

What is a Lumbar Puncture?

Your doctor or surgeon has referred you for an image-guided lumbar puncture. Under the guidance of a CT scanner, a needle will be inserted to take a sample of cerebrospinal fluid (CSF) which bathes your brain and spinal cord from your lower back or lumbar spine. The procedure is performed by a specialist doctor called a radiologist. The sample of CSF will then be sent to pathology for testing.



Under the guidance of a CT scanner, a needle will be inserted into a sac below your spinal cord in your lower back and a sample of CSF taken. The procedure is performed by a specialist doctor called a radiologist.

How long will the procedure take?



The procedure itself takes approximately 15 to 30 minutes. Our staff will monitor you for up to 4 hours after the procedure to ensure that your leg(s) function normally, your blood pressure is normal, and you can sit up and walk normally without feeling dizzy. You may be in our imaging centre for up to 5 hours.

Is there any special preparation required?

When booking your appointment, it is essential that you inform our staff if you have any allergies, take blood thinning medication, or are pregnant or breastfeeding.

Please list or bring all of your prescribed medications, those medications that you buy over the counter, including herbal remedies and supplements.

If you take blood thinning medication, you may need to stop taking these for a few days or reduce your dose. **It is very important that you do not stop any blood thinning medications or change the dose without consulting with our radiology clinical staff and your own doctor.** They will give you specific instructions about when to stop and restart the medication. These drugs are usually prescribed to prevent stroke or heart attack, so it is very important that you do not stop taking them without being instructed to do so by your doctor or our clinical staff, or both. Aspirin is usually not stopped.

In the days prior to the procedure, a blood test may be required to check your blood clotting. You should continue with pain medication and all other medications as usual.

What do I need to do on the day of the procedure?

It is common to experience numbness or weakness in your legs immediately following the injection. You, therefore, will need someone to drive you home after the procedure, and we advise you not to drive for the rest of the day.

The injection is performed with you lying on your stomach. If your stomach is 'too full', this can be uncomfortable. It helps to limit your food intake to a light meal in the 2 hours before your appointment.

On the day of your appointment, please ensure you bring:

- Your referral form (if you have it)
- All previous relevant scans or x-rays
- Medicare and healthcare cards (e.g. DVA card or concession card)
- List of all medications

What happens during the procedure?

A CT scan assists the radiologist in identifying the site of the lumbar puncture; this may be marked on your skin with a pen. An antiseptic solution is used to clean the skin, and a sterile drape applied to your back to reduce the risk of infection.

You will remain awake during the procedure but may be given some sedation medication to help you feel relaxed and comfortable. To prevent discomfort, the area where the lumbar puncture will be performed may be numbed using local anaesthetic. Local anaesthetic causes a pinprick and stinging sensation that is uncomfortable for a few seconds.

Guided by the CT images, the radiologist will place a thin needle into the sac below the spinal cord, confirming the correct location using CT. This is generally considered the safest site to take this CSF for testing. After confirmation of the correct position of the needle, a sample of CSF is collected by the radiologist. You will need to stay as still as possible. A small number of patients report backache or shooting leg pain at the time of the procedure. This pain is temporary and should ease off. Once the needle is removed, a waterproof dressing will be applied to the site.

Are there any after effects from the treatment?

- You may have a headache that requires medication and bed rest;
- Minor pain, bruising and/or infection at the site of the lumbar puncture. This may require treatment with antibiotics;
- Bleeding or bruising may occur. This is more common if you take blood-thinning medications;
- The procedure can also cause a temporary drop in blood pressure, making you feel dizzy if you sit or stand up.

Our staff will monitor you closely, including the sensation in your legs and your blood pressure.

What happens after the procedure?

You will be required to lie flat for up to 4 hours after the lumbar puncture before being allowed to sit up gradually over a period of one hour. You will need someone to drive you home after the procedure.

Our staff will provide you with clear written instructions on ways to look after yourself following the injection. This includes information such as; avoiding strenuous activity for a few days, arranging a follow-up appointment with your referring doctor and how to look after the lumbar puncture site.

What are the benefits?

The lumbar puncture will assist your referring doctor to diagnose your illness.

Are there any risks?

In referring you for this procedure, your doctor believes that the benefits of this procedure for you are greater than the risks. There are some risks and complications associated with a lumbar puncture such as headache, bleeding or infection. The use of the CT scanner to guide the procedure minimises these risks. CT uses ionising radiation to produce the images. The radiation doses associated with guiding a lumbar puncture are minimal and the associated risks are negligible.

Less common risks and complications may include infection or damage to surrounding structures such as blood vessels, organs and muscles. Some people may have an allergy to injected drugs, or the procedure may not be possible due to medical or technical reasons.

Before the lumbar puncture, the radiologist will discuss the procedure with you in detail, including any risks specific to you. You will be provided with the opportunity to ask questions. It may be necessary to do a formal consultation to ensure that the procedure is the most appropriate for you.

When do I get the results?

The radiologist will send a report outlining the procedure to your referring doctor/surgeon. It is important that you make a follow-up appointment with your referring doctor/surgeon if the injection has not helped to ease your pain.

The pathology results from the CSF sample will be sent to your referring doctor by the pathology laboratory.

I still have questions; who can I ask?

Medical information can be complex, and you may receive information that you do not fully understand. It is important for you to consider the risks and outcomes of the procedure as well as your personal needs before making a decision to undergo the procedure.

If you have read this online information and are still unsure if this is the correct procedure for you; before making a booking, you should discuss your questions or concerns with your referring doctor in the first instance. Your regular GP and/ or your family may also be a useful resource. Your referring doctor can answer questions about the risks and benefits of not having the procedure and other options for treatment.

If you have questions before your appointment about what is involved on the day, our staff would be happy to assist. Please contact the imaging centre where you have made your appointment.