TEST

Triglyceride level

A triglyceride level is a blood test that measures a type of fat circulating in your blood.

WHAT IT MEASURES
Triglycerides, a type of fat carried in blood

SAMPLE
Blood

FASTING NEEDED?
Sometimes, usually 8 to 12 hours when specifically requested

HOW LONG IT TAKES
Usually under 10 minutes

RESULTS IN
Often 1 to 2 days; laboratory timing differs

USED FOR
Cardiovascular risk assessment and treatment monitoring

MAIN LIMITATION
Recent food or alcohol can temporarily raise the result

Overview

A triglyceride level measures triglycerides in your blood. Triglycerides are fats that your body uses to store energy. They come from food and are also made by the liver.

The test is usually included in a lipid panel , alongside total cholesterol, HDL cholesterol and LDL cholesterol. Together, these results help assess the risk of heart and blood vessel disease.

Triglycerides are also relevant to inflammation of the pancreas, called pancreatitis . Very high levels can increase the risk of this condition, although the blood test alone cannot diagnose it.

Results are commonly reported in milligrams per decilitre (mg/dL) or millimoles per litre (mmol/L). Interpretation varies by laboratory, age, sex, pregnancy status, medicines and clinical context.

Why the test is ordered

A triglyceride test may be ordered to:

A raised result does not show the cause by itself. Your other lipid results, medical history, medicines and whether you had eaten recently all matter.

- Help assess your risk of heart attack or stroke
- Investigate an abnormal result from an earlier lipid panel
- Monitor lifestyle changes or triglyceride-lowering treatment
- Check for lipid changes linked to diabetes, kidney disease or other conditions
- Look for a possible cause when pancreatitis is suspected
- Monitor medicines that may raise triglycerides

Who should have the test

Triglycerides are commonly checked as part of routine cholesterol testing. How often testing is appropriate depends on your age, previous results and overall risk of cardiovascular disease.

Testing may also be useful if you have diabetes, known heart or blood vessel disease, obesity, kidney or liver disease, or a family history of severe lipid problems. It may be repeated after starting treatment or making substantial changes to diet, alcohol use, weight or physical activity.

Children and teenagers may have triglycerides measured as part of lipid screening or when there is a strong family history. Their results require age-appropriate interpretation rather than adult ranges.

How to prepare

Many routine lipid panels can be done without fasting. However, you may be asked to fast if an earlier result was high, if severe hypertriglyceridaemia is suspected, or if a fasting result is needed for consistent monitoring.

If you are told to fast, this usually means having only plain water for 8 to 12 hours. Follow the specific instructions from the laboratory or service arranging your test.

Avoid a large or unusually fatty meal before testing. Alcohol can substantially raise triglycerides in some people, so tell the person arranging the test about recent alcohol use and follow any instructions about avoiding it.

Continue prescribed medicines unless you have specifically been told otherwise. Do not stop a medicine simply because it can affect triglycerides.

What happens during the test

A healthcare professional usually takes blood from a vein in your arm. An elastic band may be placed around your upper arm, and the skin is cleaned before a small needle is inserted.

The blood is collected into a tube and sent to a laboratory. The needle is then removed and pressure is applied to the area. The collection itself usually takes only a few minutes.

Triglycerides may also be measured with a finger-prick test in some clinics or pharmacies. Unexpected or very high point-of-care results may need confirmation by a laboratory blood test.

Understanding your results

For adults, many laboratories describe a fasting triglyceride level below 150 mg/dL, or below 1.7 mmol/L, as desirable. Categories and treatment thresholds are not identical across laboratories and guidelines, so use the range printed with your result.

Higher triglycerides may be associated with greater cardiovascular risk. They can also be a sign that the body is having difficulty processing fats or sugars, but the result does not identify why.

A level of 500 mg/dL, or 5.6 mmol/L, and above is often described as severe. At this level, preventing pancreatitis becomes a more important part of follow-up, with risk increasing further as triglycerides rise. A high number without symptoms still usually requires prompt clinical review rather than emergency treatment.

Low triglycerides are usually not concerning by themselves. Occasionally, they occur with low food intake, problems absorbing nutrients, an overactive thyroid or other health issues. Interpretation depends on the wider clinical picture.

What affects the results

Triglycerides can change considerably even when the laboratory measurement is correct. Important influences include:

Rarely, free glycerol in the blood can interfere with the usual laboratory method and make triglycerides appear higher than they are. A laboratory can investigate this when a result does not fit the rest of the clinical picture.

- Recent food: Triglycerides normally rise after eating, particularly after a large or high-fat meal

- Alcohol: Recent or heavy alcohol intake can produce a substantial temporary rise
- Blood sugar: Poorly controlled diabetes can raise triglycerides
- Illness: Infection, inflammation or recent pancreatitis can affect the result
- Exercise: An unusual bout of strenuous exercise can temporarily alter triglycerides
- Pregnancy: Levels usually rise during pregnancy, especially later in pregnancy
- Kidney, liver or thyroid function: Changes in these organs can affect how fats are processed
- Body weight and recent weight change: Weight gain or loss can shift the result
- Medicines: Oestrogens, corticosteroids like prednisone or hydrocortisone , retinoids, some antipsychotics like olanzapine or risperidone , some HIV treatments, thiazide diuretics, beta blockers and certain immune-suppressing medicines can raise levels
- Natural variation: Triglycerides can differ from one day to another

Accuracy and limitations

Laboratory triglyceride testing is generally reliable for measuring the sample provided. Its main limitation is that the amount in your blood can change with meals, alcohol, illness and normal day-to-day variation.

There is no single "miss" or "false alarm" rate because this is a continuous measurement, not a yes-or-no test. A temporary post-meal or alcohol-related rise can make a usual level look high. A single lower result can also miss a pattern of intermittent or persistent elevation.

Repeating the test under standard conditions can clarify an unexpected result. A fasting repeat is particularly useful when triglycerides are markedly raised or when food intake makes the first result difficult to interpret.

Triglycerides do not measure the number of cholesterol-carrying particles directly. Non-HDL cholesterol or apolipoprotein B may sometimes give a clearer view of cardiovascular risk. When triglycerides are high, calculated LDL cholesterol may also become less reliable.

The test cannot diagnose pancreatitis. Symptoms, examination and other blood tests, especially pancreatic lipase, are more appropriate for that purpose.

Risks and complications

A blood draw may cause brief discomfort, a small bruise or light-headedness. Serious

complications from routine blood collection are uncommon.

What happens next

If your result is within the laboratory's expected range, it may simply be reviewed with the rest of your lipid panel during routine follow-up.

For a raised result, the next step may be a repeat fasting test or checks of blood sugar, thyroid, kidney and liver function. Your medicines, alcohol intake, diet and family history may also be reviewed. Treatment decisions are based on the full cardiovascular risk assessment, not the triglyceride number alone.

A very high result generally needs timely follow-up, even if you feel well. Contact the service that arranged the test if you have not received instructions.

Seek urgent medical care for severe or persistent upper abdominal pain, especially if it spreads to the back or occurs with repeated vomiting, fever, faintness or difficulty keeping fluids down. These symptoms can have several causes, including pancreatitis, and cannot be assessed from a triglyceride result alone.

Common questions

Can I drink coffee before the test?

If you have been told to fast, have only plain water. Coffee, including black coffee, may affect metabolism and does not meet strict fasting instructions. If fasting was not requested, coffee is usually allowed, but sugar, cream and milk may influence a nonfasting result.

Do I really need to fast?

Not always. Nonfasting testing is often suitable for routine cardiovascular risk assessment. Follow the specific instructions provided, because fasting may be requested after a high result or when severe elevation is suspected.

Does the time of day matter?

Meals and fasting duration usually matter more than the clock time. For repeat monitoring, having samples taken under similar conditions can make comparisons easier.

Can I exercise beforehand?

Normal daily activity is usually fine. An unusually strenuous workout can temporarily alter triglycerides, so avoid changing your exercise routine immediately before a planned repeat test unless instructed otherwise.

Can I drink alcohol the night before?

Alcohol can raise triglycerides, sometimes substantially. Follow the preparation instructions you were given and mention recent alcohol use if the result is unexpectedly high.

Why are my triglycerides high when my cholesterol is normal?

Triglycerides and cholesterol are different types of fat-related substances. Food, alcohol, blood sugar, medicines, genetics and other health conditions may raise triglycerides without producing the same change in total cholesterol.

Sources

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