

# Triglycerides

## What are triglycerides?

The fat in the food you eat is mostly in the form of triglycerides. Triglycerides are the main type of fat transported by your body.

Triglycerides are a normal component of your bloodstream. After you eat, your body digests the fats in your food and repackages the fat as triglycerides, which are released into your bloodstream. The blood carries the triglycerides throughout your body to give you energy or to be stored as fat.

Your liver also produces triglycerides and changes some into cholesterol. Your liver can change any source of excess calories into triglycerides.

## What is a normal triglyceride level?

Triglyceride levels vary with age. They also depend on how recently you have eaten before the test. The measurements will be most accurate if you haven't eaten in the last 12 hours or so. Generally, an acceptable triglyceride level is 150 mg/dL or less. Triglycerides rarely reach extremely high levels, except in people with an inherited tendency toward high levels.

## How are triglycerides associated with cholesterol?

When you eat, triglycerides combine with a protein in your blood to form what is called high-density and low-density lipoproteins. These lipoprotein particles contain cholesterol.

For triglycerides made in your liver, the process is similar. Your liver gathers carbohydrates and protein left over from a meal and changes them to fat. This fat then combines with protein and cholesterol to form very low density lipoproteins, which are released into your bloodstream.

## What are the risks of high triglyceride levels?

If your cholesterol is normal, an elevated triglyceride level does not appear to be a risk factor for heart disease. Elevated triglyceride levels, however, have been associated with diabetes and pancreatitis (inflammation of the pancreas).

## What causes high triglyceride levels?

Elevated triglyceride levels may have several causes:

- Weight gain. Triglyceride levels usually increase as your weight increases.
- Excess calories, especially from sugar and alcohol. Alcohol increases your liver's production of triglycerides and reduces the amount of fat cleared from your blood.
- Age. Triglyceride levels steadily increase as you grow older.
- Medications. Certain drugs, such as birth control pills, steroids, and diuretics (water pills) can cause triglyceride levels to rise.
- Illness. Medical conditions associated with high triglyceride levels are diabetes, hypothyroidism, kidney disease, and liver disease.
- Heredity. Some forms of high triglycerides occur among members of the same families.

## How is it diagnosed?

A simple blood test can diagnose high triglyceride levels. Your health care provider will ask you not to eat for about 12 to 14 hours before your blood is taken. This allows the triglycerides from your food to be completely eliminated. Your provider wants to know only the amount of triglycerides being made by your body, not what is produced by eating.

## How is it treated?

Treatment for elevated triglyceride levels includes the following.

- Lose weight. Weight loss alone often will lower your triglyceride levels.
- Exercise. Regular exercise makes weight loss quicker and easier.
- Eat less sugar and sugar-containing foods. Instead of sweetened fruit juices, use fresh unsweetened fruit or unsweetened fruit juice. Instead of putting sugar in your coffee, use an artificial sweetener.
- Eat your meals and snacks throughout the day. Don't eat just 2 large meals a day.
- Drink less alcohol. Some people are very sensitive to alcohol's ability to increase the liver's production of triglycerides.
- Limit fat to less than 30% of your daily calories.

If these lifestyle changes don't lower your triglyceride levels, your health care provider may prescribe a medicine such as gemfibrozil or nicotinic acid (niacin). Gemfibrozil decreases the liver's production of triglycerides and clears triglycerides from your blood. It also helps reduce cholesterol. Niacin in large doses also helps reduce total cholesterol as well as triglyceride levels. Check with your provider before taking niacin to make sure it is OK for you to take it. Your provider will recommend a dosage for you.

Fish oil also has been found to reduce triglycerides. Two or three meals of fish such as salmon or mackerel every week may help lower your triglyceride levels.

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