



Having a lumbar puncture

This information is for patients on the Battle Day Unit (BDU) and explains what to expect if you need a lumbar puncture.

What is a lumbar puncture?

A lumbar puncture is a procedure to remove a small amount of fluid that surrounds the brain and spinal cord. This fluid is called cerebrospinal fluid or CSF. The fluid is removed using a needle inserted between the bones of the lower back (lumbar vertebrae). Local anaesthetic is used to numb the skin before a longer needle is inserted to remove the fluid.

The fluid sample removed is then sent for examination under a microscope in the laboratory. This leaflet has been produced to give you general information about lumbar puncture. Most of your questions should be answered by this leaflet. It is not intended to replace the discussion between you and the healthcare team but may act as a starting point for discussion. If after reading it, you have any concerns or require further explanation, please discuss this with a member of the healthcare team.

Why is a lumbar puncture necessary?

The sample of CSF is used to diagnose infection or inflammation in and around the brain (encephalitis and meningitis), to diagnose bleeding in the brain (subarachnoid haemorrhage), to diagnose other neurological conditions (such as multiple sclerosis or Guillain Barre Syndrome) or to measure or remove fluid (idiopathic intracranial hypertension or normal pressure hydrocephalus). The results of the analysis of the CSF will help the medical team diagnose your condition and guide treatment.

Are there any risks involved?

While a lumbar puncture is usually very safe and can help with diagnosis, it can have some side effects that you need to be aware of:

- Bleeding or clear fluid leaking from where the needle went into your back.
- Swelling where the needle went into your back.
- Headache: 40% (2 in every 5). In rare cases, this can last for up to a year (3 in every 1000).
- Backache: 35% (7 in every 20).
- Nerve root injury or meningitis: around 0.3% (3 in every 1000).
- A blood clot near the spinal cord: the risk is very low.
- Other possible complications include:
 - ☐ long-term back pain
 - ☐ infection
 - ☐ nerve damage, which can cause long-term pain, pins and needles, or loss of feeling in your arms or legs
 - ☐ hearing loss

- ☐ double vision
- ☐ blood clots

Sometimes, for various reasons, it is difficult to do a lumbar puncture. If this happens, you may need to go back for a second attempt but if this is necessary, it will be fully discussed with you.

What happens during the lumbar puncture?

- The procedure is carried out in BDU and usually takes around 15 to 20 minutes, but can take longer. The doctor will go over the procedure with you and answer any questions you have. They will ask you to sign a consent form.
- You'll be asked to sit down with your head and shoulders bent forwards, or lie down on your side with your knees pulled up to your chest, allowing the space between the bones to open. A pillow will help you to be more comfortable. Please try to be patient and stay as still as you can during the procedure.
- The doctor will identify the space between the bones and mark the area. They will clean your back with an antiseptic solution and inject a small amount of local anaesthetic under the skin. This stings for a few seconds then numbs the area.
- A needle is then inserted between the bones of the lower back until the tip is in the spinal canal where the CSF is. It sometimes takes a few attempts to get the needle in the right spot. There may be a shooting pain in one of your legs if the needle touches one of the nerves in the spinal canal. This won't damage the nerve but might make you flinch. If this happens, the doctor will reposition the needle.
- The fluid drips out of the needle and is collected in sample pots. The pressure of the fluid is sometimes measured at this point (this is only done in the lying position).
- After the samples have been collected or the pressure measured and corrected, the needle is removed and a dressing is put on your back to cover the needle wound and to stop any bleeding.

If at any point during the procedure you would like the doctor to stop, please let them know but please remain still so that the needle can be safely removed.

What happens after a lumbar puncture?

The samples are sent to the laboratory where they are analysed. Initial results are usually available in a few hours but some special tests can take days or weeks to be completed. You can safely move about after a lumbar puncture but if you feel dizzy or unwell it is best to lie down. Similarly, if you develop a post-lumbar puncture headache, lying down will help relieve the discomfort. As a precaution, please do not drive for 24 hours. If you develop a post-lumbar puncture headache that persists for more than a week, please contact your GP who can refer you for consideration of another procedure to help relieve the headache.

Please keep the dressing dry. Don't go swimming or have a bath for 2 days but feel free to shower as long as you can keep the dressing dry. If the dressing does get wet, remove it and place it with a normal plaster.

Bleeding risks and blood thinners

Please let us know by email (rbb-tr.cat10@nhs.net) or by phoning the clinical administration team (0118 322 5474) before your lumbar puncture if:

- You have a diagnosed bleeding disorder.
- You have a clotting disorder.
- You are taking any blood-thinning (anticoagulant) medication.
- You are taking any antiplatelet medication (except aspirin at doses of <100mg/day)

Examples of blood-thinning medicines include:

- Warfarin
- Apixaban / Rivaroxaban / Dabigatran / Edoxaban
- Heparin injections
- Clopidogrel / Ticagrelor / Prasugrel

Some blood-thinning medicines may need to be stopped before the procedure to reduce the risk of bleeding complications. The length of time they need to be withheld varies depending on the medication and your individual circumstances.

Do not stop any prescribed blood-thinning medication unless you have been advised to do so by us

If you are unsure whether any of your medications affect blood clotting, please contact the department before your appointment so that we can advise you appropriately.

Further information

If you have any questions or concerns, please speak to a member of our admin team. They are contactable on: 0118 322 5474 or email rbb-tr.cat10@nhs.net.

Friends and Family Test

Whatever your experience, you can give feedback by completing the Friends & Family test by going online www.royalberkshire.nhs.uk/patients-and-visitors/friends-and-family-test/ or using the link sent to you in an SMS text message.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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