

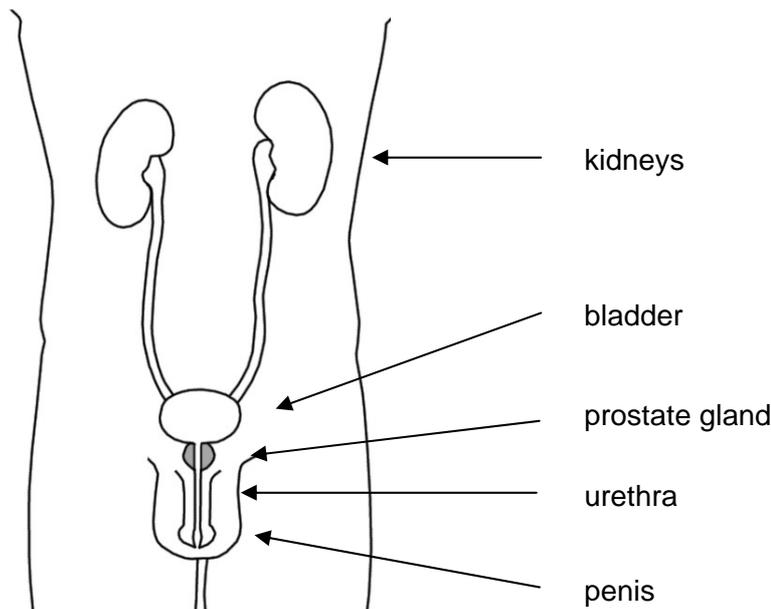
Having a transrectal ultrasound (TRUS) and prostate biopsy

This leaflet explains more about having a transrectal ultrasound (TRUS) and prostate biopsy, including the benefits, risks and any alternatives, and what you can expect when you come to hospital.

If you have any further questions, please speak to a doctor or nurse caring for you.

What is your prostate gland?

The prostate gland is only found in men and is about the size of a walnut. Your gland lies at the base of your bladder and surrounds your urethra (tube that carries urine and semen out of your body). Its main function is to produce a thick liquid and nutrients, which are mixed with your sperm to become semen.



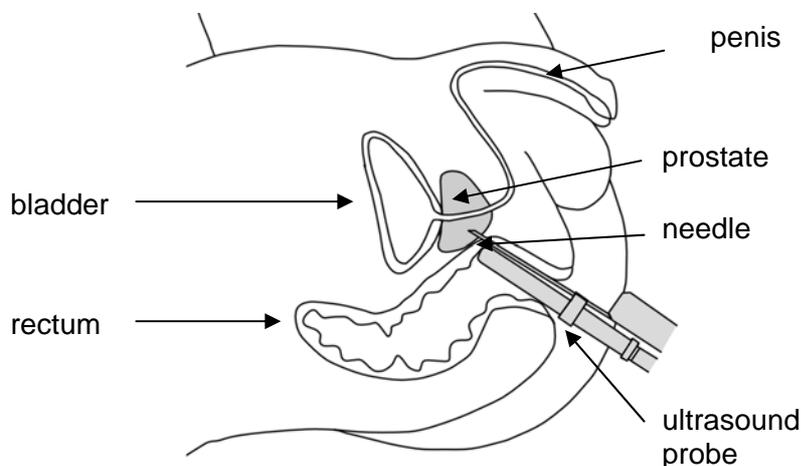
The male urinary system. Image supplied by the Prostate Cancer Charity.

What is a prostate biopsy and transrectal ultrasound?

A prostate biopsy is where small samples of tissue are taken from your prostate gland, using an ultrasound device to guide your doctor or specialist nurse.

Ultrasound devices use high frequency sound waves to create images of internal body structures. The sound waves bounce off tissues and organs, and are picked up and then displayed on a screen, similar to a television.

Because your prostate gland is in front of your rectum (back passage), a small ultrasound probe can be inserted into your rectum and create an image of your prostate gland. This is called a transrectal ultrasound or TRUS. The TRUS helps to guide your doctor or specialist nurse when he/she is performing the biopsy. He/she will insert a special needle into your prostate gland via your rectum to take the sample cells. The cells that have been taken are then examined under a microscope for any abnormalities.



TRUS biopsy. Image supplied by the Prostate Cancer Charity.

Why do I need a prostate biopsy?

You may have been advised to have a prostate biopsy because:

- your doctor found a lump or abnormality during a digital rectal examination (DRE). A DRE is where a doctor feels your prostate gland through your rectum (back passage) with his/her index finger.
- you have had a blood test showing a high level of PSA (prostate-specific antigen). PSA is a protein that is released into your blood from your prostate gland. High levels of PSA may indicate cancer.

The biopsy can find out whether any of your prostate cells have become cancerous. It can also diagnose other conditions such as:

- **benign prostatic hyperplasia** – enlargement of the prostate
- **prostatitis** – inflammation of the prostate, usually caused by a bacterial infection
- **high grade prostatic intraepithelial neoplasia (HGPIN)** – a change in the cells of your prostate (explained further on page 6).

Your diagnosis will then help your doctor or specialist nurse to plan your future care.

What are the risks?

Although serious complications are rare, every procedure has risks. Your doctor or specialist nurse will discuss the specific risks for this procedure with you in more detail:

- **Infection** (two in 100 men experience this). There is a risk of infection because the rectum wall is not sterile. We give you antibiotics before and after your biopsy to reduce this risk. However, if you develop a fever, or have pain or a burning sensation when you pass urine, you should go to your nearest A&E department as you may have an infection. You are more likely to develop an infection if you have prostatitis.

- **Bleeding into the urethra or bladder wall (often known as urinary clot retention)** (five in 100 men experience this). This can cause a haematoma (blood blister), which can make it difficult for you to pass urine, or make you pass urine frequently. If you are unable to pass urine at all (urinary retention), you should seek medical attention from your nearest A&E department.
- **Bleeding from the rectum.** This is common and six out of 10 men will experience this during the first two to three days after the biopsy, but it should not last more than two weeks. If you have heavy bleeding or start passing large clots of blood at any time following the procedure, go to your nearest A&E department.
- **An allergic reaction** to the medicine we give you. Although the risk of this is low (less than one in a 1,000 men will be affected), you can reduce this risk by letting us know if you have had any previous allergic reactions to any medicines or food.
- **Blood in your urine.** Most patients will have some blood in their urine for two to three weeks after this procedure. If this continues for longer, please contact your nearest A&E department.
- **Blood in your semen.** Most patients will have some blood in their semen for up to six weeks after this procedure. If this continues for longer, please contact your nearest A&E department or talk to your nurse specialist.
- **Problems with erections.** A prostate gland biopsy could cause some problems with erections but this is uncommon. It will not affect your fertility.

Are there any alternatives?

Having a prostate biopsy is currently the only method available to diagnose your symptoms.

Giving my consent (permission)

We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

Before the biopsy

Before you have a biopsy, you should let the doctor or specialist nurse know if you:

- are taking any medicines that thin your blood, such as antiplatelet medicines (for example aspirin or clopidogrel) or anticoagulant medicines (for examples warfarin or rivaroxaban), as you may need to stop them temporarily before your surgery.
- have allergies to any medicines, including anaesthetic
- have or have ever had bleeding problems
- have an artificial heart valve
- have had a recent (in the last three months) urine infection
- have recently (in the last three months) travelled to Asia or Africa
- have taken any antibiotics in the last three months.

You should continue to take all of your medicines as usual, unless you have been advised otherwise by the doctor that organised your biopsy.

Before the biopsy you will be asked to provide a specimen of your urine. This is to check whether or not you have a urine infection.

If there is evidence of a urine infection, your procedure may be cancelled. You will be prescribed antibiotics and re-booked for one to two weeks later.

If we were to do the biopsy while you have a urine infection, the infection could get into your blood stream. This could cause you to be very unwell.

A TRUS may make you feel light-headed. It will help if you have eaten something on the morning of the biopsy.

Will I have a local or general anaesthetic?

The biopsy is taken using a local anaesthetic. A local anaesthetic uses an injection to numb a part of your body. You stay awake but do not feel pain.

A general anaesthetic, which makes you asleep for the entire procedure, is used when the biopsies are taken via a transperineal approach. Please see our leaflet, **Having a transperineal prostate biopsy** for more information.

Your doctor or specialist nurse will discuss the options with you before you have a biopsy. For more information, please ask a member of staff for the leaflet, **Having an anaesthetic**.

During the biopsy

The biopsy is usually carried out as a day case, which means you will be able to come to hospital, have the biopsy and leave on the same day.

About 30 minutes before your prostate biopsy, you will be given some antibiotic tablets to help prevent infection. You may have been given the antibiotic tablets during the consultation with your doctor or nurse specialist before your biopsy appointment. If you have the antibiotics at home, please take the tablets two hours before your biopsy appointment time.

Once in the biopsy room, you will be asked to take off your trousers and pants, and then lie on your left-hand side with your knees tucked up against your chest. If you find this position difficult, let the doctor or specialist nurse know.

The ultrasound probe (about the size of a large finger) is covered in gel to make the passage into your rectum easier. A very fine needle is then passed down the length of the probe. Using the ultrasound for guidance, the anaesthetic liquid is injected into the small space around the prostate. You may feel a small stinging sensation while this liquid is being injected. This will help to reduce discomfort during the biopsy.

The prostate biopsy is taken with a device that contains a spring-loaded needle. The needle is inserted into the prostate gland and removes a tissue sample very quickly.

You may feel pressure in the rectum while the ultrasound probe is in place. You may also feel a brief, sharp pain or dull ache as the biopsy needle is inserted into the prostate gland. Please tell the doctor or specialist nurse if you are in discomfort.

Usually 12 biopsy samples are collected, although this may be more if the doctor or specialist nurse wants to take additional samples of a lump or nodule. The whole procedure takes around five to 10 minutes.

When the samples have been taken, a small antibiotic suppository will be inserted into your rectum. A suppository is medicine that is designed to be inserted into the rectum. This is another precaution to help reduce the risk of infection after your biopsy.

After the biopsy

You can leave the hospital as soon as the procedure is finished. You will be asked to rest for about four hours at home after this.

Before you leave, we will give you further antibiotic tablets to prevent infection. You will need to take these for three days. It is important that you follow the instructions we give you about how to take the antibiotics.

When you are at home

You may have mild discomfort in the biopsy area for one or two days after the biopsy. You may also notice some blood in your urine for up to three weeks and blood in your stools for up to two weeks. Your semen may be discoloured (pink or brown) for up to six weeks after the biopsy. This is all normal and nothing to worry about, but you may want to wear a condom if you have sex within this time.

You should:

- avoid alcohol for 24 hours, as this interacts with the local anaesthetic and suppository given at the end of the procedure
- drink plenty of non-alcoholic fluids while you have blood in your urine.

Please go to your local A&E department if you experience any of the symptoms below:

- increased pain
- temperature higher than 100.4°F (38°C)
- not passing urine for eight hours
- starting to pass large clots of blood
- persistent bleeding.

Your results

Your results should be available within seven days. Please make sure you have arranged a follow-up appointment before you go home. The results of your biopsy could be:

Normal

The prostate gland tissue samples appear normal under the microscope, with no signs of infection or cancer.

Abnormal

- Cancer cells or signs of infection are found during microscopic examination of the tissue sample.
- Signs of an abnormal non-cancerous enlargement of the prostate gland (benign prostatic hyperplasia), tuberculosis, lymphoma, or rectal or bladder cancer are present.

Normal prostate biopsy results do not rule out cancer. A needle biopsy collects tissue from a very small area, therefore there is a chance that a cancerous growth may be missed. Because of this, your doctor or specialist nurse may wish to monitor your PSA (prostate-specific antigen) level for six to 12 months, even if your biopsy result is normal.

Your PSA level may also be monitored if your results indicate benign prostatic hyperplasia or high grade prostatic intraepithelial neoplasia (HGPIN). HGPIN refers to changes in the cells of the prostate. It is not a disease and does not need treatment, but its presence means you are at a greater risk of developing prostate cancer. Because of this, you will be monitored for any further changes.

If you have prostatitis and urinary symptoms, you may be treated with antibiotics.

If the biopsy results indicate cancer, you may need further tests to see whether the cancer has spread beyond the prostate gland. These tests may include:

- a PSA test
- a bone scan
- a lymph node biopsy
- an MRI (magnetic resonance imaging) a CT (computer tomography) scan.

The doctor or specialist nurse that gives you your biopsy results will organise these tests if necessary and explain them in more detail.

Analysing the cancer cells present can determine how fast the cancer is likely to spread. This analysis is called a Gleason score. Your doctor or specialist nurse will discuss this with you at your clinic appointment if this applies to you.

You may wish to contact organisations offering further information and support. A list is given at the end of this leaflet.

Please remember that:

- Not all cases of prostate cancer need to be treated. There are many factors to consider when deciding on a treatment plan.
- If the samples do not contain enough tissue, it is possible that your test results will be inconclusive, which means a definite diagnosis cannot be made.

Useful sources of information

Dimbleby Cancer Care provides cancer support services for Guy's and St Thomas'. We have a drop-in information area staffed by specialist nurses and offer complementary therapies, psychological support and benefits advice for patients and carers.

Dimbleby Cancer Care is located in the Welcome Village of the Cancer Centre at Guy's.
t: 020 7188 5918 e: DimblebyCancerCare@gstt.nhs.uk

The Prostate Cancer Charity provides support and information for men with prostate cancer.
t: 0800 074 8383 w: www.prostate-cancer.org.uk

Macmillan Cancer Support provides information and support to anyone affected by cancer.
t: 0808 808 00 00 w: www.macmillan.org.uk

UK Prostate Link provides links to quality assessed information about prostate cancer.
w: www.prostate-link.org.uk

Cancer Research UK has a patient information website, with information on all types of cancer and treatment options, as well as a book list for further information.

t: 0808 800 4040 w: www.cancerhelp.org.uk

Appointments at King's

We have teamed up with King's College Hospital in a partnership known as King's Health Partners Academic Health Sciences Centre. We are working together to give our patients the best possible care, so you might find we invite you for appointments at King's. To make sure everyone you meet always has the most up-to-date information about your health, we may share information about you between the hospitals.

Contact us

If you have any questions about this procedure or your results, please contact one of our prostate nurse specialists on **020 7188 7339** Monday to Friday, 8am–5pm. Out of these hours, contact Florence Ward on **020 7188 8818**.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit www.guysandstthomas.nhs.uk/leaflets

Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.

t: 020 7188 8748 9am to 5pm, Monday to Friday

Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.

t: 020 7188 8801 (PALS) e: pals@gstt.nhs.uk

t: 020 7188 3514 (complaints) e: complaints2@gstt.nhs.uk

Language and Accessible Support Services

If you need an interpreter or information about your care in a different language or format, please get in touch:

t: 020 7188 8815 e: languagesupport@gstt.nhs.uk

NHS 111

Offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day.

t: 111

NHS Choices

Provides online information and guidance on all aspects of health and healthcare, to help you make choices about your health.

w: www.nhs.uk

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