

## Surgery: radical prostatectomy

What is radical prostatectomy?



Surgery for prostate cancer (called a radical prostatectomy) aims to remove the whole prostate and the prostate cancer cells inside it.

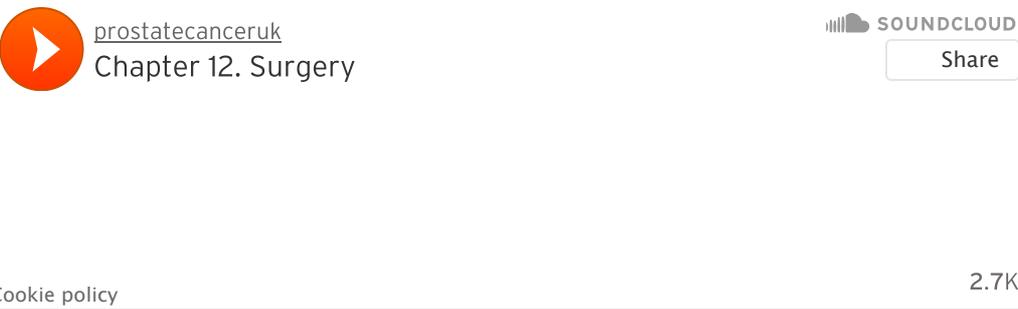
You might be offered surgery if your cancer hasn't spread outside your prostate ([localised prostate cancer](#)) and you are generally fit and healthy. Research involving men with localised prostate cancer that is low risk (likely to grow slowly) has shown that men who go on [active surveillance](#), surgery or [external beam radiotherapy](#) all have the same chances of living for 10 years or more.

Surgery may also be an option for some men whose cancer has spread to the area just outside the prostate ([locally advanced prostate cancer](#)). This will depend on how far the cancer has spread.

A radical prostatectomy is a major operation. It may not be suitable if you have other health problems, such as heart disease, that would increase the risks involved.

## See all treatment choices for localised prostate cancer

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Chapter 12. Surgery

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## Types of surgery

There are several ways of removing the prostate – keyhole surgery either by hand or robot-assisted, and open surgery.

Although robot-assisted keyhole surgery is the newest technique, the most recent research suggests all three techniques are as good as each other for treating prostate cancer. They also have similar rates of **side effects**. The advantages of keyhole surgery, both by hand and robot-assisted, are that you are likely to lose less blood, have less pain, spend less time in hospital, and heal more quickly than with open surgery.

### Keyhole surgery

Keyhole surgery (also called laparoscopy or minimally invasive surgery).

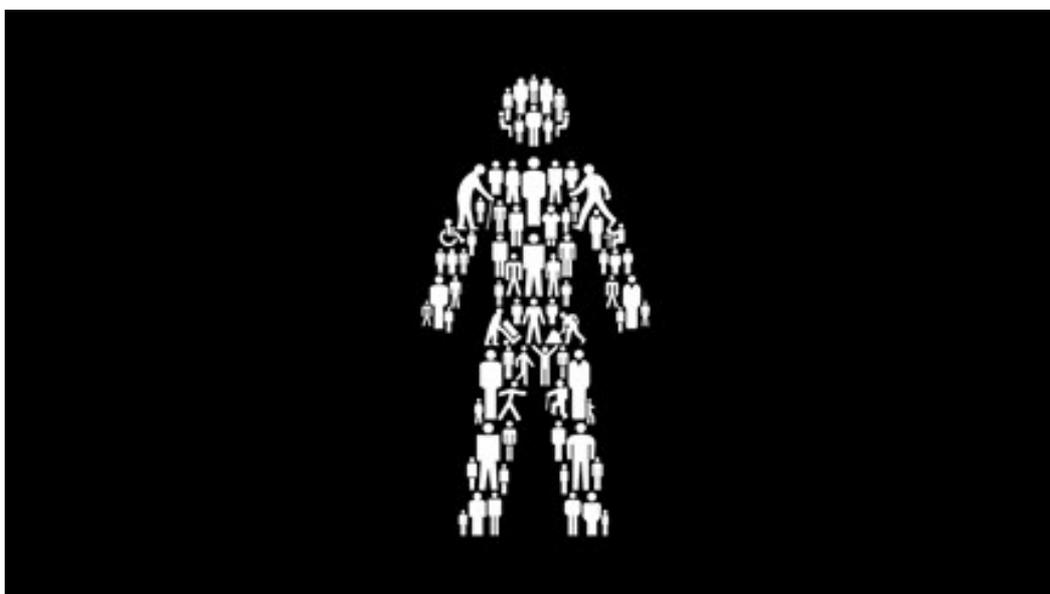
- Keyhole surgery by hand – your surgeon makes five or six small cuts in your abdomen (stomach area) and removes the prostate using special surgical tools. These include a thin, lighted tube with a small camera on the tip. The image will appear on a screen so the surgeon can see what they're doing.
- Robot-assisted keyhole surgery – Your surgeon uses similar tools as for keyhole surgery by hand, but they control the tools from a console in the operating room via four or five robotic arms. Although it's called 'robot-assisted', it's still a

surgeon who does the operation. You may hear the equipment called ‘the da Vinci® Robot’.

Robot-assisted surgery is not available in all hospitals in the UK because it uses specialist equipment that isn’t available everywhere.

## Open surgery

Your surgeon makes a single cut in your lower abdomen, below your belly button, to reach the prostate.



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# Advantages and disadvantages of surgery

What may be important for one person might not be important for someone else. The advantages and disadvantages of surgery may depend on your age, general health and the stage of your cancer.

## Advantages

- If the cancer is completely contained inside the prostate, surgery will remove all of the cancer.
- The prostate will be looked at under a microscope to give a clearer picture of how aggressive your cancer is, **whether it has spread** outside your prostate and if you need **further treatment**.
- Your health professionals can get a good idea of whether your cancer was completely removed during surgery. Your **PSA** level should drop so low that it's not possible to detect it (less than 0.1 ng/ml) at six to eight weeks after surgery.
- If there are signs that your cancer has come back or wasn't all removed, you may be able to have further treatment.
- Some men find it reassuring to know that their prostate has been physically removed, although you will still need to have **follow up tests** to make sure no cancer cells have spread outside the prostate.

## Disadvantages

- There are **risks** in having surgery, as with any major operation.
- You might get **side effects** such as erection problems and urinary problems.
- You'll need to stay in hospital for a few days – usually between one and seven days.
- If the cancer has started to spread outside the prostate, the surgeon may not be able to remove all of the cancer and you might need further treatment.
- You won't be able to have children naturally after surgery as you won't be able to produce semen, but it's possible to store sperm before surgery for fertility treatment.

# How to manage sex and relationships

Surgery can affect your sex life. Find ways to deal with those changes and discover what treatments and support are available in our interactive guide.

[FIND OUT MORE](#)

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## Risks of surgery

A radical prostatectomy is a major operation, and as with all major surgery there are some risks involved. These include:

- bleeding during or soon after the operation and possibly needing a blood transfusion, but this is uncommon
- injury to nearby tissue, including the bowel, blood vessels, nerves and pelvic floor muscles
- blood clots in the lower leg that could travel to the lung (less than two out of every 100 men)
- infection (about one to five out of every 100 men)
- problems caused by the anaesthetic, but serious problems are rare.

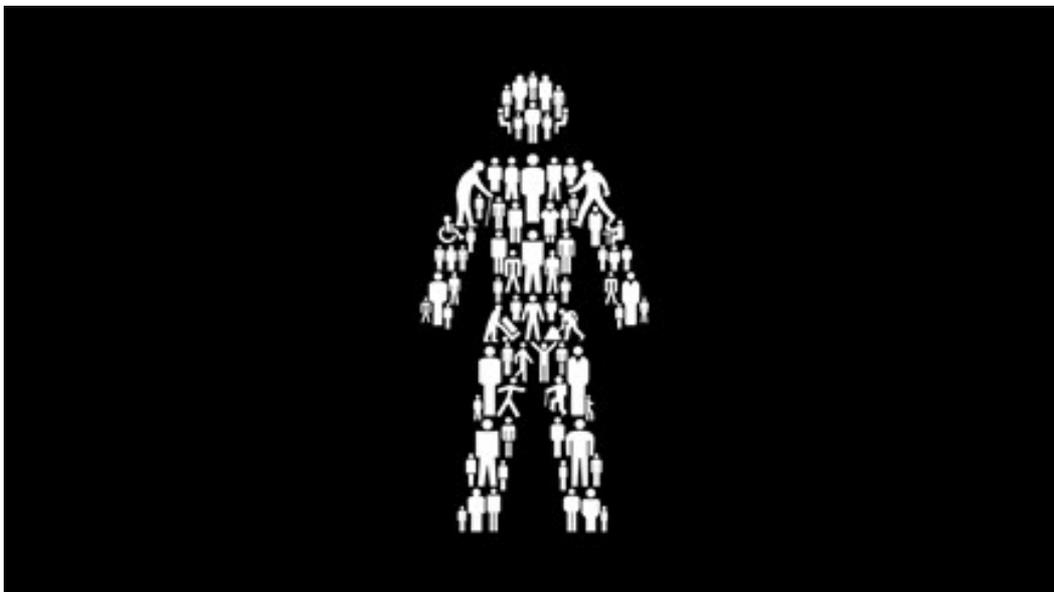
Things that can affect how your surgery goes, your risk of side effects, and whether or not you will need more treatment include:

- whether your cancer has spread
- how aggressive your cancer is
- your general health
- your surgeon's experience and skill.

Research suggests that surgeons who perform a lot of prostatectomies each year get better results and fewer side effects. Your surgeon should be

able to tell you how many operations they've done, the results and the rates of side effects.

You can look at [information on surgeons and centres that do radical prostatectomies online](#). You can see how many operations they've done, the technique used, rates of complications (such as the risks listed above) but not side effects. Remember that some surgeons operate on 'higher risk' patients who could be more likely to have complications (for example, if they are overweight) or do more difficult operations, which can affect their results.



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# What does surgery involve?

## Before the operation

A week or more before your operation you will have tests at the hospital to make sure you are fit enough for surgery.

Doing **pelvic floor muscle exercises** for a few weeks before your operation may help you recover more quickly from **urinary problems caused by surgery**.

You might need to stop taking some drugs, such as warfarin, before your operation.

### Getting organised at home

Before your operation, it helps to get organised at home to make life easier when you leave hospital. You won't be able to lift heavy things for a while and you will need to rest. You could:

- fill your freezer with food so you don't need to cook
- do your shopping online
- if possible, arrange to have a friend or relative with you for the first couple of days after you go home in case you need any help
- arrange for people to help with things like cleaning
- if you have pets, put pet food into small containers so you don't have to lift heavy bags
- get a list of useful phone numbers ready
- have some absorbent (incontinence) pads ready
- make sure you have some comfortable, loose clothes to wear while any soreness settles down.

## The operation

You will go into hospital on the day of your operation or possibly the day before. You will have a general anaesthetic so that you're asleep during the

operation and you won't feel anything. The operation usually takes two to four hours but can sometimes take longer.

As well as the prostate, your surgeon will also take out the seminal vesicles. These are two glands that are connected to the prostate and sit just behind it. They store some of the fluid in semen (the fluid that carries sperm).

There are two bundles of nerves attached to the prostate that help you get erections. Your surgeon will try to save these nerves if it's possible. This is called nerve-sparing surgery.

If your surgeon thinks your cancer may have spread to the nerves, they may need to remove one or both of these bundles. This will cause **problems getting an erection** without medical help. Even if the nerves are saved, it can still take some time for your erections to recover.

Although these nerves are involved in erections, they don't control feeling in the penis. So even if they are affected or removed you won't lose any feeling and you should still be able to have orgasms.

## After the operation

You will wake up in the recovery room. You will have an oxygen mask on, as you will be breathing more slowly than usual while the anaesthetic wears off. You will have a drip in your arm to give you fluids and pain relief, and you will have a catheter in place to drain urine from your bladder.

You may also have a thin tube in your lower abdomen to drain fluid from the area where your prostate used to be. This is usually removed 24 to 48 hours after the operation.

### Catheter

You'll have a thin, flexible tube (called a catheter) passed up your penis to drain urine from your bladder while the area heals. It will be put in place during the operation, while you're asleep. Most men go home with the

catheter in. Your nurse will show you how to look after it, and it will be removed at the hospital one to three weeks later.

### Pain

You will be given pain-relieving drugs after the operation if you need them. These should control any pain you have, but tell your doctor or nurse if you are in any pain.

The drugs are usually given into a vein in your arm or hand through a drip (intravenous infusion). You might have a pump so that you can give yourself pain relief without having to wait for someone to bring it to you.

### Swelling

You may have some bruising and swelling in and around your testicles and penis. It shouldn't last more than a few weeks. If you have a lot of swelling, or if it's getting worse, tell your doctor.

When you go home, you may find underpants (briefs) give you more support and are more comfortable than loose boxer shorts. You can also buy supportive underwear, such as a jock strap or testicle support.

### Eating and drinking

Your team will let you know when it's safe to start eating and drinking. You will usually start with sips of water.

### Getting out of bed

You will be encouraged to get out of bed and start moving around as soon as you can to lower the risk of blood clots. You may also be prescribed injections to reduce the risk of blood clots.

You will go home one to seven days after your operation, depending on your recovery and your doctor's advice.





## One-to-one support

Anyone affected by prostate disease can talk with one of our trained support volunteers.

[Find out more](#)

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## Going home

You will have the name of someone in your hospital team to contact in case there's a problem after you go home. A district nurse might also visit you during the first few weeks.

### Care of your catheter

Before you go home, your nurse will show you how to look after your catheter.

The catheter will be attached to a bag that can be worn inside your trousers, strapped to your leg. Make sure the tube isn't bent or blocked, as this could stop urine draining into the bag.

The following tips can help prevent urine infections.

- Always wash your hands with warm, soapy water before and after touching your catheter.

- Wash the catheter and the area near the tip of your penis 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 water (about 1.5 to 2 litres, or 3 to 4 pints a day).
- Eat plenty of fibre to avoid constipation (difficulty emptying your bowels) as this can stop the catheter draining properly.

Your catheter will be removed at the hospital one to three weeks after your surgery. Your doctor or nurse will make sure you can urinate before you go home.

You may notice some bleeding while the catheter is still in and just after it's removed. This is quite common and usually stops on its own.

It's common to **leak urine** when the catheter is removed. Take some absorbent (incontinence) pads and spare underwear and trousers to the hospital. Close-fitting underwear can help to keep the pads in place and men often find loose trousers most comfortable.

Some hospitals will provide a few absorbent pads and your local NHS service may provide some for free. You can buy more from pharmacies, chemists, large supermarkets, or online. You may also be able to order them from a supplier without paying VAT.

Our **surgery support pack** might be helpful.

## Your wound

After keyhole surgery, the cuts are usually closed with a special type of glue, clips or stitches. The cuts heal within a few days and the stitches slowly dissolve and fall out on their own.

If you have open surgery, the cut is usually closed with stitches or clips. Some types of stitches need to be removed in hospital or by your GP after one to two weeks.

The muscles and tissues inside your body need time to heal. This may take several months, and can sometimes take up to a year.

You will need to take it easy for the first couple of weeks after surgery. Gentle exercise around the home and a **healthy diet** will help your recovery. Light exercise such as a short walk every day will help improve your fitness. If you can, avoid climbing lots of stairs, lifting heavy objects or doing manual work for eight weeks.

It's safe to masturbate or **have sex** when you feel ready, there's no need to wait.

## Constipation

Bowel habits may take a few weeks to return to normal. You may have no bowel movements for several days after surgery. This is usually caused by the painkillers you'll be taking.

If this carries on or becomes uncomfortable you may need medicine to help empty your bowels (called a laxative). Ask your pharmacist for some as soon as you start having trouble. It's important you don't strain.

Eating high fibre foods (such as wholegrains and fruit), drinking plenty of fluids, and doing gentle physical activity will help.

## Feeling tired

Some men get **fatigue** (extreme tiredness) for a few weeks or months after surgery. This should pass with time. Try to eat healthily and be physically active when you feel able to.

Watch Colin's story for one man's experience of surgery. He and his wife talk about how he recovered from the operation.

## The impact of surgery: Colin's story



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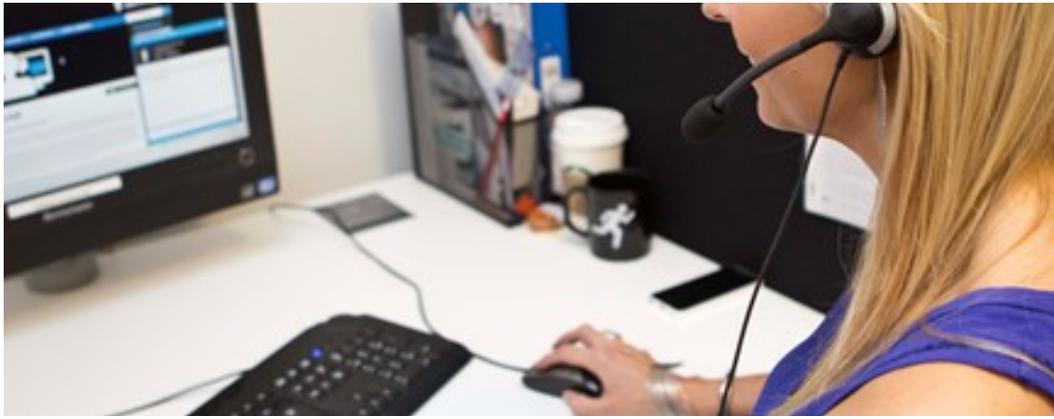
## When to call your doctor or nurse

It's important to tell your doctor or nurse if:

- your bladder feels full or your catheter isn't draining urine
- your catheter leaks or falls out
- your urine contains blood clots, turns cloudy, dark or red, or has a strong smell
- your wound area or the tip of your penis becomes red, swollen or painful
- you have a fever (high temperature of more than 38°C or 101°F)
- you feel sick (nauseous) or vomit
- you get cramps in your stomach area that will not go away
- you get pain or swelling in the muscles in your lower legs.

Your doctor or nurse will let you know if you should go to the hospital.





## Our Specialist Nurses

Ask all the questions you need answers to, or just talk. Our nurses have time for you.

[Find out more](#)

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## What happens next?

You will have regular check-ups after your operation – this is called **follow-up**. Your check-ups will usually start between six and eight weeks after surgery, and they will usually be every three to six months. Over time you may have these less often and two to three years after your treatment you may start seeing your GP instead of your hospital doctor.

### PSA test

You will have a **PSA test** a week before your check-up, so the results are available at the appointment. The PSA test is a good way of checking if your treatment has worked.

Your PSA level should drop so low that it's not possible to detect it (less than 0.1 ng/ml). A rise in your PSA level can suggest some prostate cancer cells were left behind. If this happens, your doctor will talk to you about further treatment.

## The prostate

Your prostate will be sent to a laboratory to be looked at under a microscope. This can give a clearer idea of how aggressive the cancer might be and whether it has spread.

At your first check up your doctor might talk about 'positive surgical margin' or 'negative or clear surgical margin'.

- Positive surgical margin – this means there are cancer cells on the edge of the tissue the surgeon removed. It suggests that some cancer cells may have been left behind and you may need further treatment.
- Negative or clear surgical margin – this means that the tissue the surgeon removed was surrounded by a layer of normal tissue. It suggests all the cancer was removed.

## Further treatment

If your results suggest some cancer cells may have been left behind or the cancer has **come back**, you might be offered **radiotherapy** on its own or with **hormone therapy**. You may also be able to take part in a **clinical trial**.

## Going back to work

The amount of time you take off work will depend on how quickly you recover, how much physical effort your work involves, and whether you feel ready to go back to work. If you have open surgery, you might need longer to get back to your usual activities than after keyhole surgery.

## Driving

You will be able to sit in a car as a passenger while your catheter is still in. You may want to avoid long journeys for the first two weeks after the catheter is removed until you are more used to dealing with any problems, such as **leaking urine**.

There are no official guidelines for how long you should wait before driving. Speak to your doctor about when it's safe for you to drive. You need to feel

you can do an emergency stop comfortably. Check with your insurance company how soon after surgery you are insured to drive.



## Find a support group

We believe every man with prostate cancer should have access to a good quality support group.

[Find out more](#)

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## What are the side effects?

The most common side effects of surgery are leaking urine ([urinary incontinence](#)) and problems with getting or keeping an erection ([erectile dysfunction](#)).

Your risk of getting these side effects depends on your overall health and age, how far the cancer has spread in and around the prostate and how likely it is to grow, and your surgeon's skill and experience.

## Urinary problems after surgery

### Leaking urine

Most men can't control their bladder properly when their catheter is first removed. This is because surgery can damage the muscles and nerves that control when you urinate.

You might just leak a few drops if you exercise, cough or sneeze (stress incontinence). Or you might leak more and need to wear absorbent pads, especially in the weeks after your surgery.

Leaking urine usually improves with time. Most men start to see an improvement one to six months after surgery. Some men leak urine for a year or more and others never fully recover, but there are [things that can help](#) and [ways you can manage it](#).

### Difficulty urinating

A few men (less than five out of every 100 men) may find it difficult to urinate after surgery (urine retention). This can be caused by scarring around the opening of the bladder or the urethra (the tube you urinate through).

Some men find they suddenly and painfully can't urinate. This is called acute urine retention and it needs treating quickly to prevent further problems. If this happens, call your doctor or nurse, or go to your nearest accident and emergency (A&E) department.

Watch Paul's story for one man's experience of managing urinary problems after surgery:

## Living with incontinence: Paul's story



### Erection problems after surgery

After surgery, including nerve-sparing surgery, most men find it difficult to get an erection strong enough for sex. It can take anything from a few months to three years for erections to return and they may not be as strong as before. Some men will always need medical help to get erections, and some men might not be able to get erections even with medical help.

There are treatments available, including tablets called PDE5 inhibitors, vacuum pumps, injections, pellets or creams, and implants. There are specialist services available to support men with erection problems.

Your doctor may suggest starting treatment for erection problems before surgery or in the first few weeks afterwards. This is known as [penile rehabilitation](#).

Read more [about how prostate cancer treatment can affect your sex life and the treatments available](#). Plus [find ways to manage changes to your sex life](#).

If you have anal sex and are the active partner you normally need a strong erection, so erection problems can be a particular issue. There are things that can help, such as using a constriction ring along with tablets. Read our information for [gay and bisexual men](#).

## Penis shortening

Some men notice that their penis is a bit shorter after surgery. Some research suggests that taking PDE5 inhibitor tablets may help to prevent the penis getting shorter, or help it return to its normal length. Using a vacuum pump, on its own or with a PDE5 inhibitor, may also help to prevent shortening and improve erections. Read more about [penis shortening](#).

## Dry orgasm

The seminal vesicles, which make some of the fluid in semen, are removed during surgery. This means you won't ejaculate any more. You may have a 'dry orgasm' instead – where you feel the sensation of orgasm but don't ejaculate. This may feel different to the orgasms you're used to.

## Having children

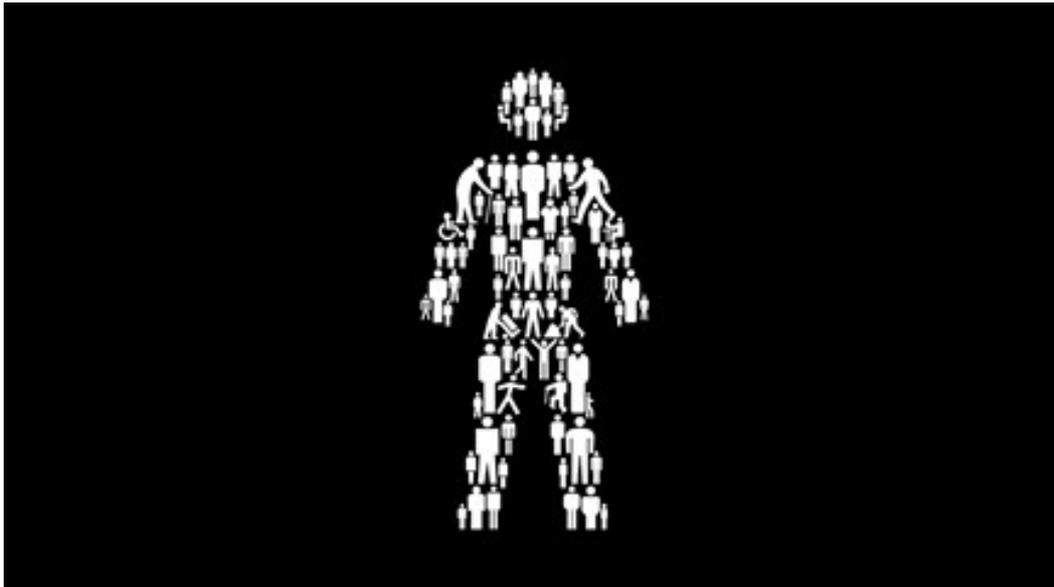
After your operation, you won't be able to father a child naturally. You may want to think about storing your sperm before having surgery so that you can use it later for fertility treatment. Ask your doctor or nurse about storing sperm.

## Loss of sensitivity

If you receive anal sex, a lot of the pleasure comes from the penis rubbing against the prostate. Some men who receive anal sex find their experience of sex changes after surgery

Watch Kevin's story for one man's experience managing side effects of surgery:

## My journey with surgery: Kevin's story



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## How to manage urinary problems

Urinary problems can be a side effect of surgery. Get practical tips to manage urinary problems in our interactive guide.

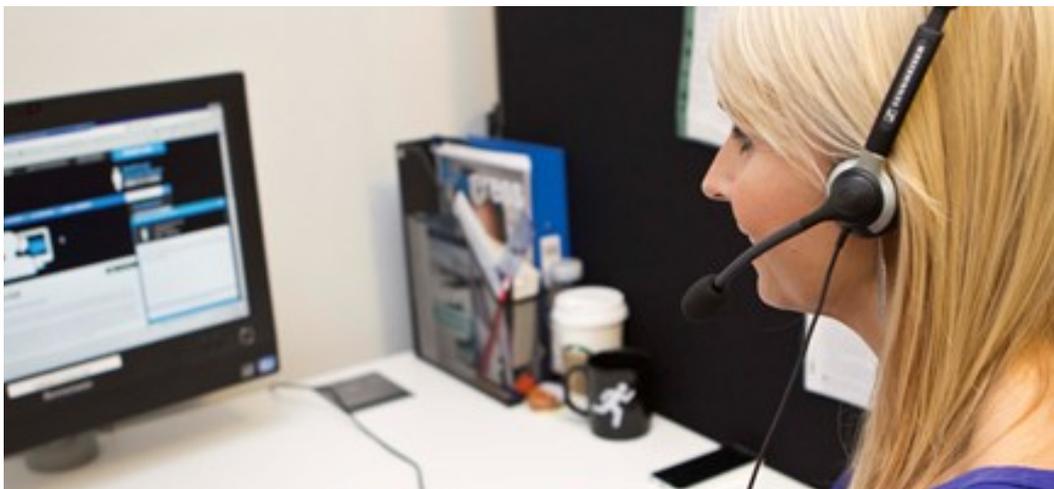
FIND OUT MORE

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## Questions to ask your doctor or nurse

You may find it helpful to keep a note of any questions you have to take to your next appointment.

- What type of surgery do you recommend for me and why?
- What type of surgery do you recommend for me? Will you try to do nerve-sparing surgery?
- How many of these operations have you done and how many do you do each year?
- Can I see the results of radical prostatectomies you've carried out?
- What pain relief will I get after the operation?
- How and when will we know whether the operation has removed all of the cancer?
- How often will my PSA level be checked?
- What is the chance of needing further treatment after surgery?
- What is the risk of having urinary problems or erection problems and what support can you offer me?





## Our Specialist Nurses

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## References

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▸ [List of references](#)