

### What is High Blood Cholesterol?

Cholesterol is present in foods and also is made by the body to help you function. It is normally present in the blood at low levels. Too much blood cholesterol can lead to increased heart attack and stroke risk. Too much cholesterol or other forms of fat such as triglycerides can cause buildup inside arteries causing them to harden or narrow so that blood flow slows or stops completely. This build up of cholesterol on the artery walls could cause chest pain or a heart attack. High blood cholesterol alone does not cause symptoms; therefore, it is important to determine if you have high cholesterol through a fasting lipid test.

#### What Will Your Cholesterol Levels Tell You?

There are four numbers that will provide information on the levels of Cholesterol and other fats in your blood:

- Total cholesterol
  - o Blood levels should ideally be <200 mg/dL.
- Low-density lipoprotein (LDL, aka "bad") cholesterol
  - Main cause of buildup and blockage in your arteries. Levels in the blood should ideally be
    100 mg/dL.
  - o Higher LDL leads to higher heart disease risk
- High-density lipoprotein (HDL, aka "good") cholesterol
  - o Keeps cholesterol from artery buildup and levels in the blood should ideally be ≥60 mg/dL.
  - o Higher HDL leads to lower heart disease risk
- Triglycerides:
  - The most common kind of fat in the blood, and a major energy source. It has been shown that people with above normal levels (>150 mg/dL) have increased risk of heart disease and stroke and may need treatment.

### What Affects the Level of Blood Cholesterol?

Things you can change:

- Diet
  - Eat fish, preferably an oily fish such as salmon or mackerel -- at least two times a week.
    Limit saturated fat to less than 7% of total daily caloric intake.
  - o Limit total cholesterol to less than 300 mg/dL per day.
  - o Avoid trans fats or hydrogenated oils.
- Weight
  - Being overweight can increase the level of cholesterol in your blood, so lose weight to lower your cholesterol.
  - To lose weight, aim for 60 to 90 minutes of moderate-intensity exercise three to five days a week.
- Physical Activity
  - o Being inactive increases heart disease risk.
  - o Regular physical activity lowers LDL and raises HDL cholesterol.
  - Exercising at least 30 minutes three to five days a week at a moderate level, such as taking a brisk walk decreases your risk of heart disease.



- Quitting Smoking
  - o Smoking can not only raise cholesterol but also make it harder to control.

# Things that can't be changed:

- Age and gender
  - As people age, cholesterol levels tend to rise, but risk is increased earlier for men than women. Men are at greater risk if they are 45 years or older, while women are at greater risk if they are over 55. This is because premenopausal hormones protect against high cholesterol<sup>1</sup>.
- Heredity
  - High cholesterol tends to run in families, so if a close family member has high cholesterol, you are likely to have it as well.

## What to know about Cholesterol-Lowering Medicine

Doctors will prescribe medicine to reduce high cholesterol if you are at high risk for heart disease or stroke. Medication will reduce the amount of fat, cholesterol and other substances that cause plaque in the inner walls of the arteries. It is common for your doctor to prescribe more than one. They also often recommend a change in diet along with medication. You should follow instructions exactly and never stop taking the medication on your own. Inform your doctor of any side effects you experience, and make sure they know of other medications you take, as prescription pills (as well as certain foods and supplements) can interfere with how the medications work. Pay attention to instructions on taking the medications carefully.

## Types of cholesterol lowering medications

- Statins or HMG-CoA reductase inhibitors Lowers LDL cholesterol by stimulating the removal of cholesterol from the body.
- Niacin or nicotinic acid (B vitamin) Lowers total cholesterol, LDL cholesterol, and triglyceride levels, can also raise levels of HDL cholesterol.
- Bile-acid binders or resins (cholestyramine, cholestipol, colesevelam): Reduces blood levels of cholesterol by increasing excretion of bile acids. Often come in a powdery mix to take with water or juice. Fibrates or fibric acids (gemfibrozil, clofibrate, fenofibrate): lowers triglyceride levels and are somewhat good for raising HDL cholesterol levels.

