Total Protein and A/G Ratio

Does this test have other names?

Albumin/globulin ratio

What is this test?

This is a blood test to measure the levels of protein in your body. Your liver makes most of the proteins that are found in your blood. Albumin is one major type of protein. Albumin carries many other substances around your system, including medicines and products your body makes. Another kind of protein called globulin has other functions in your body.

This test provides information about the amount of albumin you have compared with globulin. This comparison is called the A/G ratio. This test is useful when your healthcare provider suspects you have liver or kidney disease.

Why do I need this test?

You may need this test to find out whether you have liver disease, such as cirrhosis. Symptoms of cirrhosis include:

- Fluid buildup in the belly, which causes pain and swelling
- Fluid buildup in the feet, ankles, or legs
- Fatigue
- Itching
- Nausea and vomiting
- Lack of appetite
- Weight loss
- Spiderlike blood vessels on the skin
- Yellowing of the skin and eyes (jaundice)

This test can also help healthcare providers diagnose nephrotic syndrome, a condition that affects your kidneys. In adults, this problem may be caused by diabetes or lupus. Nephrotic syndrome causes puffiness around your eyes and in your arms and legs. With this condition, you lose too much protein in your urine. Protein testing may also show abnormal results if you have a problem that causes you to lose protein from your digestive tract.

What other tests might I have along with this test?

Depending on your symptoms, you may also have other blood and urine tests.

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.

Certain diseases tend to lower your level of albumin and raise your level of one or more types of globulins. A normal range for total protein is 60 to 80 grams per liter (g/L). A normal range of albumin is 35 to 52 g/L. The normal range for globulins varies by specific type.

If your protein level is low, you may have a liver or kidney problem.

If your protein level is high, you may have a gastrointestinal problem.

Low or high A/G ratios can help your healthcare providers identify other health problems, including certain cancers, autoimmune diseases, or some genetic disorders.

How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

Does this test pose any risks?

Taking a blood sample with a needle carries risks that include bleeding, infection, bruising, or feeling dizzy. When the needle pricks your arm, you may feel a slight stinging sensation or pain. Afterward, the site may be slightly sore.

What might affect my test results?

Being on bed rest for a long time can lower your protein level. If you are dehydrated, your protein level may appear higher than it is. Dehydration may also lead to higher albumin levels. Making sure you have had enough water before the test will give an accurate result. If the band (tourniquet) is placed around your arm for too long during blood collection, this can also make your albumin level seem high.

How do I get ready for this test?

Tell your healthcare provider about any symptoms you're having. 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.