

Cholesterol Abnormalities & Diabetes

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Cholesterol, which is a soft, waxy substance found in the bloodstream and the body's cells, is important to overall health. However, not all cholesterol is created equal. There is "good" cholesterol, of which the body needs an ample supply, and "bad" cholesterol, which should be kept to a minimum. Unfortunately, people with diabetes are more prone to having unhealthy cholesterol levels, which contributes to cardiovascular disease. By taking steps to manage cholesterol, individuals can reduce their chance of cardiovascular disease and premature death.

Target Numbers

Using a blood sample taken after a brief period of fasting by the patient, a lipoprotein profile reveals the following lipid levels:

- **Low-density-lipoprotein (LDL) cholesterol = "bad" cholesterol**
Target: Less than 100 mg/dL
71.3 million (31.9%) U.S. adults have LDL cholesterol levels of 130 mg/dL or higher. When too much LDL cholesterol is in the blood, it may be deposited in the inner walls of the arteries. Together with other substances, it can form plaque and cause the risk of heart disease to increase. People with diabetes have the same risk for heart disease and stroke as those who already have cardiovascular disease, so they should strive for even lower levels of LDL cholesterol. If you have additional cardiovascular risk factors, your health care provider may want your level to be below 70 mg/dL. A person with diabetes who lowers his LDL cholesterol can reduce cardiovascular complications by 20 percent to 50 percent.
- **High-density-lipoprotein (HDL) cholesterol = "good" cholesterol**
Target: At least 40 mg/dL
41.8 million (18.9%) U.S. adults have HDL cholesterol levels lower than 40 mg/dL. Having the opposite effect of LDL cholesterol, HDL helps the body by removing cholesterol from the blood. Therefore, the higher the HDL cholesterol level, the better. A reading of 60 mg/dL and above is considered protective against heart disease.
- **Triglycerides**
Target: Below 150 mg/dL
Triglycerides are the main form in which fats exist in the body. They come from fats eaten in foods, and they are also made in the body by the liver. A high triglyceride level contributes to atherosclerosis, a build-up of plaque on the inner lining of the arteries that can cause them to harden and reduce blood flow. The mean level of triglycerides for American adults age 20 and older is 144.2 mg/dl.

How does diabetes affect cholesterol?

Diabetes tends to lower "good" cholesterol levels and raise triglyceride and "bad" cholesterol levels, which increases the risk for heart disease and stroke. This common condition is called diabetic dyslipidemia.

"Diabetic dyslipidemia means your lipid profile is going in the wrong direction," said Richard Nesto, M.D., a spokesperson for the American Heart Association. "It's a deadly combination that puts patients at risk for premature coronary heart disease and atherosclerosis — where the arteries become clogged with accumulated fat and other substances."

Studies show a link between insulin resistance, which is a precursor to type 2 diabetes, and diabetic dyslipidemia, atherosclerosis and blood vessel disease. These conditions can develop even before diabetes is diagnosed.

Learning how to prevent and treat abnormal cholesterol levels is an important step in maintaining optimum health.