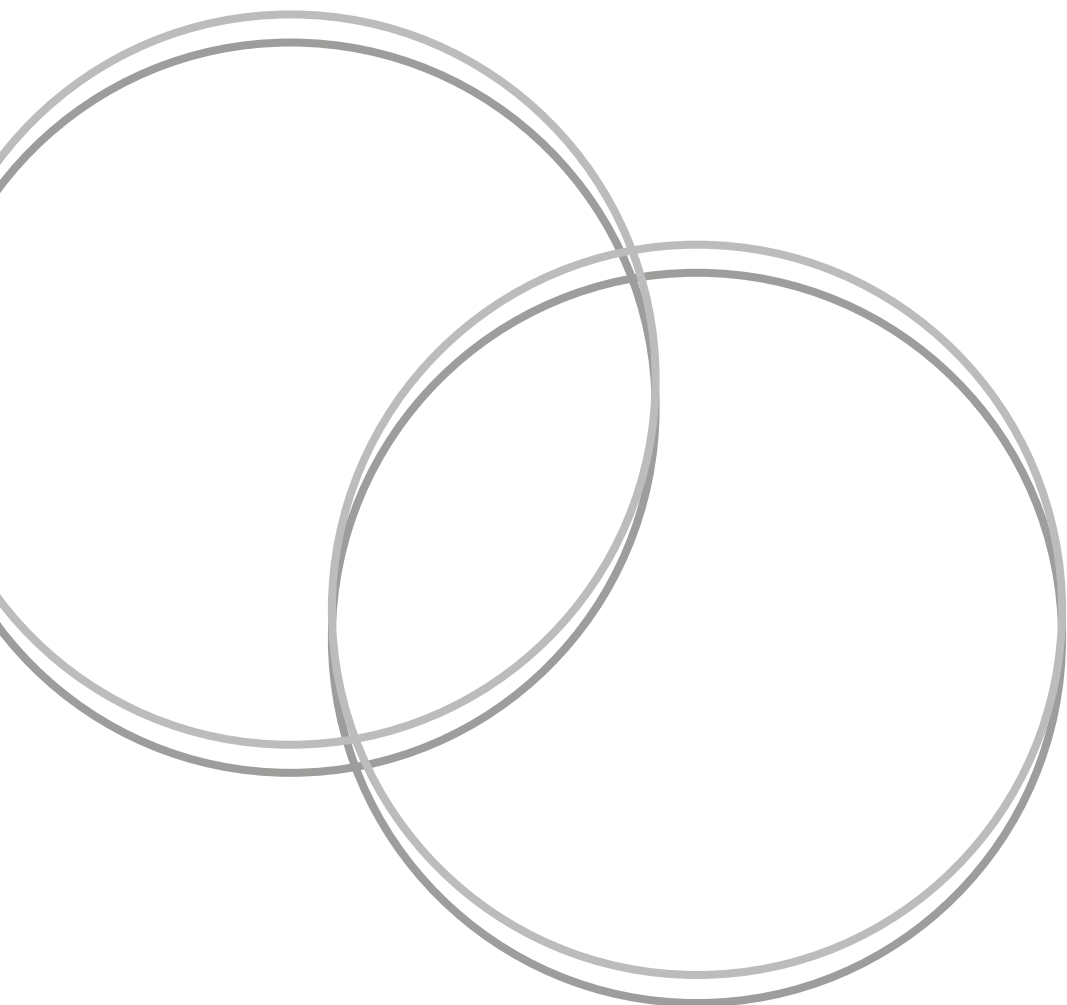


Fluoroscopy (X-ray) – guided lumbar puncture

Information for patients



What is an X-ray guided lumbar puncture?

A lumbar puncture (also called a spinal tap) is a procedure which is carried out to collect a sample of cerebrospinal fluid (CSF) for testing. CSF surrounds and cushions the brain and spinal cord. A CSF sample is collected by inserting a very fine needle into your lower back, between the bones of your spine, into the space around the spinal cord. This part of the spine is the safest area to access, as the spinal cord itself is well above this space.

During an X-ray guided lumbar puncture, X-rays are used to help guide the needle into the correct position.

Why is an X-ray guided lumbar puncture performed?

A lumbar puncture is performed to collect samples of cerebrospinal fluid (CSF), which are then sent to a laboratory for testing. These tests can help doctors determine whether your symptoms are caused by a condition affecting your brain or spine. A lumbar puncture can also be used to measure the pressure inside the spinal canal or to reduce the CSF pressure. The doctor referring you for your image guided lumbar puncture will talk to you about the exact reasons why you are having a lumbar puncture.

An X-ray guided lumbar puncture is typically performed if previous attempts at a standard lumbar puncture were difficult or unsuccessful. The use of X-rays allows the doctor to more accurately position the needle to guide it into the spinal canal.

What are the benefits?

A lumbar puncture will help with diagnosis, or it may be part of treatment (for example to reduce raised CSF pressure).

What are the risks?

This is a simple and safe procedure. However, a lumbar puncture carries a low risk of the following complications:

Headache

Some people develop a headache after a lumbar puncture. This is due to the slight reduction in pressure around the brain after removal of a small amount of CSF. It usually gets better on its own within 24 to 48 hours. Drinking plenty of fluids will help, as it is important to be well hydrated after the procedure (caution is required if you have a medical condition limiting your fluid intake). A simple painkiller like paracetamol and laying flat may also help.

Bleeding

There is a small risk of bleeding where the needle is inserted into the lower back. Usually, this is minor and you may notice mild bruising. Very rarely, the bleeding is more serious.

Infection

There is a small risk of infection where the needle is inserted into the CSF space. Strict sterile precautions are taken to reduce this risk.

CSF Leak

After the test, a little CSF fluid may leak out and collect under the skin. You may notice a small swelling where the lumbar puncture was carried out. This is not dangerous and will usually get better by itself. Very rarely, the CSF leak does not get better on its own, and requires a procedure to fix it.

How do I prepare for the procedure?

You may eat and drink normally before the procedure.

You should not drive for 24 hours after the procedure, so you will need to arrange alternative transport or have someone drive you home.

Medications

Please let your doctors organising the procedure know if you are taking an antiplatelet medication (like aspirin or clopidogrel) or an anticoagulant (like warfarin, heparin, apixaban or dabigatran) before your lumbar puncture. They will let you know when to stop these medications before the procedure and when to restart them afterward. Please do not stop taking any medication unless you have been advised to do so.

Pregnancy

The amount of radiation used during the procedure is small. However, the risks of radiation are slightly higher for the unborn child. If you are or may be pregnant, please inform your doctors before attending the appointment.

Who performs the procedure?

A specially trained doctor called a radiologist will perform the procedure. These doctors have special expertise in using X-ray and scanning equipment. They are also skilled at reading and understanding the images produced.

What happens during the procedure?

- Before the procedure, you will be asked to change into a hospital gown. You will then be taken into the X-ray room.
- The radiology doctor will ask you a few questions about your medical history and will explain the procedure and ask any questions you may have. Please let the radiologist know if you are allergic to any medications, in particular local anaesthetic (lidocaine), latex, or plasters.
- You will be asked to lie down on the X-ray table, usually on your left side with your knees bent towards your chest. Your head will rest on a pillow.
- The X-ray machine will move around you and take X-rays of your lower back. These will be shown on a monitor and will be used by the radiologist to plan where to insert the needle. This area will be marked with a clean pen before the procedure starts.
- Care will be taken to ensure that the procedure is as sterile (clean) as possible. The radiology doctor will wear sterile gloves. Your lower back will be cleaned with antiseptic and a sterile sheet will be placed over your back. Please do not touch this sheet.
- The doctor will inject local anaesthetic into your lower back to numb the area. When the area is numb, a spinal needle will be slowly inserted into your lower back, in between the bones of your spine. X-rays will be used help the doctor position the needle and guide it into the spinal canal. You may feel some pressure or 'pushing' on your back. Please let the doctor know if you feel sharp pain.
- Once the needle enters the spinal canal, the pressure will be measured if this is needed. CSF will then be collected in small tubes. When all of the samples have been collected, the needle will be removed and a small dressing will be put on your back to cover the needle wound.

What happens after the procedure?

You will be taken back to the ward, or a day case unit area, on a trolley or bed and will be monitored after the procedure. You will need to lie flat on your back for at least 60 minutes. If you feel unwell or have any concerns after your lumbar puncture, please speak to a member of staff.

If you are having the lumbar puncture as an outpatient and recover well from the procedure, you will be allowed to go home later on the same day.

You should avoid strenuous activity for the rest of the day.

You should not drive for 24 hours post procedure as your insurance may not be valid in the event of an accident.

The dressing can be removed the morning following the procedure.

Drink plenty of fluids for 1-2 days after the procedure (caution is required if you have a medical condition where your fluid intake needs to be carefully controlled).

The results will be sent back to the doctor who ordered the tests.

After you go home

Please contact your GP or go to your nearest emergency department if you experience any of the following symptoms:

- A temperature of 38°C or above.
- Tenderness, redness and/or swelling where the needle was inserted that does not go away after a few days or is getting worse.
- Clear fluid or blood leaking from the area where the needle was inserted that does not go away after a few days.
- Weakness or numbness in your arms or legs.
- New incontinence or constipation.
- A severe persistent headache that does not get better when you lay flat.
- Sweating.
- Confusion.

Contact

If you would like any further information, you may contact the **Oxford Radiology Department** on: 01865 228 376

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call 01865 221 473 or email PALSJR@ouh.nhs.uk

Neuroradiology Department
Oxford University Hospitals NHS Trust
Oxford OX3 9DU

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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