



UNIVERSITY OF MARYLAND UNIVERSITY HEALTH CENTER

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Understanding Cholesterol

What is cholesterol?

Cholesterol is a soft, fat-like substance found in animal cells. While most of your cholesterol is made by your liver, some comes from eating high saturated fat foods. Although necessary for normal functions, cholesterol contributes to the formation of blockages of the coronary arteries in the heart. Because cholesterol cannot dissolve in your blood, it must join up with fats (and proteins) to make a "package" which travels to the cells. These packages are called lipoproteins. Certain fats are essential for good health, but having too much fat and cholesterol in your blood may lead to an increased risk for heart disease, strokes, diabetes, and some cancers.

What are the types of cholesterol?

- **Low Density Lipoprotein (LDL)** is called "bad" cholesterol. It can become stuck inside blood vessels narrowing and increasing your risk of heart disease.
- **High Density Lipoprotein (HDL)** is called "good" cholesterol because it finds and rescues the stuck LDL pieces and brings HDL back to the liver. HDL cholesterol reduces the risk for heart disease.
- **"Total" Cholesterol** includes both the LDL and the HDL levels in your blood.

What should your cholesterol level be?

LDL: optimal = < 100
desirable = below 130
borderline high = 130-159
high = 160 or above.

HDL: desirable = greater than 60
intermediate = 40-60
low = below 40

Triglycerides: desirable = 150

Total Cholesterol:

desirable = below 200
borderline high = 200-239
high = 240 or above

People with heart disease have even stricter goals.

What can you do about your cholesterol levels?

1. **Stop smoking.** This raises HDL levels.
2. **Lose weight.** If you are over weight, losing weight will raise HDL and decrease LDL.
3. **Exercise.** Any activity that raises your heart rate for 30 minutes at least 3 times a week will increase HDL levels.
4. **Eat less saturated fat.** Saturated fat raises blood cholesterol levels.
5. **Cut back on cholesterol in foods.**

Is it bad to have fat in your diet?

No. Your body uses fat for energy. On average, less than 30% of your daily calories should come from fat (that's about 40-50 grams per day). However, some types of fat are better than others.

What are the different types of fat?

Saturated fats which come primarily from animal products cause cholesterol levels to rise, which increases the risk for heart disease. Your diet should include no more than 10% of saturated fats daily.

Saturated fats are found in:

- whole milk, cream, butter, cheddar cheese, chocolate (cocoa butter), egg yolks, beef, cream cheese, hot dogs, liver, salami, kidney, lamb and mutton, bacon, pastrami, coconut oil and palm oil, coffee creamers, pork, and lard.

Trans fat results from adding hydrogen to unsaturated vegetable oils to increase shelf life and to improve texture. Trans fats are found in foods like cookies, crackers, some margarines, baked goods, and fried foods. They are also naturally occurring in very small amounts in meat and dairy products. Trans fats tend to increase total and LDL cholesterol, and also may decrease HDL (good) cholesterol.

Polyunsaturated fats can bring our total blood cholesterol down, but the HDL (good cholesterol) comes down along with the LDL (bad cholesterol). These fats should comprise 10% of your daily intake. Examples of poly-unsaturated fats include corn oil, sunflower seeds, safflower seeds, and some types of margarine.

Monounsaturated fats are the most desirable type found in food, because these fats can lead to decreases in LDL, while leaving the HDL unaffected. Most Americans need to increase the relative amount of monounsaturated fats to 10% of their daily intake. Examples of monounsaturated fats include olive oil, peanut oil and peanuts, canola oil, and avocados.

Beware: Low cholesterol does not mean low fat and low fat does not mean low calorie! Many "fat-free" food products contain a lot of sugar and calories. Our bodies can make fat from extra calories of any kind, so eating too many "fat-free" foods can actually lead to higher calorie intake and no improvement in cholesterol levels.

READ THE FOOD LABELS! ALL THE INFORMATION IS THERE FOR YOU.

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