Glossary

Apo-B receptors

Receptors found in the liver and on arterial walls that match the apoprotein profile of LDLs, the only type of lipoprotein without other Apo receptors.

Apoproteins

Proteins bound to the outer surface of a lipoprotein that allow the lipoprotein to "dock" to whichever part of the body has matching receptors.

Atherosclerosis

A condition associated with the hardening of arteries due to the buildup of fat and plaque on arterial walls.

Bile

Liquid released by the gallbladder that helps to break down fats in the intestine.

Cholesterol

Fat-like substance that is found in all cells of the body.

Fatty streaks

Lines of foam cells that form in arterial walls. They attract calcium from the bloodstream that will harden the foam cells.

Fibrin

Protein in the blood that binds red blood cells together to make a clot.

Foam cells

Cells that form when an LDL particle in an arterial wall gets encapsulated by white blood cells and then oxidized. They are an indicator of the early stages of atherosclerosis.

High density lipoprotein (HDL)

The “good” lipoprotein. HDLs act like sponges that soak up dangerous LDL particles and return them to the liver for repackaging.

Homocysteine

A type of amino acid that is correlated with higher instances of atherosclerosis. Homocysteine speeds up the initial oxidation of LDL particles, causing rapid elongation of fatty streaks and increased blood clotting.

Homocystinuria

A genetic disorder characterized by a high blood level of homocysteine that leads to the accelerated onset of atherosclerosis.

Lipase

An enzyme that breaks down fats found in food so the body can absorb them.

Lipoprotein

A group of proteins that transport fats and cholesterol in water. There are five types of lipoprotein—chylomicron, VLDL, IDL, LDL, and HDL—that vary in size and density.

Low density lipoprotein (LDL)

The most dangerous type of lipoprotein. LDL’s have only one apoprotein profile, Apo-B, and can therefore stick to Apo-B receptors in places outside the liver like arterial walls.

Lumen

An arterial opening that can be narrowed or blocked by the buildup of plaque.

Micelle

A package of fatty acids in which lipase breaks triglycerides into fatty acids to be absorbed by the intestine. Micelles form when bile surrounds a small unit of triglycerides. After the lipase has done its job, the micelle will be absorbed by an intestinal cell and release its fatty acids to be reestablished as triglycerides.

Omega-3 fatty acid

A type of fatty acid found in fish that works to improve blood flow, inhibit clotting, and reduce inflammation.

Phospholipid

A lipid containing a phosphate group that makes up the outside of lipoproteins. One side is soluble in water and the other side is soluble in fat, which allows the lipoprotein to first accumulate fat, then pass through water-based membranes.

Plaque

A rigid substance formed from calcified foam cells that slowly hardens an artery, inhibiting dilation and contraction and narrowing the blood vessel.

Saturated fats

A type of fat that desensitizes Apo receptors in the liver, it made mostly in the bodies of animals, and is solid at room temperature. Saturated fats have no double-bonds.

Triglyceride

Fat molecules found in nature that consist of carbon chains and glycerol.

Unsaturated fats

A type of fat that sensitizes the Apo receptors in the liver, comes from plants, and is liquid at room temperature. Monounsaturated fats are healthiest and have one double-bond; polyunsaturated fats have two or more double-bonds.