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Triglycerides: Why do they matter?

By Mayo Clinic staff

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Triglycerides: Why do they matter?

Triglycerides are an important measure of heart health. Here's why triglycerides matter — and what to do if your triglycerides are too high.

By Mayo Clinic staff

If you've been keeping an eye on your blood pressure and cholesterol levels, there's something else you might need to monitor: your triglycerides. Having a high level of triglycerides, a type of fat (lipid) in your blood, can increase your risk of heart disease. However, the same lifestyle choices that promote overall health can help lower your triglycerides, too.

What are triglycerides?

Triglycerides are a type of lipid found in your blood. When you eat, your body converts any calories it doesn't need to use right away into triglycerides. The triglycerides are stored in your fat cells. Later, hormones release triglycerides for energy between meals. If you regularly eat more calories than you burn, particularly "easy" calories like carbohydrates and fats, you may have high triglycerides (hypertriglyceridemia).

What's considered normal?

A simple blood test can reveal whether your triglycerides fall into a healthy range.

- Normal — Less than 150 milligrams per deciliter (mg/dL), or less than 1.7 millimoles per L (mmol/L)
- Borderline high — 150 to 199 mg/dL (1.8 to 2.2 mmol/L)
- High — 200 to 499 mg/dL (2.3 to 5.6 mmol/L)
- Very high — 500 mg/dL or above (5.7 mmol/L or above)

The American Heart Association (AHA) recommends that a triglyceride level of 100 mg/dL (1.3 mmol/L) or lower is considered "optimal." The AHA says this optimal level would improve your heart health. However, the AHA doesn't recommend drug treatment to reach this level. Instead, for those trying to lower their triglycerides to this level, lifestyle changes such as diet, weight loss and physical activity are encouraged. That's because triglycerides usually respond well to dietary and lifestyle changes.

Your doctor will usually check for high triglycerides as part of a cholesterol test (sometimes called a lipid panel or lipid profile). You'll have to fast for nine to 12 hours before blood can be drawn for an accurate triglyceride measurement.

What's the difference between triglycerides and cholesterol?

Triglycerides and cholesterol are separate types of lipids that circulate in your blood. Triglycerides store unused calories and provide your body with energy, and cholesterol is

used to build cells and certain hormones. Because triglycerides and cholesterol can't dissolve in blood, they circulate throughout your body with the help of proteins that transport the lipids (lipoproteins).

Why do high triglycerides matter?

Although it's unclear how, high triglycerides may contribute to hardening of the arteries or thickening of the artery walls (atherosclerosis) — which increases the risk of stroke, heart attack and heart disease.

High triglycerides are often a sign of other conditions that increase the risk of heart disease and stroke as well, including obesity and metabolic syndrome — a cluster of conditions that includes too much fat around the waist, high blood pressure, high triglycerides, high blood sugar and abnormal cholesterol levels.

Sometimes high triglycerides are a sign of poorly controlled type 2 diabetes, low levels of thyroid hormones (hypothyroidism), liver or kidney disease, or rare genetic conditions that affect how your body converts fat to energy. High triglycerides could also be a side effect of taking medications such as beta blockers, birth control pills, diuretics, steroids or the breast cancer drug tamoxifen.

What's the best way to lower triglycerides?

Healthy lifestyle choices are key.

- **Lose weight.** If you're overweight, losing 5 to 10 pounds can help lower your triglycerides. Motivate yourself by focusing on the benefits of losing weight, such as more energy and improved health.
- **Cut back on calories.** Remember that extra calories are converted to triglycerides and stored as fat. Reducing your calories will reduce triglycerides.
- **Avoid sugary and refined foods.** Simple carbohydrates, such as sugar and foods made with white flour, can increase triglycerides.
- **Limit the cholesterol in your diet.** Aim for no more than 300 milligrams (mg) of cholesterol a day — or less than 200 mg if you have heart disease. Avoid the most concentrated sources of cholesterol, including meats high in saturated fat, egg yolks and whole milk products.
- **Choose healthier fats.** Trade saturated fat found in meats for healthier monounsaturated fat found in plants, such as olive, peanut and canola oils. Substitute fish high in omega-3 fatty acids — such as mackerel and salmon — for red meat.
- **Eliminate trans fat.** Trans fat can be found in fried foods and commercial baked products, such as cookies, crackers and snack cakes. But don't rely on packages that label their foods as free of trans fat. In the United States, if a food contains less than 0.5 grams of trans fat per serving, it can be labeled trans fat-free. Even though

those amounts seem small, they can add up quickly if you eat a lot of foods containing small amounts of trans fat. Instead, read the ingredients list. You can tell that a food has trans fat in it if it contains partially hydrogenated oil.

- **Limit how much alcohol you drink.** Alcohol is high in calories and sugar and has a particularly potent effect on triglycerides. Even small amounts of alcohol can raise triglyceride levels.
- **Exercise regularly.** Aim for at least 30 minutes of physical activity on most or all days of the week. Regular exercise can boost "good" cholesterol while lowering "bad" cholesterol and triglycerides. Take a brisk daily walk, swim laps or join an exercise group. If you don't have time to exercise for 30 minutes, try squeezing it in 10 minutes at a time. Take a short walk, climb the stairs at work, or try some sit-ups or push-ups as you watch television.

It's also important to control diabetes and high blood pressure if you have high triglycerides and one of these conditions.

What about medication?

If healthy lifestyle changes aren't enough to control high triglycerides, your doctor may recommend medications that can help further lower your triglycerides. Usually, the focus of therapy is to lower high levels of the "bad" cholesterol (LDL cholesterol), before addressing high triglyceride levels. Medications to treat high cholesterol include:

- **Niacin.** Niacin, sometimes called nicotinic acid, can lower your triglycerides and your "bad" cholesterol (low-density lipoprotein, or LDL, cholesterol). Your doctor may prescribe a niacin supplement, such as Niaspan. Don't take over-the-counter niacin without talking to your doctor first. Niacin can interact with other medications and can cause dangerous side effects if you overdose.
- **Fibrates.** Fibrate medications, such as fenofibrate (Lofibra, TriCor) and gemfibrozil (Lopid), can also lower your triglyceride levels.
- **Statins.** If you also have low high-density lipoprotein (HDL, or "good") cholesterol or high low-density lipoprotein (LDL, or "bad") cholesterol, your doctor may prescribe cholesterol-lowering statins or a combination of a statin and niacin or fibrates. Because of the risk of side effects from statins, be sure to tell your doctor if you experience any muscle pain, nausea, diarrhea or constipation.
- **Omega-3 fatty acid supplements.** Omega-3 fatty acids supplements can help lower your cholesterol. You can take over-the-counter supplements, or your doctor may prescribe Lovaza, a prescription omega-3 fatty acid supplement, as a way to lower your triglycerides. Lovaza may be taken with another cholesterol-lowering medication, such as a statin. If you choose to take over-the-counter supplements, get your doctor's OK first. Omega-3 fatty acid supplements could affect other medications you're taking.

If your doctor prescribes medication to lower your triglycerides, take the medication as prescribed. And remember the significance of the healthy lifestyle changes you've made.

Medications can help — but lifestyle matters, too.

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