

[Print this page](#)[Close this window](#)

Medical Encyclopedia: Triglyceride level

URL of this page: <http://www.nlm.nih.gov/medlineplus/ency/article/003493.htm>

Alternative names

TG; Triacylglycerol

Definition

This is a test to measure the amount of triglyceride in the blood.

How the test is performed

Blood is drawn from a vein, usually on the inside of the elbow or the back of the hand. The puncture site is cleaned with antiseptic, and an elastic band is placed around the upper arm to apply pressure and restrict blood flow through the vein. This causes veins below the band to fill with blood.

A needle is inserted into the vein, and the blood is collected in an air-tight vial or a syringe. During the procedure, the band is removed to restore circulation. Once the blood has been collected, the needle is removed, and the puncture site is covered to stop any bleeding.

For an infant or young child, the area is cleansed with antiseptic and punctured with a sharp needle or a lancet. The blood may be collected in a pipette (small glass tube), on a slide, onto a test strip, or into a small container. Cotton or a bandage may be applied to the puncture site if there is any continued bleeding.

How to prepare for the test

Fast for 8 to 12 hours before the test. The health care provider may advise you to withhold drugs that may affect the test.

How the test will feel

When the needle is inserted to draw blood, some people feel moderate pain, while others feel only a prick or stinging sensation. Afterward, there may be some throbbing.

Why the test is performed

Triglycerides are often measured as a reflection of fat (lipid) ingestion and metabolism, or as part of an evaluation of coronary risk factors.

Triglycerides comprise the largest proportion of fats (lipids) in the diet, in the adipose tissue, and in the blood. Immediately after a meal, triglycerides appear in the blood as the major constituent of chylomicrons.

Under normal circumstances, triglycerides within chylomicrons are stripped of fatty acids as they pass through various tissues (especially adipose and skeletal muscle). The chylomicron remnant is then taken up by the liver

so that chylomicrons disappear from the blood within 2 or 3 hours.

The remaining triglycerides, plus additional triglycerides synthesized within the liver, are then re-packaged as VLDL and secreted into the blood from the liver.

Triglycerides are a storage form of energy. They are stored in adipose tissue and muscle, and gradually released and metabolized between meals according to the energy needs of the body.

Normal Values

- **Normal:** Less than 150 mg/dL
- **Borderline High:** 150-199 mg/dL
- **High:** 200-499 mg/dL
- **Very High:** 500 mg/dL or above

What abnormal results mean

High triglyceride levels may be associated with a higher risk for heart disease and stroke. This is especially true because people with high triglycerides often have other conditions, such as diabetes and obesity, that increase the likelihood of developing cardiovascular disease.

High triglyceride levels may indicate:

- Cirrhosis
- Familial hyperlipoproteinemia (rare)
- Hypothyroidism
- Low protein in diet and high carbohydrates
- Poorly controlled diabetes
- Nephrotic syndrome
- Pancreatitis

Low levels may indicate:

- Malabsorption syndrome (inadequate absorption of nutrients in the intestinal tract)
- Malnutrition
- Hyperthyroidism
- Low fat diet

Additional conditions under which the test may be performed:

- Chylomicronemia syndrome
- Familial combined hyperlipidemia
- Familial dysbetalipoproteinemia
- Familial hypertriglyceridemia
- Familial lipoprotein lipase deficiency
- Hyperlipidemia; acquired
- Noninsulin-dependent diabetes (NIDD)
- Stroke secondary to atherosclerosis
- Stroke secondary to carotid stenosis

What the risks are

- Excessive bleeding
- Fainting or feeling light-headed
- Hematoma (blood accumulating under the skin)
- Infection (a slight risk any time the skin is broken)
- Multiple punctures to locate veins

Special considerations

Pregnancy can interfere with test results.

Drugs that can increase triglyceride measurements include cholestyramine, estrogens, and oral contraceptives.

Drugs that can decrease triglyceride measurements include ascorbic acid, asparaginase, clofibrate, and colestipol.

Veins and arteries vary in size from one patient to another, and from one side of the body to the other. Obtaining a blood sample from some people may be more difficult than from others.

Update Date: 5/17/2005

Updated by: Vishal Datta, M.D., Division of Endocrinology and Metabolism, New York Methodist Hospital, Brooklyn, NY. Review provided by VeriMed Healthcare Network.



A.D.A.M., Inc. is accredited by URAC, also known as the American Accreditation HealthCare Commission (www.urac.org). URAC's [accreditation program](#) is the first of its kind, requiring compliance with 53 standards of quality and accountability, verified by independent audit. A.D.A.M. is among the first to achieve this important distinction for online health information and services. Learn more about A.D.A.M.'s [editorial process](#). A.D.A.M. is also a founding member of Hi-Ethics (www.hiethics.com) and subscribes to the principles of the Health on the Net Foundation (www.hon.ch).

The information provided should not be used during any medical emergency or for the diagnosis or treatment of any medical condition. A licensed physician should be consulted for diagnosis and treatment of any and all medical conditions. Call 911 for all medical emergencies. Adam makes no representation or warranty regarding the accuracy, reliability, completeness, currentness, or timeliness of the content, text or graphics. Links to other sites are provided for information only -- they do not constitute endorsements of those other sites. Copyright 2005, A.D.A.M., Inc. Any duplication or distribution of the information contained herein is strictly prohibited.