



[Home](#) → [Medical Encyclopedia](#) → CSF smear

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CSF smear

A cerebrospinal fluid (CSF) smear is a lab test to look for bacteria, fungi, and viruses in the fluid that moves in the space around the spinal cord and brain. CSF protects the brain and spinal cord from injury.

How the Test is Performed

A sample of CSF is needed. This is usually done with a lumbar puncture (also called a spinal tap).

The sample is sent to a lab. There, a tiny amount is spread on a glass slide. Lab staff then views the sample under a microscope. The smear shows the color of the fluid and the number and shape of cells present in the fluid. Other tests may be done to check for the presence of bacteria or fungi in the sample.

How to Prepare for the Test

Follow instructions on how to prepare for a spinal tap.

Why the Test is Performed

Your health care provider may order this test if you have signs of an infection that affects the brain or nervous system. The test helps identify what is causing the infection. This will help your provider decide on the best treatment.

Normal Results

A normal test result means there are no signs of an infection. This is also called a negative result. However, a normal result doesn't mean that there is no infection. The spinal tap and CSF smear may need to be done again or other tests may be needed.

What Abnormal Results Mean

Bacteria or other germs found in the sample may be a sign of meningitis. This is an infection of the membranes covering the brain and spinal cord. The infection can be caused by bacteria, fungi, or viruses.

Risks

A laboratory smear poses no risk. Your provider will tell you about the risks of a spinal tap.

Alternative Names

Spinal fluid smear; Cerebrospinal fluid smear

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