



Hyperlipidemia (High Blood Fat)

WHAT IS HYPERLIPIDEMIA?

Hyperlipidemia means there are high levels of fats (or lipids) in the blood. These fats include cholesterol and triglycerides, which are important for our bodies to function. But when they are too high, these fats can put people at risk for heart disease and stroke.

DID YOU KNOW?

High blood fat often comes from the foods we eat, but other factors—your genes, hormonal diseases, certain medications—can also contribute to this condition.

WHAT CAUSES HYPERLIPIDEMIA?

Hyperlipidemia is caused when your diet contains too much cholesterol and fat (found in meat, cheese, cream, eggs, and shellfish, for example), when the liver produces too much cholesterol and fat, or both.

Fats do not dissolve in water. For them to be carried in the blood (which is mostly water), they combine with a protein in the liver to create a lipoprotein. There are three kinds of lipoproteins in the body:

- Low-density lipoprotein (or LDL)
- High-density lipoprotein (or HDL)
- Very low-density lipoprotein (or VLDL, which is mostly made up of triglycerides)

Too much LDL, or “bad” cholesterol, can build up in the arteries (the blood vessels that carry blood throughout the body) and, over time, cause heart disease or stroke. On the other hand, having high levels of HDL, or “good” cholesterol, protects the heart by helping to remove the build-up of LDL cholesterol from the arteries. Low levels of HDL cholesterol and high levels of triglycerides can also increase fat build-up in the arteries and cause heart disease, especially in people who are obese or have diabetes.

WHAT ARE THE RISK FACTORS FOR HYPERLIPIDEMIA?

Being overweight or obese, not getting enough exercise, and eating a diet high in saturated fat and cholesterol and low in fruits, vegetables and fiber can contribute to hyperlipidemia. Beyond diet, however, there are other factors that can lead to this condition.

Hyperlipidemia can run in families as a genetic disorder:

- Familial hypercholesterolemia –LDL cholesterol levels are high
- Familial hypertriglyceridemia –Triglyceride levels are high
- Familial combined hyperlipidemia –Levels of LDL cholesterol, triglycerides, or both are high, and HDL is low

Hyperlipidemia can also be related to a hormonal disease such as diabetes, hypothyroidism (too little thyroid hormone), and Cushing’s syndrome (too much cortisol, sometimes called “the stress hormone”). Certain medications could also be related:

- birth control pills
- menopausal hormone therapy
- some diuretics (water pills)
- beta-blockers to treat cardiovascular diseases

DESIRABLE LEVELS OF BLOOD FATS

Total cholesterol	Less than 200 mg/dL
HDL cholesterol	Greater than 40 mg/dL for men and 50 mg/dL for women
LDL cholesterol	<ul style="list-style-type: none">• Less than 130 mg/dL for most people• Less than 100 mg/dL for people with heart disease or diabetes, or less than 70 mg/dL if they have acute coronary symptoms such as chest pain, or multiple poorly controlled heart disease risk factors
Triglycerides	Less than 150 mg/dL

HOW IS HYPERLIPIDEMIA DIAGNOSED?

Hyperlipidemia generally has no symptoms. Screening is done with a simple blood test to measure levels of cholesterol and triglycerides. According to the National Cholesterol Education Program Guidelines, healthy adults should be screened once every five years starting at age 20. If you have a family history of high cholesterol or other risk factors for heart disease (such as high blood pressure, smoking, family history of heart disease at a young age, and especially diabetes), you may need earlier or more frequent screening.

HOW IS HYPERLIPIDEMIA TREATED?

Improving your diet, losing weight, and getting enough exercise are the best ways to prevent and manage hyperlipidemia.

If necessary, your doctor will also prescribe medication. The type and dose of medication will depend on your individual blood fat levels (rather than total cholesterol) and whether you have heart disease, diabetes, or other risk factors for heart disease.

Medications can lower LDL cholesterol and triglycerides or raise HDL cholesterol. Statins are the most common medication for lowering LDL cholesterol, and can reduce the risk of both heart attacks and strokes. Fibrates and niacin are used to lower triglycerides and to raise HDL cholesterol, but their role in preventing heart attacks and stroke is not clear. Medications do not "cure" the problem and need to be taken indefinitely for maximum benefit.

Questions to ask your doctor:

- How often should I have my blood fat levels checked?
- Is my hyperlipidemia due to diet, or something else?
- What kind of changes do I need to make in my diet and exercise habits?
- Do I need to take medication? What kind?
- Should I see a specialist like a cardiologist or endocrinologist?

RESOURCES

- Find-an-Endocrinologist: www.hormone.org or call 1-800-HORMONE (1-800-467-6663)
- Hormone Health Network information on cardiovascular health: www.hormone.org/Cardiovascular/index.cfm
- National Heart, Lung, and Blood Institute (National Cholesterol Education Program): www.nhlbi.nih.gov
- American Heart Association: www.americanheart.org

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The Hormone Health Network offers free, online resources based on the most advanced clinical and scientific knowledge from The Endocrine Society (www.endo-society.org). The Network's goal is to move patients from educated to engaged, from informed to active partners in their health care. This fact sheet is also available in Spanish at www.hormone.org/Spanish.

