

# Immunofixation and Protein Electrophoresis (CSF)



## Does this test have other names?

IPE CSF, CSF protein electrophoresis

## What is this test?

Cerebrospinal fluid (CSF) is the fluid that surrounds your brain and spinal cord. This test uses an electrical current on a CSF sample to separate out types of protein called immunoglobulins. Normally, your CSF does not contain much protein. An increase in the amount of these proteins could be a sign of an inflammatory or immune disorder. These include multiple sclerosis (MS) and meningitis.

In people with MS who have this test, CSF shows a pattern called oligoclonal bands. It also shows higher levels of immunoglobulins. These results help confirm an MS diagnosis. Oligoclonal bands are not seen in healthy CSF.

## Why do I need this test?

You may need this test if your healthcare provider thinks you have MS or another nervous system disorder.

## What other tests might I have along with this test?

You may also have a test to measure the level of glucose in your CSF. If your healthcare provider thinks you may have meningitis, you may need a Gram stain of your CSF to look for infection.

You may also have blood tests to check for:

- Albumin
- Prealbumin
- Immunoglobulins

## What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

Results are given in milligrams per deciliter (mg/dL). The normal range for CSF protein in adults is 15 to 45 mg/dL. Having oligoclonal bands is linked to MS.

If your levels are higher, it may mean that you have a health problem, such as:

- Multiple sclerosis (MS)
- Meningitis
- Lyme disease of the central nervous system
- An autoimmune disease
- A brain tumor

## How is this test done?

This test is done with a sample of your CSF. Your healthcare provider will take the sample through a spinal tap (lumbar puncture). They will put a thin needle into your lower back to remove fluid.

## Does this test pose any risks?

A lumbar puncture has these risks:

- Headaches
- Infection
- Bleeding
- Tumors
- Numbness

If the joints in your lower spine are deformed from arthritis, it may be hard for the healthcare provider to get a good sample of your CSF. Talk with your provider so you know what to expect.

## What might affect my test results?

Other factors aren't likely to affect your results.

## How do I get ready for this test?

You don't need to prepare for this test. But blood thinners and over-the-counter pain relievers, like aspirin, can cause bleeding during the lumbar puncture. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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