AST (SGOT) blood test result ranges, and how to interpret them

An AST blood test helps determine how well the liver is

SGOT ranges | Interpreting results | Why do it? | Vs. ALT | Procedure | Risks Follow-up testing | Summary

functioning by measuring levels of aspartate aminotransferase (AST) in the blood. Too much of this enzyme can indicate a problem, such as liver damage. Another name for the test is a serum glutamic-oxaloacetic transaminase (SGOT) test. Aspartate aminotransferase (AST) is an enzyme mostly found in the liver. AST is also present in other parts of the body, including the:

kidneys heart

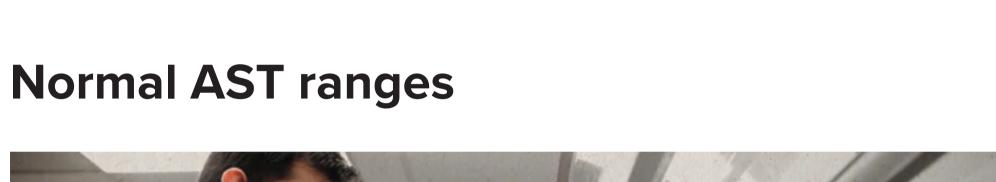
muscles

Another name for the AST enzyme is serum glutamic-oxaloacetic transaminase (SGOT).

Most people have low levels of the AST enzyme. Damage to liver cells can cause the release of extra AST into the blood though, leading to higher levels of the enzyme.

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AST levels can vary depending on factors such as:

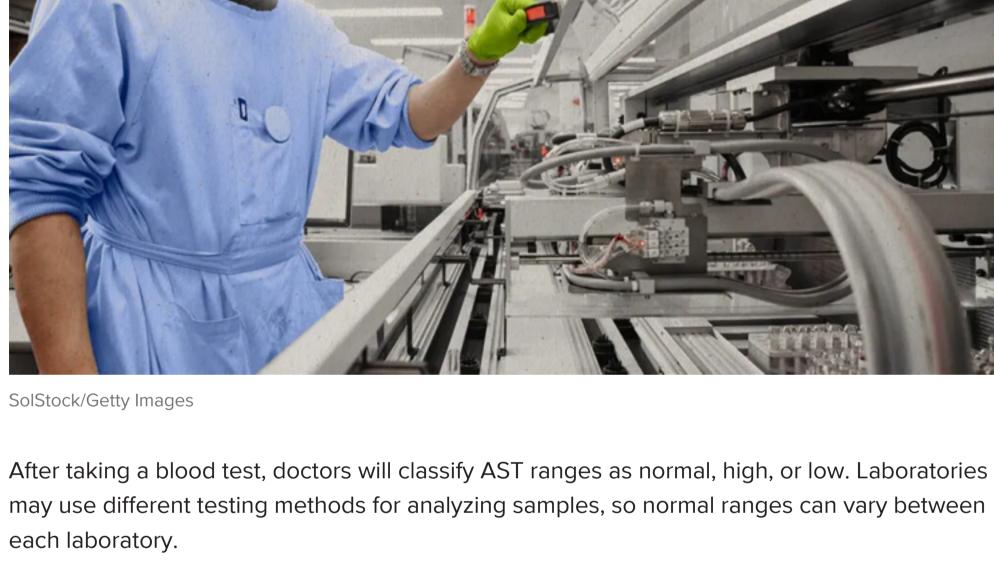
<36 U/L

>36 U/L

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chronic hepatitis

• damage from alcohol



age sex weight race

There is not an exact range for AST levels, as levels can vary among people and still be normal.

liter (IU/L). On a test result, the laboratory will usually list their specific reference range. People will need to look at this reference range and discuss with their doctor what their test results mean for them. To understand the results of an AST blood test, a doctor will also look at

The measurements for AST levels are typically in units per liter (U/L) or international units per

Normal

other enzymes that can indicate a liver problem.

The following table indicates general AST blood test ranges. However, reference ranges can vary slightly among different laboratories. **A**dults Children

>40 IU/L which may be a sign High >1,000 U/L are very high levels and may be a of liver inflammation sign of liver injury or hepatitis ADVERTISEMENT

10-40 IU/L

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What do the results mean?	
Results from an AST blood test <u>can help</u> indicate liver health.	

• heart, kidney, bone, or muscle damage liver cancers

If AST levels are high, it may also be a sign of:

• cholestasis, a decrease in bile flow

• liver scarring, known as liver cirrhosis

the liver, or it may be a sign of alcohol-induced liver damage.

Low AST levels may indicate:

 liver disease cirrhosis

• genetic conditions

• autoimmune conditions

kidney disease

cancer

age

• vitamin B6 deficiency

hepatitis.

A doctor may also test levels of <u>alanine aminotransferase (ALT)</u>, another liver enzyme. ALT levels occur in higher concentrations in the liver. If ALT levels are normal but AST levels are high, it could indicate a health problem outside of

Having high levels of AST and no other signs of a problem is not necessarily a cause for

concern. People with normal liver function can have high AST levels, which may be due to:

Very high AST levels are usually a sign of progressing liver damage, often due to acute

sex race • certain medications

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Doctors primarily use the AST blood test to check for and assess liver problems, usually

alongside other liver tests. The AST protein mainly occurs in the liver and heart. With liver

damage, AST can leak from the liver into the bloodstream. When this happens, AST levels in

liver enzyme, ALT, at the same time. If both levels are high, it may indicate a problem with a

person's liver. If only AST levels are high, this may indicate a problem with another organ or

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A person should always discuss any medications or health products they take with a doctor.

AST <u>also occurs</u> in the brain, heart, kidneys, and muscles. If there is damage in any of these areas, AST levels may also increase. To rule out issues affecting areas outside the liver, doctors may order a check of the second

Why is the AST test performed?

the blood will be higher than normal.

treatment is working

ALT vs. AST tests

Learn more about the ALT test here.

system.

People may have an AST test for screening, diagnosis, or monitoring purposes. A doctor may <u>recommend</u> this test if a person: • has risk factors for liver disease, such as family history, obesity, or diabetes • has symptoms of a liver problem, such as jaundice, fatigue, or unexplained weight loss

• is undergoing treatment for a liver condition, as an AST blood test can help show how well

Alanine aminotransferase (ALT) is an enzyme that mostly occurs in the liver. If there is damage to liver cells, ALT levels in the bloodstream can increase. An ALT test can help indicate liver health, along with other liver enzyme tests.

Healthcare professionals may use both ALT and AST tests to check for the presence of liver

enzymes in the blood, as this can give them a clearer idea of overall liver function and health.

How is the AST test done? The AST blood test is straightforward and similar to any other blood test. A healthcare

• clean the site of the blood draw with an antiseptic wipe

Learn how long it might take to receive blood test results here.

some may interfere with liver enzyme levels.

sleeves during the test.

blood draw.

professional may take the following steps:

to that area

feel a mild prick or pain

• remove the needle once they have drawn enough blood • send the blood sample to a laboratory for testing An AST blood test will usually only take a few minutes in total.

In some cases, people may be able to take an AST test at home. Using an at-home test kit,

people will take a blood sample from their fingertip and send the sample to a laboratory.

People may receive AST blood test results through the mail, an app, or an online system.

• sit the person down and tie a stretchy band around the upper arm to increase blood flow

• insert a needle into a vein in the arm to take a blood sample, which may cause people to

Preparation People may need to fast for several hours if they are having a combination of liver enzyme tests.

If people are only having an AST blood test, they may not need to fast or prepare in any way.

People will need to let their doctor know if they are taking any medications or supplements, as

As a healthcare professional will be taking blood from the arm, it may be helpful to wear short

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As with any blood test, an AST blood test has <u>very few</u> risks. It is rare to experience any severe

side effects, but people may have some mild bruising or discomfort in the area at the site of the

A healthcare professional will place a Band-Aid or bandage on the arm to stop any bleeding.

beforehand. It is safe for people to drive and continue their usual activities after an AST blood

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People may want to have something to eat after the test, particularly if they were fasting

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Risks

test, unless they experience any unusual symptoms.

not agree to such placement, do not provide the information.

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down red blood cells.

relating to abnormal AST levels.

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another organ such as the heart or kidneys.

information on the health of the liver.

Last medically reviewed on December 22, 2021

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Follow-up testing A doctor may order tests along with an AST blood test or follow-up tests. This is to help ensure

proper diagnosis and determine the best course of treatment. These tests <u>may include</u> .

• ALT test: A doctor may order an ALT test alongside an AST test.

• Coagulation panel: This measures the functioning of clotting-related proteins that the liver produces. • Complete metabolic panel: This assesses how well the kidneys and liver are working and shows levels of electrolytes.

• Glucose test: High or low blood glucose levels may indicate a liver problem.

The extent of follow-up testing will depend on a person's results. A doctor may also take

additional blood tests, imaging tests, or a biopsy to identify or rule out any potential conditions

Doctors may also take additional tests to check other liver enzymes, such as ALT, to get more

do they mean?

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the liver. Learn about the causes of cirrhosis, diagnosis,...

Cirrhosis is a liver condition that causes irreversible scarring on

• Bilirubin test: A bilirubin test checks levels of a byproduct created when the liver breaks

• Platelet count: Low platelet levels may indicate HELLP syndrome during pregnancy.

Summary An AST blood test, or SGOT test, checks how much AST, a liver enzyme, is present in the blood. High levels of AST in the bloodstream could be a sign of liver damage, or cell damage in

• Viral testing: This can help doctors check for hepatitis.

• Imaging: A doctor may order images of the liver via ultrasound.

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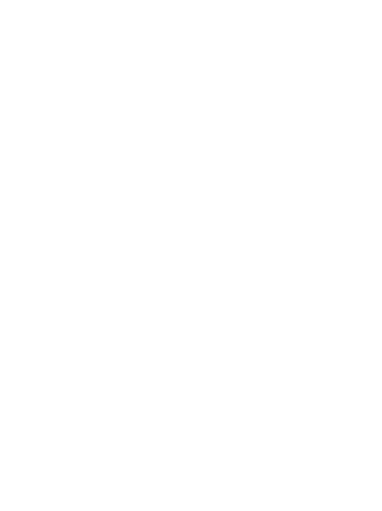
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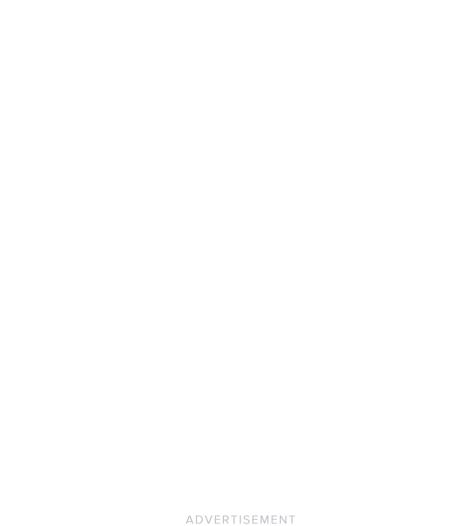
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