-Health/Medical Awareness

## A primer on cholesterol

Sorting the good from the bad

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Q How come there is bad cholesterol and good cholesterol? Which is which? Please help me sort out the facts about cholesterol? —lyndi\_elgar@gmail.com



A Cholesterol, per se, is not bad for you. In fact, you cannot survive without it. It is a component of the membrane of all your cells. You also need it to synthesize steroid hormones and some other essential substances. But cholesterol is harmful if you have too much of it in your blood. Excess cholesterol has a tendency to be deposited in the form of plaques in the walls of arteries, which over time weakens and completely clogs many of these blood vessels. This condition, known as atherosclerosis, is particularly disastrous if it involves the blood vessels of the heart and brain because it can result in a heart attack or a stroke. It is therefore a good idea for you to monitor your blood cholesterol level. How often should you check your blood cholesterol level? Experts agree that cholesterol and lipid blood levels should be measured at least once every five years in people over age 20. Those with elevated cholesterol should be tested more often. The blood test that is usually performed to do this is called lipid profile and the results are reported as total cholesterol, LDL cholesterol, HDL cholesterol, and triglycerides. Good and Bad Cholesterol

Cholesterol is a form of fat or lipid. Like all fats it is not soluble in water, the main constituent of blood. Thus, on its own, it cannot circulate in blood. To transport it via the bloodstream to the different cells of your body, it has to be carried by protein-containing substances called lipoproteins, notably low-density lipoprotein (LDL) and high density lipoprotein (HDL). In fact, practically all the cholesterol in your blood is bound to lipoproteins, LDL deposits its attached cholesterol on the walls of your arteries and that is why LDL cholesterol is called bad cholesterol. HDL, on the other hand, brings the cholesterol it binds to your liver for disposal as bile acids that is why HDL cholesterol is called good cholesterol. Desirable lipid profile values

You have a healthy blood lipid profile if your LDL cholesterol (bad cholesterol) is low, i.e., less than 100 mg/dL (2.59 mmol/L), your HDL cholesterol (good cholesterol) is high, i.e., 60 mg/dL (1.55 mmol/L) or higher, your total blood cholesterol—which is a measure of LDL cholesterol, HDL cholesterol, and other lipid components in your blood—is low, i.e., less than 200 mg/dL (5.18 mmol/L), and your triglyceride level is less than 150 mg/dL (1.70 mmol/L). A high triglyceride level has been linked to higher risk of coronary artery disease. Factors that lead to a bad cholesterol profile

Contrary to widespread belief, the cholesterol in the food that you eat does not really make that much impact on your blood cholesterol level. Latest re-examination by experts of available scientific data has revealed that there is really no appreciable relationship between dietary cholesterol consumption and blood level of cholesterol. Evidently, cholesterol blood levels are impacted more by genetics and high saturated fat intake than cholesterol intake. These latest findings, however, do not mean you can eat as much cholesterolcontaining food as you wish because, while cholesterol is no longer a dietary concern, saturated fat still is and food that is rich in cholesterol are generally also rich in saturated fats. This simply means that a high cholesterol diet is still, albeit indirectly, a faulty diet.

Aside from a faulty diet, the other factors that can increase your LDL cholesterol include excess weight, genetic factors, age, certain diseases such as diabetes mellitus, hypothyroidism, and liver disease, certain drugs such as birth control pills and thiazides, excessive alcohol consumption, and smoking. Physical activity,

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on the other hand, tends to increase your HDL cholesterol levels. How to keep a good blood lipid profile If you wish to keep a good blood lipid profile:

- Adopt a diet that is higher in plant-based food such as vegetables, fruits, whole grains, legumes, nuts, and seeds, and lower in calories and animal-based foods Exercise regularly Attain and maintain a desirable body weight through diet and exercise
- Refrain from smoking and drinking
- With the help of your doctor, control whatever chronic disease you might have