TEST

Amylase - blood

A blood amylase test measures an enzyme that helps digest carbohydrates.

WHAT IT MEASURES
Amylase, an enzyme that helps digest carbohydrates

SAMPLE
Blood

FASTING NEEDED?
No, unless your laboratory gives specific instructions

HOW LONG IT TAKES
Usually less than five minutes

RESULTS IN
Same day or within two days; varies by laboratory

USED FOR
Helping diagnose pancreatic problems; occasional monitoring

MAIN LIMITATION
Amylase can come from organs other than the pancreas

Overview

A blood amylase test measures amylase, an enzyme that helps break down starches and other carbohydrates during digestion.

Most amylase comes from the pancreas and salivary glands. Pancreatic inflammation or injury can release it into the bloodstream. However, an abnormal result does not prove that the pancreas is the cause. Salivary gland conditions, kidney function, medicines, and other factors can also affect the level.

A lipase blood test is often ordered with or instead of amylase. Lipase is more specific to the pancreas and usually remains raised longer after acute pancreatic inflammation.

Why the test is ordered

Your healthcare professional may order blood amylase if you have symptoms of acute pancreatitis, meaning sudden inflammation of the pancreas. Symptoms can include severe upper abdominal pain, pain spreading to the back, nausea, vomiting, or abdominal tenderness.

The test may also help investigate:

Amylase is not a useful general screening test for people without symptoms because a raised result has many possible causes.

- A blockage or injury affecting the pancreas
- Complications after pancreatic or abdominal procedures
- Salivary gland swelling or inflammation
- An unexplained amylase increase
- Changes in a diagnosed pancreatic condition

Who should have the test

You may need this test if your symptoms and medical history suggest a pancreatic or salivary gland problem, or if another test, scan, or procedure has raised a concern.

Amylase alone cannot diagnose acute pancreatitis. Clinicians consider your symptoms, examination, other blood tests, and sometimes imaging. Lipase is commonly preferred.

Blood amylase can return toward normal within several days, so tell the healthcare professional when your symptoms started.

How to prepare

Most people do not need to fast. You can usually eat and drink normally unless your laboratory or healthcare professional gives different instructions.

Tell them about all prescription medicines, over-the-counter products, and supplements you take. Some can affect amylase or be linked to pancreatic inflammation. Do not stop a prescribed medicine unless the prescriber tells you to.

Also mention recent abdominal surgery, injury, or a procedure involving the pancreas or bile ducts, as these can influence the result.

What happens during the test

A healthcare professional places a small needle into a vein, usually inside your elbow or on the back of your hand. Blood is collected into a tube.

The blood draw usually takes less than five minutes. Results may be available the same day or

within two days, depending on the laboratory.

Understanding your results

Your report shows your amylase result and the laboratory's reference range, often in units per litre (U/L).

Do not compare your result with a range found online. Reference ranges and interpretation vary by laboratory, age, pregnancy status, medicines, and clinical circumstances.

A raised amylase level can occur with acute pancreatitis, but it does not confirm the diagnosis. Other causes include salivary gland inflammation, reduced kidney clearance, bowel or bile duct conditions, abdominal injury, and certain medicines.

Clinicians usually diagnose acute pancreatitis using a combination of characteristic abdominal pain, a substantial rise in pancreatic enzymes, and imaging when needed. A mild increase is generally less specific than a marked rise.

A normal result does not completely rule out pancreatic inflammation. Amylase may be normal if testing happens late, if the pancreas has long-term damage, or in some cases involving very high triglycerides, a type of blood fat.

A low result is often unimportant by itself but may be considered alongside other tests when long-term pancreatic disease or poor nutrition is suspected.

What affects the results

Timing is important. Amylase usually rises within hours of acute pancreatic injury and falls over the following days. Testing very early or several days later may miss the increase.

Other factors include:

Macroamylasemia may be considered when amylase remains raised but you feel well and other pancreatic tests are normal. It does not necessarily mean the pancreas is inflamed. Blood or urine testing may help identify it.

- Kidney function: Reduced clearance can raise amylase
- Salivary gland conditions: Infection, blockage, inflammation, or injury can increase it
- Macroamylasemia: Amylase binds to another protein and remains in the bloodstream

- Medicines: Some opioids like oxycodone or morphine , diuretics like furosemide or hydrochlorothiazide , immune-suppressing medicines, and anti-seizure medicines can affect interpretation
- Recent procedures or injury: Surgery, pancreatic procedures, trauma, or resuscitation can raise amylase
- Very high triglycerides: A fatty blood sample may obscure an increase
- Laboratory method: Results from different methods and reference ranges should not be compared directly

Accuracy and limitations

Blood amylase is not specific to the pancreas because other tissues also produce it. It can therefore be raised when the cause is elsewhere.

Accuracy depends on when the sample is taken, the cutoff used, the cause of inflammation, and the population tested. Amylase can miss acute pancreatitis when blood is collected too early or late, or in some people with very high triglycerides or long-term pancreatic damage.

Raised levels can occur without pancreatitis, particularly with kidney impairment, salivary gland disease, macroamylasemia, or other abdominal conditions. Repeated amylase measurements do not reliably show whether acute pancreatitis is improving.

Lipase is generally preferred for suspected acute pancreatitis because it is more pancreas-specific and stays raised longer. Ultrasound, CT, or MRI may be needed if the diagnosis is uncertain, complications are suspected, or another cause of pain must be investigated.

Risks and complications

A blood draw may cause brief discomfort, minor bleeding, or a small bruise. Some people feel light-headed or faint, but serious complications are uncommon.

What happens next

If your result is normal and your symptoms are improving, further pancreatic testing may not be needed. Your healthcare professional will interpret the result with your symptoms, examination, and other findings.

A mildly raised result may lead to repeat testing or tests such as lipase, kidney function, liver tests, triglycerides, or pancreatic imaging. Persistent elevation without symptoms may prompt testing for macroamylasemia or a salivary source.

Arrange routine follow-up for an unexpected abnormal result even if you feel well. Do not change medicines based only on the result.

Seek urgent medical assessment for severe or persistent upper abdominal pain, repeated vomiting, fever with worsening pain, or yellowing of the skin or eyes. Call emergency services if abdominal pain occurs with fainting, confusion, severe breathing difficulty, or signs of collapse.

Common questions

Can I drink coffee before an amylase blood test?

Usually. Fasting is not normally required, so plain coffee is generally acceptable. Follow your appointment instructions, especially if other fasting tests are being performed.

Does the time of day matter?

Usually not. The time since symptoms began matters more because amylase rises and falls over several days after pancreatic injury.

Can I exercise beforehand?

Normal activity is unlikely to affect the test. Follow any exercise restrictions given for other blood tests being collected at the same appointment.

Why were both amylase and lipase ordered?

Lipase is more pancreas-specific and remains raised longer. Amylase may provide additional context or help identify a non-pancreatic source.

Can alcohol affect the result?

Alcohol can affect the pancreas and other organs, but an amylase result cannot show how much alcohol someone consumed. Tell your healthcare professional about recent and usual alcohol use.

Does a high result mean I have pancreatitis?

No. Pancreatitis is one possible cause. Symptoms, lipase, kidney function, medicines, and imaging help determine what the result means.

Sources

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