



## What Are High Triglycerides?

**Triglycerides (TGs) are essential fats (also called “lipids”) transported in our bloodstream with cholesterol.** They are called *triglycerides* because each molecule contains three fatty acids. TGs are the major source of energy used and stored by our bodies. They come from two sources—what we eat and what our liver makes. High blood TG levels can be genetic, or caused by diabetes, thyroid problems, kidney disease, or some medicines.

**Blood TG levels are measured in laboratory tests along with cholesterol.** Since neither of these fats can dissolve in the blood, they are transported together as ‘passengers’ in vehicles called “lipoproteins.” When these vehicles contain many TG passengers, they are known as “triglyceride-rich lipoproteins.” Those made by the liver are called ‘very low-density lipoprotein,’ or ‘VLDL.’ Those made by the intestine after eating are called ‘chylomicrons.’ Whenever TG-rich lipoproteins are present in the blood in high numbers, the TG level will be reported as increased. Conditions linked to high TGs, like diabetes, thyroid and kidney disease, are usually tested at the same time. Blood levels of TG (mg/dl) are shown below:

Normal – Less than 150	Borderline High – 151-199	High – 200 to 499	Very High – More than 500
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**High triglycerides are common, and linked to serious health risks.** Almost 1 in 3 Americans have high TGs. High TG levels lower ‘good’ HDL-cholesterol. Further, when blood TGs and ‘low density lipoprotein’ or ‘LDL’ cholesterol are both elevated, heart disease and stroke risk are increased. Many experts believe that a very useful measure of heart disease risk is “non-HDL Cholesterol” calculated as Total cholesterol minus HDL-Cholesterol, which measures both VLDL and LDL-cholesterol. A blood TG level greater than 500mg/dl also increases the risk of inflammation of the pancreas, or ‘pancreatitis,’ another serious health condition.



### Diet and Lifestyle Changes To Reduce High Triglycerides

Limit white breads, white rice, white potatoes, sweetened beverages, sugared cereals, cakes and cookies. Choose whole grain breads, cereals and pasta, brown and wild rice, and fresh fruit. Restrict alcohol use to 1 drink daily or less for women, and maximum of 2 drinks daily for men.

If your TGs are more than 500 mg/dl, also reduce your total dietary fat to less than 15 % of calories. See a Registered Dietitian Nutritionist for help.

Exercise regularly—perform moderate cardio exercise for at least 150 minutes per week.

If you are overweight, lose weight—a weight loss of just 5-10% of your body weight will lower TGs.

If you have diabetes, a hemoglobin A1C <7% is a good target for most patients.

### Medications For Reducing High Triglycerides

Statins are the preferred lipid medication for lowering blood TGs up to 500 mg/dl, and some experts choose them for TGs up to 999mg/dl. Stronger statins like atorvastatin or rosuvastatin lower TG more than weaker statins, like simvastatin or pravastatin

Fenofibrate is often chosen as the lipid lowering medication when TG levels are more than 1,000 mg/dl, and can reduce TGs by up to 50%.

Prescription Fish Oils taken at 4 grams per day can be used instead of or in addition to fenofibrate.

Niacin alone can lower TG levels by up to 30%. New medications are also in development.

Many medications and medical conditions can raise blood TGs. Review these with your care provider.

#### For More Information

Triglycerides and Cardiovascular Disease—A Statement from the American Heart Association. Circulation 2011;123:2292.

**Courtesy of the National Lipid Association  
And Your Provider**