

Lumbar puncture

A lumbar puncture is a medical procedure where a needle is inserted into the lower part of the spine to test for conditions affecting the brain, spinal cord or other parts of the nervous system.

During the procedure, pressure is measured and samples of cerebrospinal fluid (CSF) are taken from inside the spine. CSF is a clear, colourless fluid that surrounds and supports the brain and spinal cord. Analysis of CFS can often reveal a good deal about some conditions that affect the brain and spinal cord.

The fluid can be tested to help diagnose conditions, such as:

- [meningitis](#) – an infection of the layers (membranes) surrounding the brain and spinal cord
- [subarachnoid haemorrhage](#) – a type of stroke, caused by bleeding in and around the brain
- [Guillain-Barré syndrome](#) – a rare condition that causes inflammation of the nerves in the arms and legs

A lumbar puncture doesn't necessarily mean you have one of these conditions; it may be used to rule them out.

A lumbar puncture can also be used to treat some conditions, such as injecting [antibiotics](#) or [chemotherapy](#) medication into the CSF.

Read more about [why lumbar punctures are used](#).

How is a lumbar puncture carried out?

Under [local anaesthetic](#), a hollow needle is inserted into the base of the spine and into the spinal canal, which contains the spinal cord and the nerves coming from it.

The pressure within the spinal canal is usually measured and some CSF is removed either to reduce the pressure or for a sample to be sent for testing.

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You will normally be lying on your side, with your legs pulled up and your chin tucked in, but sometimes the procedure is carried out while you're seated and leaning forwards.

It usually takes around 30-45 minutes to complete.

It's possible to get results on CSF samples within 48 hours, but specialised tests can take several weeks.

Read more about [how a lumbar puncture is performed](#).

Are there any risks?

A lumbar puncture is generally safe and the risk of serious complications is very low.

Serious side effects are generally uncommon, although many people experience headaches caused by CSF leaking out through the needle hole in the spine. This occurs internally, so you won't see it.

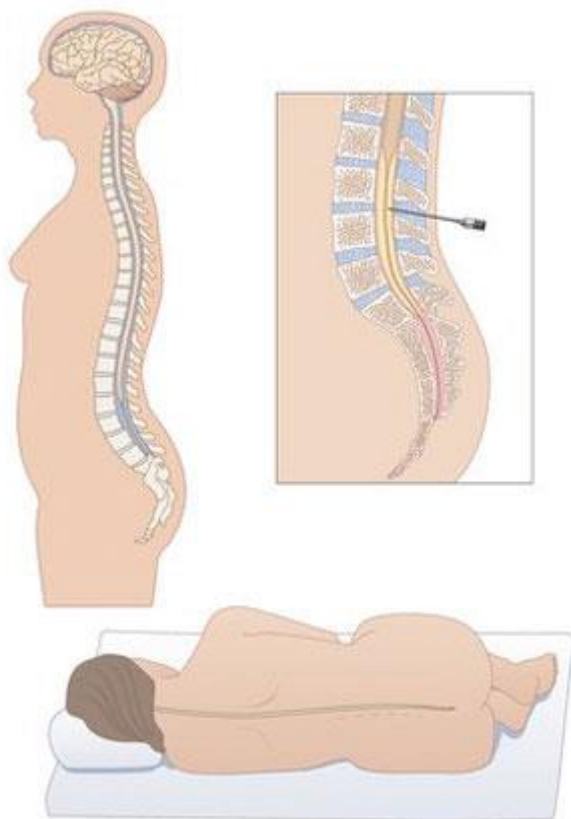
The headaches are typically worse when in the upright position and can usually be relieved by lying down. Drinking plenty of fluids and taking simple painkillers will also help. It can take up to a week for the hole to heal and the fluid to stop leaking.

Read more about the [possible side effects of a lumbar puncture](#).

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During a lumbar puncture, you may be asked to lie on your side so a needle can be inserted between the two bones at the base of your spine.

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