels the surface of the prostate through the wall of the back passage (rectum).

GP

General practitioner. A doctor who deals with a range of health problems in people of all ages. Also called a family doctor.

Prostate specific antigen (PSA)

A protein produced by cells in your prostate. It is normal for all men to have a small amount of PSA in their blood. A raised PSA level can be caused by a number of things, including an enlarged prostate.

Retrograde ejaculation

A possible side effect of some treatments for prostate problems, where semen doesn't come out straightaway when you orgasm, but leaves the body when you next urinate.

Urethra

The tube that carries urine from the bladder and semen from the prostate, through the penis and out of the body.

Urologist

A surgeon who specialises in urinary and reproductive problems.

More information from us

Leaflets and booklets

We have a range of other leaflets and booklets about prostate problems.

To order publications:

All our publications are free and available to order or download online. To order them:

- call us on **0800 074 8383**
- visit our website at **prostatecanceruk.org/publications**

Call our Specialist Nurses

If you want to talk about prostate problems, call our Specialist Nurses in confidence. You can also text NURSE to 70004, or you can email or chat online with our nurses on our website. Visit **prostatecanceruk.org/get-support**



**Speak to our
Specialist Nurses**

0800 074 8383*

prostatecanceruk.org

*Calls are recorded for training purposes only. Confidentiality is maintained between callers and Prostate Cancer UK.

Other useful organisations

Bladder and Bowel UK

www.bladderandboweluk.co.uk

Telephone: 0161 607 8219

Impartial information and advice about bladder and bowel problems.

Continence Product Advisor

www.continenceproductadvisor.org

Unbiased information on products for continence problems.

Complementary and Natural Healthcare Council

www.cnhc.org.uk

Telephone: 020 3668 0406

Details of complementary therapists who meet national standards.

Electronic Medicines Compendium (eMC)

www.medicines.org.uk

Information on medicines, including how to use them, side effects, and how other medicines, food or alcohol may affect them.

Medicines and Healthcare products Regulatory Agency (MHRA)

www.mhra.gov.uk

Telephone: 020 3080 6000

Advice about how to use herbal remedies safely. Also runs the Yellow Card Scheme, a system for reporting unusual side effects.

NHS website

www.nhs.uk

Information about conditions, treatments and lifestyle, and a directory of health services in England.

About us

Prostate Cancer UK has a simple ambition: to stop men dying from prostate cancer – by driving improvements in prevention, diagnosis, treatment and support.

At Prostate Cancer UK, we take great care to provide up-to-date, unbiased and accurate facts about prostate diseases. We hope these will add to the medical advice you have had and help you to make decisions. Our services are not intended to replace advice from your doctor.

References to sources of information used in the production of this booklet are available at prostatecanceruk.org

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- Our Specialist Nurses
- Our Volunteers.

Donate today – help others like you

Did you find this information useful? Would you like to help others in your situation access the facts they need? Every year, 40,000 men face a prostate cancer diagnosis. Thanks to our generous supporters, we offer information free to all who need it. If you would like to help us continue this service, please consider making a donation. Your gift could fund the following services:

- £10 could buy a Tool Kit – a set of fact sheets, tailored to the needs of each man with vital information on diagnosis, treatment and lifestyle.
- £25 could give a man diagnosed with prostate cancer unlimited time to talk over treatment options with one of our specialist nurses.

To make a donation of any amount, please call us on **0800 082 1616**, visit **prostatecanceruk.org/donate** or text **PROSTATE to 70004[†]**. There are many other ways to support us. For more details please visit **prostatecanceruk.org/get-involved**

[†]You can donate up to £10 via SMS and we will receive 100% of your donation. Texts are charged at your standard rate. For full terms and conditions and more information, please visit prostatecanceruk.org/terms



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**Call our Specialist Nurses from Monday to Friday 9am - 6pm,
Wednesday 10am - 8pm**

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