



What are liver function tests?

Liver function tests are blood tests that help assess how well your liver is working. They can show early signs of inflammation, damage or blockage and are often part of routine health check ups.

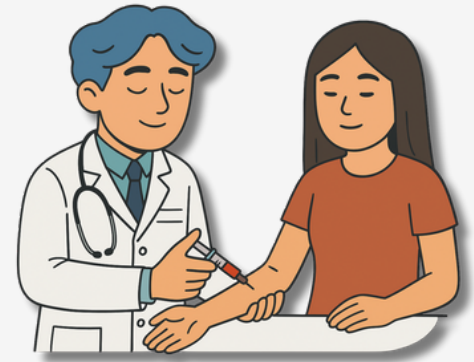
What can you expect

During the test

The blood sample for liver function tests is usually drawn through a small needle inserted into a vein in the bend of your arm. The needle is attached to a small tube, to collect your blood. You may feel a quick pain as the needle is inserted into your arm and have some short-term soreness at the site after the needle is removed.

After the test

Your blood goes to a laboratory for analysis. If the lab analysis happens on-site, you could have your test results within hours. If your doctor sends your blood to an off-site laboratory, you may get the results within several days.



Key measurements explained

1. ALT, alanine aminotransferase

What it shows

ALT is an enzyme found mainly in liver cells. When the liver is inflamed or damaged, ALT levels rise.

Typical range

- Around 7 to 56 units per litre

How to interpret

- Mildly raised values can be linked to fatty liver, alcohol, medications or metabolic conditions
- Significantly raised values may indicate acute inflammation or hepatitis
- ALT is usually compared with AST for clearer interpretation

2. AST, aspartate aminotransferase

What it shows

AST is found in the liver, muscles and other organs. It is less liver specific than ALT, so the two are read together.

Typical range

- Around 8 to 48 units per litre

How to interpret

- A high AST with a high ALT usually indicates liver inflammation
- A high AST that is much higher than ALT can sometimes point to alcohol related injury or muscle related causes
- The AST to ALT ratio may guide diagnosis



3. GGT, gamma glutamyl transferase

What it shows

GGT helps detect bile flow problems and is sensitive to alcohol intake and certain medicines.

Typical range

- Men, roughly 8 to 61 units per litre
- Women, roughly 5 to 36 units per litre

How to interpret

- Raised GGT with raised ALP suggests a bile duct or gallbladder issue
- Raised GGT with high ALT or AST can support the diagnosis of liver inflammation
- A rise in GGT alone is common in alcohol use or medication effects

4. ALP, alkaline phosphatase

What it shows

ALP is present in the liver, bile ducts and bones. It rises when bile flow is obstructed or when bone turnover increases.

Typical range

- Around 40 to 129 units per litre

How to interpret

- Raised ALP with raised GGT points towards a liver or bile duct cause
- Raised ALP with normal GGT may indicate a bone related cause
- Very high ALP levels often prompt imaging such as ultrasound



5. Bilirubin

What it shows

Bilirubin is a pigment made from the breakdown of red blood cells. The liver processes it for removal.

Typical range

- Total bilirubin usually 0.1 to 1.2 milligrams per decilitre

How to interpret

- Raised bilirubin may cause jaundice
- Causes include bile duct obstruction, hepatitis, haemolysis or inherited conditions such as Gilbert syndrome
- Patterns of direct and indirect bilirubin help guide further assessment

6. Albumin

What it shows

Albumin is a protein produced by the liver. It reflects the liver's ability to synthesise proteins.

Typical range

- Around 3.5 to 5.0 grams per decilitre

How to interpret

- Low albumin suggests long standing liver disease rather than early inflammation
- Levels can also fall with poor nutrition, kidney disease or inflammation



7. Total protein

What it shows

A general measure of proteins in the blood, including albumin and globulins.

Typical range

• Around 6.3 to 7.9 grams per decilitre

How to interpret

• Abnormal values guide further investigation but are less liver specific



8. Globulin

What it shows

Globulins include antibodies and other proteins.

Typical range

• About 20 to 35 grams per litre

How to interpret

• Raised globulins can be seen in autoimmune liver disease or chronic inflammation

Putting it all together

Clinicians do not rely on a single value. LFTs are interpreted in combinations, for example:

Pattern 1, raised ALT and AST

Suggests liver inflammation, often seen in fatty liver, alcohol injury, viral hepatitis or medication effects.

Pattern 2, raised ALP and GGT

Points toward bile duct or gallbladder issues, for example obstruction or cholestasis.

Pattern 3, high bilirubin with raised ALP and GGT

Often indicates problems with bile flow.

Pattern 4, low albumin with prolonged abnormalities

May suggest chronic liver disease.

- *Reference ranges vary slightly between laboratories, so people should check the ranges printed on their own report.*
- *Abnormal results do not automatically mean liver disease, many values change temporarily with exercise, medicines or recent illness.*
- *Results should always be interpreted by a healthcare professional.*



Questions to ask your doctor

- Why have I been asked to have a liver blood test?
- Can I eat before I have my test?
- How and when will I get my results?
- Who can I talk to if I have questions about my results?