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Biopsy

A biopsy is a medical test in which a small sample of tissue is removed from a part of the body. The sample of tissue is looked at under a microscope by a specialist. By looking at the tiny cells that make up the sample of tissue, the specialist can help to make a diagnosis and find out what might be wrong.

Note: the information below is a general guide only. The arrangements, and the way tests are performed, may vary between different hospitals. Always follow the instructions given by your doctor or local hospital.

Why are biopsies done?

- If something is wrong with your body doctors start by asking you questions (what is called 'taking a history'). They then might examine you. Based on what they find, they might order a scan or X-rays. The scan might show up a lump or a growth inside your body. It might not be easy to tell what the growth is, simply by looking at the scan. In that case a biopsy is necessary to take a tiny bit of the lump out so that it can be looked at under a microscope. That way, the doctor can find out what is wrong and make a diagnosis. In this way, biopsies are useful to diagnose cancer. [See the separate leaflet called Diagnosing Cancer for more details.](#)
- Biopsies are also used in non-cancerous conditions to help make the diagnosis and to guide what treatment should be used.
- Sometimes you may already have a condition but a biopsy can help to assess how severe it is. For example, a biopsy may help to find out how severe inflammation is in an organ such as the liver.

How are biopsies done?

There are many different procedures to obtain biopsy samples. It depends on what part of the body the sample is needed from. Here are some examples:

- **A 'punch' biopsy.** This is useful to diagnose skin conditions. A special instrument punches a small hole through the top layers of the skin to remove a sample of skin. To make the procedure painless, the doctor may inject some local anaesthetic or put on some anaesthetic cream beforehand.
- **A 'needle' biopsy.** This can sample tissue from organs or lumps beneath the skin. For example, a special long needle can be inserted through the skin into the kidney, liver, thyroid, bone marrow or abnormal lumps. A small sample of the tissue can be obtained this way. The doctor will usually inject some local anaesthetic using a fine needle into the skin first. This is to make the procedure painless. In some cases, you may have the biopsy whilst having an [ultrasound scan](#) or [magnetic resonance imaging \(MRI\) scan](#). This is so the person doing the biopsy can see the needle is going in the right place. See also the separate leaflets called [Bone Marrow Biopsy and Aspiration](#), [Kidney Biopsy \(Renal Biopsy\)](#) and [Liver Biopsy](#).
- **Endoscopic biopsies.** An endoscope is a thin flexible telescope which is used to look into various parts of the body. A biopsy of tissue is commonly taken during these procedures. One example is a gastroscopy, when an endoscope is passed through the mouth and into the stomach. During this test, the doctor or nurse may take a biopsy of the stomach lining.
- **Excisional biopsy.** This means an entire abnormal lump is removed to be examined. This may be done under a local or general anaesthetic, depending on the site of the lump. For example, this type of biopsy may be done for certain breast lumps.
- **Perioperative biopsy.** Sometimes, during an operation, a surgeon may remove a small sample of tissue which is examined within a few minutes. This may help the surgeon to determine the cause of a lump inside the body, which may help to decide on how to proceed with the operation.

How long does a biopsy take to do?

- Actually taking a biopsy with a needle only takes a few seconds. But to make sure the needle gets exactly the right bit, it might take the doctor a while to position you correctly and, if they are using a scanner, to scan the correct place. This could take about half an hour.

How is a prostate biopsy done?

- There is more than one way to do a prostate biopsy: your urologist will advise you on what is best for you.
- One way is to use an ultrasound probe inside the back passage so that, on a screen, the doctor can see the prostate gland. A tiny needle is then inserted into the prostate gland to take a biopsy. You are awake for this procedure, although may be given pain relief if needed.
- Another way involves being under a general anaesthetic and several biopsies being taken of the prostate through the skin.
- [Read more about diagnosing prostate cancer in the separate leaflet called Prostate Cancer.](#)

How is a breast biopsy done?

- Usually a biopsy of a breast lump is done using an ultrasound machine and a small needle. The doctor would normally inject some local anaesthetic first to numb the area.
- [Read more about diagnosing breast cancer in the separate leaflet called Breast Cancer.](#)
- Sometimes a biopsy of a breast lump is done because the woman has felt it herself and gone to see a doctor. At other times the breast lump is picked up by screening, but the woman was unaware she had a lump in the first place. [Read more about breast cancer screening in the separate leaflet called Breast Screening.](#)

How is an endometrial biopsy done?

- The endometrium is the lining of the womb. It cannot be accessed through the skin, from the outside. It has to be looked at or biopsied from the inside.
- A specialist will do a camera test to look inside your womb (this is called a hysteroscopy). Using a small needle they can then take a sample of the lining of the womb, or they can suck a tiny bit of the lining off using a syringe.
- It is not normally painful and you can be awake for the procedure.

How long do biopsy results take?

- This will vary from hospital to hospital.
- Once the biopsy is taken it usually needs to be prepared with chemicals and 'set' in a little microscope slide.
- Then a specialist doctor (a histopathologist) will look at it under a microscope and write a report.
- The report is then sent back to the doctor who originally ordered or performed the biopsy.
- From start to finish this usually takes three weeks, but can be quicker or slower than that, depending on the hospital or what type of biopsy is taken.

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Document ID: 4742 (v41)	Last Checked: 22/11/2018	Next Review: 21/11/2021

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