TEST

Albumin blood (serum) test

An albumin blood test measures a liver-made protein that helps keep fluid inside blood vessels

WHAT IT MEASURES
Albumin, a protein made by your liver, in blood

SAMPLE
Blood

FASTING NEEDED?
No

HOW LONG IT TAKES
Usually less than five minutes

RESULTS IN
Often within one day; laboratory turnaround differs

USED FOR
Assessing and monitoring liver, kidney, and overall health

MAIN LIMITATION
Hydration and inflammation can shift levels without showing the cause

Overview

An albumin blood test measures albumin in the liquid part of your blood. Serum is the liquid left after a blood sample has clotted.

Albumin is a protein made by the liver. It helps keep fluid inside blood vessels and carries hormones, medicines, fatty acids, and other substances through the bloodstream.

The test is often included in a liver panel or comprehensive metabolic panel. An albumin result cannot diagnose a condition by itself. It must be interpreted alongside your symptoms, medical history, other results, and changes over time.

Why the test is ordered

The test may be used to investigate or monitor conditions that affect albumin production, loss, or distribution.

Common reasons include:

Albumin may also be measured during a routine blood panel without a specific concern about it.

- Assessing liver function with other blood tests
- Investigating protein loss through the kidneys or digestive tract
- Monitoring a liver, kidney, or inflammatory condition
- Assessing swelling or unexplained fluid build-up
- Checking general health during illness or before some treatments

Who should have the test

You may be offered this test if other findings suggest a liver or kidney problem, you have unexplained swelling, or you are being monitored for a condition that affects blood proteins.

It may also be ordered during a hospital stay, after major surgery, or during prolonged illness. Albumin provides useful context in these situations but is not a stand-alone measure of nutrition.

Repeat testing usually depends on why the test was ordered and the rest of your results, rather than one mildly abnormal result.

How to prepare

Albumin testing alone does not require fasting. You can usually eat and drink normally.

Albumin is often measured with other tests that may require fasting, so follow the instructions for the whole blood panel. If told to fast, plain water is generally allowed unless your instructions say otherwise.

Continue your usual medicines unless specifically told not to. Tell the person arranging the test about prescription medicines, supplements, recent intravenous fluids, albumin infusions, or blood products.

Be normally hydrated, but do not deliberately drink excessive amounts of water before the test.

What happens during the test

A healthcare professional inserts a small needle into a vein, usually in your arm. Blood is

collected into a tube and sent to a laboratory.

You may feel a brief scratch or sting. The blood draw usually takes less than five minutes.

No recovery time is usually needed, and you can generally return to normal activities straight away.

Understanding your results

Results are commonly reported in grams per litre or grams per decilitre. Use the reference range on your laboratory report because ranges vary by laboratory and clinical context.

A low albumin result does not identify one condition. Possible causes include reduced liver production, loss through the kidneys or digestive tract, inflammation, severe illness, burns, pregnancy, or dilution from excess fluid.

A high result is most often related to dehydration, which concentrates the blood. It can also follow intravenous albumin treatment. It is not usually caused by the liver producing too much albumin.

Your result may be compared with:

A result just outside the reference range may not indicate a medical problem. Your healthcare professional may first review your hydration, recent illness, medicines, and other results.

- Other liver tests, such as bilirubin and liver enzymes
- Kidney function tests and urine albumin
- Total protein and other blood proteins
- Inflammation markers
- Previous albumin results

What affects the results

Hydration has an important effect. Dehydration concentrates albumin, while excess fluid, intravenous fluids, or fluid retention can dilute it.

Pregnancy usually lowers albumin concentration because the liquid part of the blood expands. Inflammation, infection, surgery, or injury can also lower it, so a low result does not automatically mean poor nutrition.

Standing for a prolonged period or leaving a tourniquet on too long may concentrate blood in the arm. Drawing blood near an intravenous fluid line may alter the sample.

Recent intravenous albumin, plasma, or a large transfusion can temporarily affect the result. Medicines that influence hormones, inflammation, or fluid balance may also matter. Do not stop any medicine because of an albumin result without medical advice.

Laboratories may use different measurement methods, which can produce slightly different results. Trends are easiest to compare when the same laboratory is used.

Accuracy and limitations

Laboratory albumin measurement is generally reliable, although collection problems, sample dilution, and differences between testing methods can produce misleading results.

Albumin is not specific to one disease. A low result may reflect inflammation, pregnancy, kidney loss, excess fluid, or liver disease. A normal result does not rule out early liver or kidney disease.

Albumin changes relatively slowly because it remains in the bloodstream for weeks. It may miss rapid changes or remain low during recovery.

Serum albumin is not a reliable nutrition test by itself. A nutrition assessment also considers food intake, weight changes, muscle loss, medical conditions, and physical findings.

For early kidney damage, a urine albumin-to-creatinine ratio is usually more informative because it checks whether albumin is leaking into urine. Other liver tests, clotting tests, imaging, or urine studies may be needed depending on the concern.

Risks and complications

A blood draw may cause mild soreness, a small bruise, or brief bleeding. Some people feel faint during or shortly after the procedure.

What happens next

A result within the laboratory range may need no specific follow-up, although other tests ordered with it still need to be reviewed.

A mildly abnormal result is commonly managed through routine follow-up. This may include repeating the test, reviewing medicines and recent illness, or ordering liver, kidney, urine, or inflammation tests. Treatment targets the underlying cause rather than the albumin number itself.

Seek prompt medical advice if you develop worsening swelling, reduced urination, yellowing of the skin or eyes, or increasing abdominal swelling.

Call emergency services for severe breathing difficulty, fainting, new confusion, chest pain, vomiting blood, or black, tar-like stools. These symptoms require urgent assessment regardless of your albumin result.

Common questions

Can I drink coffee before an albumin blood test?

Albumin itself does not require fasting. If other tests require fasting, avoid coffee unless your instructions allow it; plain water is the safest choice.

Does the time of day matter?

Timing is not usually critical. For repeat monitoring, having blood taken under similar conditions can make comparisons easier.

Can I exercise beforehand?

Ordinary activity is unlikely to cause a major change. Strenuous exercise may affect hydration and other tests, so avoid an unusually hard workout unless told otherwise.

Should I drink extra water before the test?

Normal hydration is helpful, but do not force large amounts of water. Dehydration and excessive fluid intake can both affect the concentration.

Does pregnancy affect albumin?

Yes. Albumin concentration usually falls during pregnancy as blood volume increases. Pregnancy-specific context is important when interpreting the result.

Does a low result mean I need more protein?

Not necessarily. Inflammation, fluid balance, liver production, and protein loss can all lower albumin. Increasing dietary protein will not correct every cause.

Sources

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