The Cholesterol Highway

The following information describes the route taken by cholesterol as it moves around your body, using the bloodstream as its "highway." Please refer to the list below for a glossary of key terms related to cholesterol, diet, and heart disease.

The cholesterol in your body comes from two sources: the fats in the foods you eat and your liver.

Some excess fat in the body is converted into low-density lipoprotein or LDL cholesterol, which is carried through the bloodstream to various parts of the body.

Sometimes, along the way, LDL cholesterol sticks to the walls of the arteries. Over time, this causes the arteries to become blocked. When arteries are blocked, blood flow slows down and heart disease can result. (Now you know why LDL is referred to as the "bad cholesterol.")

On the other hand, high-density lipoprotein or HDL cholesterol helps free some of the LDL cholesterol from the walls of the arteries and returns it to the bloodstream. (This is why HDL is called the "good cholesterol.")

One of the objectives of a low-fat diet is to help lower your LDL cholesterol to a "goal" level. Ask your doctor what your appropriate LDL-cholesterol goal is.

Glossary

Cholesterol An odorless, white, waxy, powdery substance. You cannot taste it or see it in the foods that you eat. Your body needs some cholesterol in order to function normally.

Lipoproteins Protein-coated packages that carry fat and cholesterol through the body. Lipoproteins are classified by their density.

HDL cholesterol High-density lipoprotein, or "good cholesterol" helps carry the "bad cholesterol" away from the walls of the arteries and returns it to the bloodstream, thus preventing buildup of cholesterol in the artery walls.

LDL cholesterol Low-density lipoprotein, or "bad cholesterol" carries the largest amount of cholesterol in the blood and is responsible for depositing cholesterol in the artery walls. An elevated LDL-cholesterol level is associated with risk of heart disease.

Triglycerides Fat-like substances that are carried through the bloodstream to the tissues. Much of the body's fat is stored in the form of triglycerides for later use as energy.

VLDL cholesterol Very-low-density lipoprotein carries cholesterol and triglycerides from the liver. After it sheds the triglycerides, it becomes LDL cholesterol.

Total cholesterol The total amount of HDL cholesterol, LDL cholesterol, and VLDL cholesterol.

Lipids Fatty substances that are present in blood and body tissues and include cholesterol and triglycerides.

Fat One of the essential nutrients that supply calories to the body. Fat provides 9 calories per gram, more than twice the number of calories provided by carbohydrate or protein. Small amounts of fat are necessary for normal body function.

Saturated fat Usually solid at room temperature. It is commonly found in animal products, such as meat, poultry, egg yolks, and dairy products. It is also found in a few vegetable products, such as coconut and cocoa. Saturated fat raises blood cholesterol more than anything else in the diet.

Unsaturated fat Usually liquid at refrigerator temperature. It is primarily found in vegetable products. The two kinds of unsaturated fat are:

Monounsaturated fat — a slightly unsaturated fat that is found in greatest amounts in foods from plants, including olive and canola (rapeseed) oil. When substituted for saturated fat, monounsaturated fat helps to reduce blood cholesterol.

Polyunsaturated fat — a highly unsaturated fat that is found in food products derived from plants, including safflower, sunflower, corn, and soybean oils. Like monounsaturated fat, it is a healthier alternative to saturated fat.

Hydrogenated fat Liquid, unsaturated fat that has been changed by a chemical process into a more solid, saturated fat. Though this improves the shelf life of the products in which this fat is used, it also increases the saturated fat content. It is commonly found in cakes, cookies, snacks, and other food products.

Atherosclerosis Also called "hardening of the arteries." When too much LDL cholesterol builds up on the inside of your arteries, it forms a substance called plaque. The buildup of plaque in the arteries causes them to become thicker, harder, and less flexible—in short, less efficient at carrying blood.

Coronary heart disease The result of atherosclerosis, and commonly referred to as CHD, it is caused by the narrowing of coronary arteries (through which oxygen-rich blood and nutrients are supplied to the heart). In time, the inadequate supply of oxygen-rich blood and nutrients damages heart muscle and can lead to chest pain, heart attack, and possibly death.

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