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## CSF total protein

CSF total protein is a test to determine the amount of protein in cerebrospinal fluid (CSF). CSF is a clear fluid that is in the space around the spinal cord and brain.

### How the Test is Performed

A sample of CSF is needed [1 to 5 milliliters (ml)]. A lumbar puncture (spinal tap) is the most common way to collect this sample. Rarely, other methods are used for collecting CSF such as:

- Cisternal puncture
- Ventricular puncture
- Removal of CSF from a tube that is already in the CSF, such as a shunt or ventricular drain.

After the sample is taken, it is sent to a lab for evaluation.

### Why the Test is Performed

You may have this test to help diagnose:

- Tumors
- Infection
- Inflammation of the central nervous system
- Guillain-Barré syndrome
- Vasculitis
- Blood in the spinal fluid
- Multiple sclerosis (MS)

### Normal Results

The normal protein range varies from lab to lab, but is typically 15 to 60 milligrams per deciliter (mg/dL) or 0.15 to 0.6 milligrams per milliliter (mg/mL).

Normal value ranges may vary slightly among different laboratories. Talk to your health care provider about the meaning of your specific test results.

The examples above show the common measurements for results for these tests. Some laboratories use different measurements or may test different specimens.

## What Abnormal Results Mean

An abnormal protein level in the CSF suggests a problem in the central nervous system.

Increased protein level may be a sign of a tumor, bleeding, nerve inflammation, or injury. A blockage in the flow of spinal fluid can cause the rapid buildup of protein in the lower spinal area.

A decrease in protein level can mean your body is rapidly producing spinal fluid or you have a more generalized protein deficiency.

## References

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Updated by: Joseph V. Campellone, MD, Department of Neurology, Cooper Medical School of Rowan University, Camden, NJ. Review provided by VeriMed Healthcare Network. Also reviewed by David C. Dugdale, MD, Medical Director, Brenda Conaway, Editorial Director, and the A.D.A.M. Editorial team.

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