

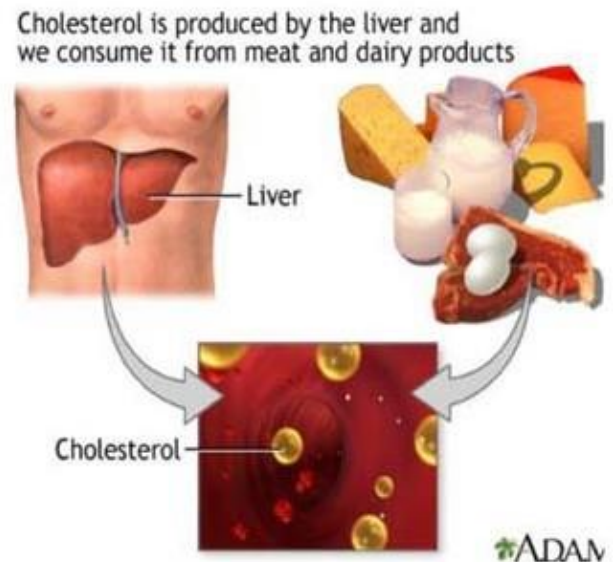
### What is cholesterol?

Cholesterol is a fat-like substance found in the bloodstream and your body's cells. Carbohydrates, protein, and fat in one's diet results in the liver making cholesterol that is released into the blood. Another way to get cholesterol is by consuming animal products such as dairy, meat, and eggs. Small amounts of cholesterol are needed by the body in order to produce hormones and cell membranes. Too much cholesterol in the blood is a risk for coronary heart disease and stroke.

### What are the types of cholesterol?

When cholesterol is in the blood, it is attached to a protein and is referred to as a lipoprotein. The lipoproteins are categorized based on the relation of protein to fat. The following are types of cholesterol:

- High density lipoproteins (HDL): are known as the "good" cholesterol since it helps remove bad cholesterol from the blood; high levels of HDL are optimal
- Low density lipoproteins (LDL): are known as the "bad" cholesterol and can cause plaque buildup; low levels of LDL are optimal
- Very low density lipoproteins (VLDL): similar to LDL but contains a higher portion of fat in relation to cholesterol; low levels are optimal
- Triglycerides (TG): are a type of fat that is carried by VLDL in the blood; low levels are optimal<sup>(1)</sup>



### How to test for cholesterol levels

Every individual 20 years of age and older should get their cholesterol levels tested every five years. This test is known as a "lipoprotein profile". It is a blood test that must be done while fasting (no eating, drinking, or taking medications 9 to 12 hours prior to getting your blood taken)<sup>(2)</sup>. The following lab values are ideal:

Total Cholesterol	HDL	LDL	Triglycerides
Less than 200 mg/dL	> 40 >50	Less than 100 mg/dL	Less than 150 mg/dL

### High cholesterol levels

High cholesterol is also known as hypercholesterolemia. Hypercholesterolemia is a major risk factor for coronary heart disease, heart attack, and stroke. Also when there is too much LDL in the blood, plaque forms on the walls of the arteries which is known as atherosclerosis. In order to reduce your high cholesterol, lifestyle changes are recommended. You should eat a heart-healthy diet, engage in 30 minutes of physical activity at least three times a week, avoid tobacco smoke, and lose weight (if applicable).

### Causes of hypercholesterolemia

- Family history
- Poor diet
- Physical inactivity
- Being overweight
- Hypothyroidism
- Kidney disease
- Anorexia nervosa

### Healthy tips for eating out

- **Control your portions:** Ask for half of the meal to be placed in a to-go container, pick entrees that are smaller in size, or share a meal with someone else.
- **Select healthier preparations:** Choose foods that are grilled, steamed, broiled, baked, or roasted instead of fried, sautéed, stuffed, au gratin, or pan-fried which are all high in fat and calories.
- **Limit foods high in sodium:** Stay away from foods that are pickled, smoked, or dishes that contain soy, cocktail, or teriyaki sauce.
- **Request condiments on the side:** Ask for dressings, gravies, and sauces on the side so that the amount used can be controlled.



### Foods to eat

According to American Heart Association, you should consume foods that are low in cholesterol, saturated fat, and trans fat, such as<sup>(3)</sup>:

- Fruits and vegetables
- Fish containing Omega-3
- Leaner red meats
- Fat-free/low-fat dairy
- Unsaturated vegetable oils (olive, canola, safflower or sunflower)
- Skinless poultry
- Beans
- Foods high in fiber
- Seeds and nuts
- Peas

### Foods to avoid

You should limit the consumption of foods that are high in cholesterol, saturated fat, and trans fat, such as<sup>(3)</sup> :

- Fried foods
- Whole milk, cream and ice cream
- Butter, egg yolks and cheese
- Processed, organ, and fatty red meats
- Baked goods containing egg yolks and saturated fats
- Saturated oils (coconut oil, palm oil or palm kernel oil)
- Foods with *trans* fats (fried foods, baked goods, stick margarines and shortenings)
- Solid fats (shortening, soft margarine or lard)

-1- The basics of cholesterol. WebMD. 2009. 16 November 2009. <<http://www.webmd.com/cholesterol-management/guide/cholesterol-basics>>. -2- Cholesterol levels. American Heart Association. 2009. 16 November 2009. <<http://www.americanheart.org/presenter.jhtml?identifier=4500>>. -3- Tips on reducing cholesterol. American Heart Association. 16 November 2009. <<http://www.americanheart.org/presenter.jhtml?identifier=69>>.