



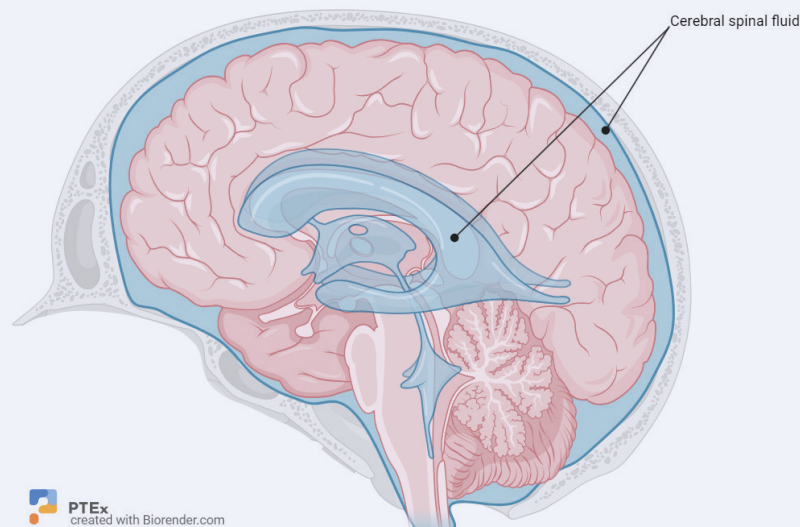
# PATHOLOGY TESTS EXPLAINED

Information about pathology tests to help everyone take control of their health and make the right decisions about their care.

## WHAT YOU SHOULD KNOW ABOUT SPINAL FLUID TESTING AND HAVING A LUMBAR PUNCTURE

Cerebrospinal fluid (CSF) is the clear watery fluid that flows in and around your brain and spinal cord. It is being continually absorbed into your blood and replenished with new fluid.

The blood-brain barrier is a tightly locked layer of cells that separates the brain from circulating blood and this helps keep toxins and most blood cells away from the brain. Any condition that disrupts this can cause changes to the CSF.



The brain

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### Testing

Testing a sample of CSF can be very useful in diagnosing a range of conditions affecting the central nervous system. These include:

- Infectious diseases such as meningitis and encephalitis to decide if an infection is caused by bacteria, viruses or, less commonly, fungi, parasites, or TB – mycobacterium tuberculosis. It is also used to detect infections in or near the spinal cord.
- Bleeding within the brain or skull.
- Diseases that cause inflammation, autoimmune disorders such as Guillain-Barré syndrome or sarcoidosis, or conditions like multiple sclerosis that cause the destruction of myelin, the insulating layer around nerves.
- Tumours of the central nervous system – either primary tumours that originate there or metastatic tumours which have started somewhere else in the body.

### Other tests

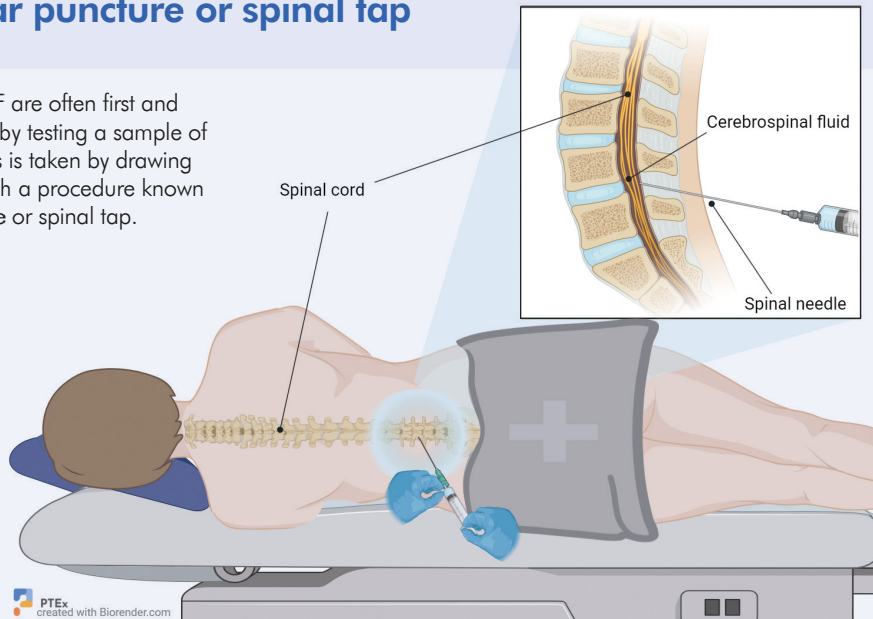
Other tests that may be requested at the same time as the CSF testing:

- Blood culture to detect and identify bacteria in the blood.
- Blood glucose, total protein, bilirubin to compare with the concentrations found in the CSF.
- FBC (full blood count) to examine the number of various cells in the blood.
- Antibodies for a range of infections.
- CRP (C-reactive protein) and ESR (erythrocyte sedimentation rate) which are markers in the blood indicating inflammation.



## Lumbar puncture or spinal tap

Changes in your CSF are often first and most easily detected by testing a sample of your spinal fluid. This is taken by drawing off some fluid through a procedure known as a lumbar puncture or spinal tap.



The lumbar puncture is usually performed while you are lying on your side but can sometimes be done in a sitting position. Using a local anaesthetic, a special needle is inserted through the skin between two vertebrae, and a small amount of CSF is collected and placed into tubes. Several tubes are collected to ensure the quality of samples for testing. This is because blood or bacteria from the collection procedure may contaminate the first sample. The final tube collected is usually the sample used for testing.

Taking a sample of your CSF is a safe procedure but let your doctor know if you experience a headache, pain, numbness, or tingling in your legs, or pain at the puncture site. You may be asked to drink extra fluids to rehydrate after the procedure and to lie quietly in a flat position, without lifting your head to avoid a potential post-test spinal headache.



## What can your results show?

A CSF analysis of your sample will include several different test results depending on what your doctor ordered, which are based on your clinical signs and symptoms. Your doctors will likely order more tests to confirm your diagnosis.

Some infections may require urgent treatment and you will need to start medicine before you have a final diagnosis.



## Questions to ask your doctor

- Why does this test need to be done?
- Do I need to prepare (such as fast or avoid medications) for the sample collection?
- Will an abnormal result mean I need further tests?
- How could it change the course of my care?
- What will happen next, after the test?

For more detailed information on these and many other tests go to [pathologytestsexplained.org.au](http://pathologytestsexplained.org.au)



[www.pathologytestsexplained.org.au](http://www.pathologytestsexplained.org.au)

Pathology Tests Explained is the primary national source of consumer information on pathology testing. Information is written and edited by practising pathologists and scientists, including leading experts. This ensures integrity and accuracy.

Pathology Tests Explained is managed by a consortium of medical and scientific organisations representing pathology practice in Australia. More details at: [www.pathologytestsexplained.org.au/about](http://www.pathologytestsexplained.org.au/about)



Please use this QR code to access more information

## My Health Record

You'll find a direct link to the Pathology Tests Explained website embedded in the pathology results pages of your My Health Record.

Click on the link to find information about what your tests are investigating or measuring and what your results can tell your doctor.