



Effect of Lifestyle Habits and Medical Procedures in Lowering High Lipid Profile

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Description

Lipid profile is an initial screening test to measure the abnormalities in lipids such as cholesterol and triglyceride levels. Through this test, we can identify the genetically inheritance diseases and also estimate the risks of Cardiovascular Disease (CVD). A complete cholesterol test is also called a lipid profile test. Lipid profile test used to measure the amount of “good” and “bad” cholesterol and triglycerides levels in the blood, along with the type of fat.

Risk Factors

Cholesterol is a soft, waxy substance which is very essential for the functioning of the body mainly essential for the visceral organs. However, too much cholesterol can lead to heart disease, stroke, atherosclerosis, and hardening of arteries. Cholesterol testing is very important for the person who are having family history of heart diseases with overweight or obese, consume alcohol frequently, smoking, lead an physically inactive lifestyle, comorbidities like diabetes, kidney disease, POS, or an thyroid disease, All of these factors together increases the risk of increasing cholesterol level in the blood.

A complete cholesterol test measures four types of lipids, or fats, in the blood (Table 1).

Types of lipids	Normal	Borderline	High
Total cholesterol	≤ 200 mg/dL	201-240 mg/dL	>240 mg/dL
Low-Density Lipoprotein(LDL) cholesterol	<100 mg/dL idealn 100-129 mg/dL	130-159 mg/dL	>160-190 mg/dL
High-Density Lipoprotein (HDL) cholesterol	>60 mg/dL	40-59 mg/dL	<40 mg/dL
Triglycerides	≤ 150 mg/dL	151-200 mg/dL	>200 mg/dL

Table 1: Clinical parameters of cholesterol test.

Lifestyle Habits to Lower Cholesterol

- A diet rich in fiber and plant sterols reduces the LDL level upto 30% in blood. When the diet without saturated fat or <7% of the total calories and simple carbohydrates lowers more than 200 mg of cholesterol in the blood.
- Avoid trans-fat completely.
- Read food labels. Products with “low cholesterol” or “no cholesterol” could have high amount of saturated fats or sugar.
- Regular aerobic exercise can lower bad cholesterol (LDL) and raise good cholesterol (HDL) levels.
- Quit smoking.
- Lifestyle modifications such as diet, exercise, and weight loss are the effective ways to improve triglyceride levels.

Medications and Procedures

Lifestyle changes do not lower the cholesterol level completely, using medications or a combination of treatments shows the best results.

Statins

Statin is a most effective and commonly used cholesterol drugs which block the liver metabolism to make cholesterol. In rare cases statin can damage the liver and muscle. The usage of drug may leads to memory loss and increase the risk of type 2 diabetes.

Niacin

Niacin helps to raise HDL (“good”) cholesterol and lowers LDL levels.

Fibrates

Fibric acid derivatives and fibrates help to raise HDL cholesterol and lower triglyceride levels.

Ezetimibe (Zetia)

This drug decreases the absorption of cholesterol by small intestine. Ezetimibe along with statin reduces the cholesterol to 25%.

Bile acid sequestrants

Lowers total and LDL cholesterol level in blood.

PCSK9 inhibitors

Mainly used in patients with in heterozygous familial hypercholesterolemia who cannot control their cholesterol through diet and statin treatment. The drugs alirocumab block the liver protein PCSK9, which hinders the liver’s ability to remove LDL-cholesterol from the blood. This reduces the amount of bad cholesterol in the bloodstream. Evolocumab in particular, has proven to be effective in lowering the risk of heart attack and strokes in people who have cardiovascular disease.

LDL apheresis

It’s a blood-cleansing procedure which helps the patients with severe genetic cholesterol disorders. In this procedure blood is drawn and chemically cleansed of LDL cholesterol and then returned to the

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body. Treatment takes for every 2-3 weeks, which lowers the LDL concentration up to 50%-80% but they're costly in both time and money.

Screen the cholesterol level in the blood for every 5 years. If man, cholesterol levels checked regularly, starting by age of 35 or younger. If woman, cholesterol screening should begin by age 45 or younger.