

Cholesterol



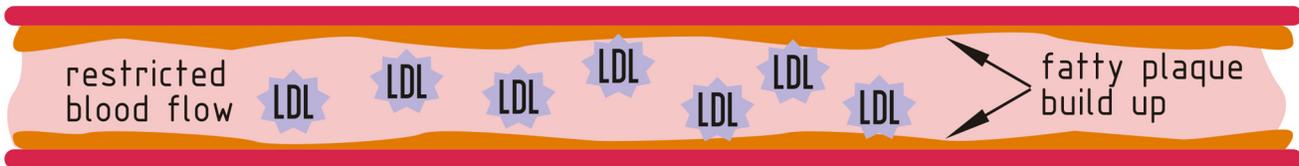
What is cholesterol?

Cholesterol is a waxy substance that's found in the fats (lipids) in your blood. It is essential for your body to make cell membranes, vitamin D, and hormones (Heart and Stroke, 2014)

High cholesterol is linked to heart disease and stroke

High cholesterol can lead to a buildup of plaque in the artery walls, which narrow your arteries (atherosclerosis). Your heart may not get as much oxygen-rich blood as it needs, which increases the risk of a heart attack. Decreased blood flow to your brain can cause a stroke (Heart and Stroke, 2014).

The “good” vs. the “bad” cholesterol (Heart and Stroke, 2014)



1. **Low-density lipoprotein (LDL)** = *bad* cholesterol because high levels in the blood promote plaque buildup in the artery walls.



2. **High-density lipoprotein (HDL)** = *good* cholesterol because it helps carry LDL cholesterol away from the artery walls (Heart and Stroke, 2014)

Risk Factors (College of Family Physicians of Canada, 2007)

- Family history of heart disease or stroke
- Very overweight
- Over 40 years of age for men, and over 50 for women
- Smoking
- High blood pressure
- Diabetes
- Excess fat around your waist (over 40” for men or over 35” for women. If Chinese or South Asian, over 35” for men or over 32” for women)
- Not exercising
- LDL > 2.0 mmol/L and HDL < 1.0mmol/L

High cholesterol usually has **no signs or symptoms**. A **blood test** is how you can detect high cholesterol (National Institutes of Health, 2014).

Treatment

Thankfully, there are a number of things you can control to reduce your cholesterol levels. Eat healthy foods (see below), quit smoking if you smoke, lose weight if you are overweight, and exercise (National Institutes of Health, 2014).



Recommended Levels (Sizer, Whitney, & Piche, 2009)

HDL	Men > 1.2 mmol/L	Women > 1.0 mmol/L
LDL	<3.0 mmol/L (mainly from saturated fats in diet - meat, >2% milk, >20% cheese)	
Triglyceride – not cholesterol but a type of fat	<1.7 mmol/L (mainly from simple sugars in diet – fruit, juice, pop, alcohol, candy)	
Total cholesterol	<5.2 mmol/L	
Total Cholesterol: HDL ratio	<5	
Fat	Men 60 – 105 g/day	Women 45 – 75 g/day
Fiber	Men 38 g/day	Women 25 g/day

***It is important to know which levels are elevated in order to treat appropriately. Talk to your doctor to get a blood test.*

***Since it is hard to keep track of your HDL and LDL levels, keeping track of your total fat and fiber intake per day is much easier and effective. Lowering your cholesterol almost always means lowering your fat intake and increasing your fiber intake.*

9 Ways to Decrease your Cholesterol! (Heart and Stroke, 2014)

1. Test your cholesterol. Ask your doctor to check it if you have any of the above risk factors.
2. Reduce your fat intake to 20 to 35% of your daily calories.
3. Choose healthy fats (polyunsaturated and monounsaturated) like vegetable oil, nuts, fish.
4. Limit your saturated fat intake to <7% of your daily calories. Eat less red meat and high-fat dairy products.
5. Avoid trans fat often found in hard margarines, fast foods, and pre-made foods.
6. Use Canada's Food Guide to plan a healthier diet. Eat more vegetables, fruit, and whole grains.
7. Bake, broil, or steam your food. Avoid fried food.
8. Be smoke free. Smoking increases LDL cholesterol.
9. Be physically active. Aim for 30 minutes of moderate to vigorous intensity physical activity per day by breaking it up in 10-minute segments.
10. Achieve and maintain your weight at a healthy BMI. Know your waist circumference.



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Sizer, F., Whitney, E., & Piche, L. (2009). *Nutrition: Concepts and controversies, first Canadian edition*. Toronto: Nelson Education.

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