

What is high cholesterol?

Cholesterol has a bad reputation. Many people fear cholesterol, watch cholesterol, worry about cholesterol. However, the reality is that cholesterol is crucial for life: it is a building block for many normal hormones, and a major part of the membrane that surrounds each and every cell in our bodies.

The problem with cholesterol is that it is also the major component of plaque, the fatty material that builds up in arteries as part of [atherosclerosis](#), which in turn can lead to serious problems such as [heart attack](#) or [stroke](#).

So how do you tell whether you have a cholesterol problem? Your blood level of cholesterol, and of the different subtypes of cholesterol, is the key. One of the subtypes of cholesterol is called LDL (low-density lipoprotein)-cholesterol, the so-called “bad” cholesterol. High levels of LDL-cholesterol are strongly linked to an increased risk of health problems such as [heart attack](#). Another subtype is called HDL (high-density lipoprotein)-cholesterol, the “good” cholesterol. High levels of HDL-cholesterol reduce the risk of heart problems, while a low HDL-cholesterol level increases that risk.

For healthy people with no other medical problems, any level of LDL-cholesterol less than 5.0 mmol/L is fine.

These target levels, however, are different if you have [diabetes](#), have had a [heart attack](#), or have several other risk factors for [atherosclerosis](#). In those cases, your level of LDL-cholesterol should be less than 2.0 mmol/L.

Your doctor can help you to determine what your risk category is, and consequently, what your cholesterol levels should be. A simple fasting blood test will provide your current cholesterol levels.

How common is high cholesterol?

According to a recent Canada-wide health survey, 45% of Canadian men and 43% of Canadian women had a total cholesterol level above 5.2 mmol/L.

Who is at risk of high cholesterol?

Some people are more likely to have elevated blood cholesterol than others, and should be tested. For example, individuals who are overweight tend to have higher cholesterol levels. So do people with [diabetes](#). People with a family history of early heart disease are at risk of having high cholesterol levels. The current Canadian guidelines for the treatment of high cholesterol levels recommend that doctors test for high cholesterol levels in:

- men over the age of 40
- women over the age of 50 or who have gone through menopause
- smokers
- people with [diabetes](#) or [high blood pressure](#)
- people with a parent, brother or sister who had heart disease at an early age.
- obesity
- children with a family history of high cholesterol
- people with erectile dysfunction

Other situations where screening is recommended include: people with inflammatory diseases, chronic renal disease, evidence of atherosclerosis (hardening of the arteries), HIV infection treated with highly active antiretroviral therapy and clinical manifestation of high level of cholesterol (see Symptoms section).



Other criteria that increase your risk of developing high cholesterol include a diet that is high in saturated fats, being overweight, being physically inactive and drinking large amounts of alcohol. Cigarette smoking or poorly controlled diabetes can contribute to a low HDL-cholesterol (“good” cholesterol) level.

How to avoid high cholesterol levels

Only a minority of the cholesterol found in the blood, and found in [atherosclerotic](#) plaque, comes from dietary intake—most is made by the liver. So, reducing the amount of fat (including cholesterol) in your diet has only a small impact on blood cholesterol levels, but is still an important measure to reduce your fat intake if you have a diet rich in fat. For people who are overweight, losing weight will often result in lower cholesterol readings. Maintaining a healthy body weight and eating a low-fat diet are important steps that you can take to reduce your cholesterol levels and reduce your risk of heart disease.

What are the symptoms?

High cholesterol usually doesn’t cause symptoms, which is why it has been called a “silent killer”. Occasionally, when cholesterol levels are very high, fat is deposited in the skin and tendons and forms yellowish bumps called xanthomas.

How is the disease diagnosed?

A blood test (done while you are fasting) can measure your cholesterol levels. This test measures your levels of total cholesterol, HDL-cholesterol and triglycerides (another kind of fat in the blood) and from those, your LDL-cholesterol level can be calculated.

How is high cholesterol treated?

The first thing your doctor will usually recommend is a change in your lifestyle. In particular, people with high cholesterol should stop smoking, maintain a healthy weight, exercise regularly and eat less fat and sugar, if appropriate.

Because dietary and lifestyle changes may not be enough to lower your cholesterol to the desired level, medication is often prescribed for people whose cholesterol levels are above the target numbers for their level of risk. Using medications to reach your target cholesterol has been shown to reduce the chance of a first heart attack or death in people who have never had one, and to reduce the risk of a second heart attack or death in people who have already had one.

Living with high cholesterol

[The Healthy Heart Kit](#)

Subscribe to the Heart and Stroke Foundation’s [He@thline](#) to get monthly newsletters containing heart-healthy recipes and tips for lifestyle changes

[Canada’s Food Guide](#)

[Canada’s Physical Activity Guide](#)



Resources

Patient association

[Heart and Stroke Foundation of Canada](#)

Other site(s)

[Heart and Stroke Foundation of Canada](#)

[Healthy Heart Society \(in British Columbia\)](#)

[Making the Connection](#)

[Public Health Agency of Canada](#)