Understanding and Managing Your Triglycerides

The Mended Hearts, Inc.
There are several types of fat in your body, and triglycerides are the most common. Along with LDL ("bad") cholesterol and HDL ("good") cholesterol, triglycerides are important to understand and manage so you can maintain good heart health.

Triglycerides occur naturally in your bloodstream. Your body stores fat in the form of triglycerides when you eat more calories than you use during your daily activities. But when your body makes too many triglycerides, the result can contribute to hyperlipidemia, a clinical word that describes the presence of too much "bad" fat in your bloodstream. Hyperlipidemia is a nationwide problem that affects about 99 million Americans age 20 and over.

If you have high levels of "bad" fats, you are at a higher risk for cardiovascular disease, which is the No. 1 killer of Americans. Those "bad" fats are LDL cholesterol and triglycerides.
The levels of “bad” fats in your bloodstream say a lot about how healthy your cardiovascular (i.e., heart and circulation) system is. If you have high levels of “bad” fats, you are at a higher risk for cardiovascular disease, which is the No. 1 killer of Americans. Those “bad” fats are LDL cholesterol and triglycerides.

Too much LDL cholesterol and triglycerides in your bloodstream can lead to deposits of cholesterol on the inside walls of your arteries. These deposits, or plaques, narrow the opening of the artery so less blood can flow to tissues. This process is called atherosclerosis, which can lead to heart disease, stroke, or other serious cardiovascular diseases.

HDL cholesterol, on the other hand, is considered “good” fat. HDL takes the bad cholesterol out of your blood and keeps those fats from building up in your arteries.

A healthy heart and blood vessels are associated with low levels of LDL cholesterol and triglycerides, and a high level of HDL cholesterol. By looking at the levels of LDL cholesterol, HDL cholesterol, and triglycerides in your bloodstream, your doctor can determine if you have hyperlipidemia.

Your triglyceride level is often closely linked to your LDL (“bad”) cholesterol level. That’s why a high LDL level usually means a high triglyceride level, too. (See the table on the next page for more detailed information about those numbers.) In some cases, however, people may have a relatively low LDL reading but still have a high triglyceride level. This condition is called hypertriglyceridemia, or “very high triglycerides,” a condition that can also lead to cardiovascular disease.
How are fats in the bloodstream measured? Your doctor uses a simple blood test called a “fasting lipoprotein profile” to measure the levels of cholesterol and other fats in your bloodstream.

The profile shows the readings for total cholesterol, HDL cholesterol, LDL cholesterol, and triglycerides. Each of those numbers is important, both on its own and taken together, as a complete picture of the fat levels in your blood.

Before considering your triglyceride level, your doctor will first look at your overall cholesterol level, especially your LDL level. Your doctor determines your risk for heart disease and other cardiovascular conditions based on your lipoprotein profile and other risk factors that may be present.

If both your LDL and triglyceride levels are high, your doctor will treat the LDL primarily. After you reach your LDL cholesterol goal, your doctor will attempt to increase low HDL cholesterol levels and reduce high triglycerides to further reduce your risk of heart disease.

The Adult Treatment Panel (ATP III) of the National Cholesterol Education Program recommends that doctors screen every adult over the age of 20 every 5 years with a fasting lipoprotein profile. More frequent screening may be necessary if you change your diet, gain weight, have a family history of high cholesterol or heart disease, or develop diseases associated with hyperlipidemia, such as diabetes.

### Your Fat Numbers and What They Mean

Everyone has slightly different target numbers for cholesterol and triglyceride levels. Your doctor will determine your personal target goals for your fat numbers, based upon whether you have other risk factors for heart disease. The numbers listed to the right are the “very best” numbers for these fats.

<table>
<thead>
<tr>
<th>Type of Lipid</th>
<th>Ideal Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total cholesterol</td>
<td>Less than 200 mg/dL</td>
</tr>
<tr>
<td>LDL cholesterol</td>
<td>Less than 100 mg/dL</td>
</tr>
</tbody>
</table>
| HDL cholesterol      | 40 mg/dL or higher for men  
                       | 50 mg/dL or higher for women                         |
|                      | 60 mg/dL or higher is considered protective against heart disease for both men and women |
| Triglyceride levels  | Less than 150 mg/dL                                   |

Screening and Diagnosis
The main causes of hyperlipidemia are also risk factors for cardiovascular disease. These are:
- Eating too much saturated fat and trans fat
- Not enough exercise
- Obesity
- Smoking
- In some people, a family history of hyperlipidemia

The first step a doctor usually takes to lower a patient’s bad fat levels is to prescribe what is called “therapeutic lifestyle change” (TLC). As a rule, this includes healthy changes to diet and exercise, as well as immediate steps to quit smoking.

Sticking to a TLC program can lower your LDL cholesterol and triglyceride numbers to improve your health significantly, including lowering your risk for heart disease.

According to the American Heart Association’s Dietary Guidelines, a healthy diet will include:
- A variety of fruits and vegetables (at least nine to ten servings per day)
- A variety of grain products (at least half of which should be whole grain foods)
- Fat-free and low-fat milk products, fish, legumes (beans), skinless poultry, and lean meats
- Fats and oils with 2 grams or less of saturated fat per tablespoon, such as liquid and tub margarines, canola oil, and olive oil
- Less than 1,500 milligrams of sodium per day

Understanding Trans-Fatty Acids

You may have heard about “trans-fatty acids,” a type of fat that is often found in unhealthy foods. A diet high in trans-fatty acids will raise the LDL cholesterol and lower the HDL cholesterol in your bloodstream. This can lead to heart disease, including a heart attack. That’s why it’s important to avoid foods high in trans-fatty acids, such as fast foods, stick and full-fat margarines, sweet rolls, cookies, doughnuts, and deep-fried foods.

A diet aimed at cutting triglyceride levels may also include increased soluble fiber (found in oats, peanuts, beans, and some fruits) and plant stanols or sterols, which are healthy substances found in nuts, vegetable oils, corn, and rice.

To get your bad fat levels down and your HDL cholesterol level up, your doctor may prescribe an exercise program for you according to your specific health conditions and needs. Your doctor will recommend an activity such as brisk walking for 30 minutes at least most days of the week. Do not start any exercise program without first checking with your doctor. This sample exercise prescription on the next page will give you an idea of what one looks like:
**Sample Exercise Prescription**

**Day 1**
- Warm up (5 to 10 minutes): Walk and gently stretch muscles.
- Strength training (20 minutes): Lift 2-pound weights in each hand as demonstrated in the office.
- Cool down (5 to 10 minutes): Walk and gently stretch muscles.

**Day 2**
- Warm up (5 to 10 minutes): Walk and gently stretch muscles.
- Aerobic training (40 minutes): Take a brisk walk outdoors or use a step machine or treadmill. Keep your heart rate below 120 beats per minute.
- Cool down (5 to 10 minutes): Walk and gently stretch muscles.

For patients who are overweight or obese, a weight loss goal will also be established. Your doctor can tell you if you are overweight or obese according to the Body Mass Index (BMI), which assigns a number based on your height and weight. If your BMI is under 25, your weight is healthy. If it falls between 25 and 29.9, you are overweight. If it is 30 or over, you are considered obese.

Losing even 5 to 10 percent of your body weight can do a lot of good for your overall health, such as reducing your risks for cardiovascular disease.

Patients who drink alcohol should limit themselves to no more than two drinks per day (for men), or one drink per day (for women). While research has shown some cardiovascular benefits of alcohol, drinking more than the recommended limits can do far more harm and is a risk factor for diabetes, among other conditions.

Patients who smoke should quit immediately. Smoking does serious harm to blood vessel walls and lowers the good HDL levels that help fight atherosclerosis, among many other important health consequences. Smoking has been linked to greatly increased risk for cardiovascular disease, some types of cancer, serious lung diseases, and other potentially life-threatening conditions.
For some patients, a therapeutic lifestyle change (TLC) prescription doesn’t lower LDL or triglyceride levels enough—or the risks of heart disease are too high for TLC alone. In these cases, your doctor may prescribe medication to help your body lower the amount of these fat types in your bloodstream.

Four types of medication are typically used to lower blood lipid levels:

- **Statins:** These drugs block a liver enzyme your body uses to make cholesterol, which helps lower your levels of LDL cholesterol and triglycerides.

- **Bile acid sequestrants:** Also known as anion exchange resins, these medicines help your body get rid of cholesterol and can be used in combination with statins and fibrates.

- **Fibrates:** This is another type of medication that raises HDL cholesterol and lowers triglyceride levels in the blood.

- **Prescription niacin (nicotinic acid):** This works on the liver to slow the body’s production of blood fats. It’s very effective in raising levels of HDL cholesterol and can also be used in combination with other drugs.

In addition, there are prescription medications specifically designed to lower triglycerides.

- **Omega-3 fatty acids:** These are natural substances that your body needs, but cannot adequately produce on its own. They are found in some plants and in the oil of certain fish, such as salmon and mackerel. After evaluating your medical history and overall heart health, your doctor may specify a prescription omega-3 if you have very high triglycerides. The FDA has approved prescription omega-3s (but not dietary supplement omega-3s or dietary supplement fish oil) for the treatment of very high triglycerides.

The American Heart Association (AHA) does not recommend the use of dietary supplements to treat cardiovascular disease. AHA only recommends the use of FDA-regulated medicines for the prescribed treatment of diagnosed cardiovascular disease. Only prescription drugs are reviewed by the FDA to ensure proper strength and effectiveness.

Even though some products lower triglycerides, others have been shown to increase LDL (bad) cholesterol. Under your doctor’s direction, it is important to consider a medication that lowers triglycerides without increasing your LDL (bad) cholesterol risks at the same time.

It is important to tell your health care provider about all the medicines you take, including both prescription and non-prescription medicines, vitamins, and herbal supplements. Medicines may affect each other, causing side effects.
Congratulations!

By reading this booklet, you have taken an important step toward managing your triglycerides and improving your cardiovascular health. This resource guide has provided important information to help you understand high LDL and triglycerides and become more aware of your LDL, HDL and triglyceride numbers, offered suggestions for important lifestyle changes, and provided important information about medications that may help.

Please talk to your healthcare provider about this information. Together, you can develop a plan to help lower your cholesterol and manage your triglycerides.

Your comments and suggestions are appreciated.

Please go to our online survey https://www.research.net/s/triglycerides and answer just a few questions to help us improve the work we are doing to provide educational resources about cholesterol management.

The Mended Hearts, Inc.

www.mendedhearts.org
1.888.HEART99
info@mendedhearts.org

Models are used for illustrative purposes only.