

Cholesterol lowering through lifestyle changes

Cholesterol is essential for your body, as it provides the building blocks for cell membranes, bile acids, vitamin D, and certain hormones. However, high levels of cholesterol in the blood can cause a fatty build-up in the arteries (atherosclerosis), and when this happens in the arteries that supply the heart it can lead to conditions such as angina and heart attack.



'Good' and 'bad' cholesterol

Not all cholesterol is the same. Two important types of cholesterol are low-density lipoprotein (LDL) cholesterol and high-density lipoprotein (HDL) cholesterol — they are named after molecules called lipoproteins that carry cholesterol in the blood.

LDL cholesterol is often called 'bad' cholesterol because it is the type of cholesterol involved in atherosclerosis. High levels of LDL cholesterol in the blood are linked to heart disease.

On the other hand, HDL cholesterol is known as 'good' cholesterol. HDL cholesterol carries cholesterol from the body to the liver for removal. High levels of HDL cholesterol in the blood are associated with a reduced risk of heart disease.

You can achieve a healthier balance of LDL and HDL cholesterol levels through a number of lifestyle changes, including:

- ▶ reducing the total amount of fat in your diet;
- ▶ replacing saturated fat and trans fat with polyunsaturated or monounsaturated oils;
- ▶ avoiding foods that are high in cholesterol;
- ▶ choosing foods high in starch and fibre;
- ▶ maintaining a healthy body weight;
- ▶ becoming more physically active; and
- ▶ avoiding smoking.

Lowering your total fat intake

Foods high in fat often contain large amounts of saturated fat, and this is a major cause of elevated LDL ('bad') cholesterol in the blood. The following are steps towards reducing fat in your diet.

- ▶ Always read the labels of food that you are buying to see which are low in fat. Look for the Heart Foundation's tick of approval, or check the nutrition label for levels of fat, saturated fat, cholesterol and calories per serve.
- ▶ Be aware that processed meats such as devon and salami can be very high in saturated fats.
- ▶ Many full-fat dairy products such as cream, sour cream, ice cream, butter and the majority of cheeses are high in saturated fat. Choose skim or low-fat milk, as well as reduced-fat cheeses, yoghurts and sour cream.
- ▶ Meat products can be high in saturated fat. Eat only moderate portions of meat (the size of a deck of cards). Look for cuts of meat labelled 'lean' or 'extra lean', and trim off all visible fat prior to cooking.
- ▶ Choose skinless poultry, but avoid duck and goose, as these have a high fat content even without their skin.
- ▶ Bake, grill, steam or microwave food rather than frying it. If you do fry food, use a non-stick pan and minimal oil.
- ▶ Avoid deep fried takeaway food, high-fat pizzas and creamy pasta sauces.

Reducing saturated fat and trans fat intake

It's advisable to reduce your intake of saturated fat because too much saturated fat in the diet can lead to elevated LDL ('bad') cholesterol levels.

Trans fat is a type of unsaturated fat that acts like a saturated fat in the body. Trans fat is thought to be especially damaging to heart health because it increases your LDL ('bad') cholesterol level and decreases your HDL ('good') cholesterol level.

If you are taking steps to reduce total fat you will also be well on the way to reducing your intake of saturated fat and trans fat. However, lowering the amount of saturated fat and trans fat in your diet can also be achieved by replacing these fats with polyunsaturated or monounsaturated fats.

- ▶ Fish contains polyunsaturated fatty acids, which may help heart health, and for this reason the Heart Foundation recommends that you eat at least 2 (preferably oily) fish meals per week.
- ▶ Avoid commercially produced baked goods such as croissants, muffins, pies and pastries, as these can contain hidden saturated fats and trans fats. Alternatively, make your own using polyunsaturated or monounsaturated alternatives.
- ▶ You may need to change the type of oil that you use in cooking and food preparation. Palm, palm kernel, and coconut oils contain large amounts of saturated fat, even though they are vegetable oils.
- ▶ When shopping, read food labels and avoid foods containing 'partially hydrogenated vegetable oils' or 'hydrogenated oils', as these are terms for trans fats.
- ▶ 'Good' vegetable oils that have high quantities of polyunsaturated fat include safflower, sunflower, corn, soybean and sesame, peanut and canola oils. Oils containing monounsaturated fats are also recommended; examples include olive and canola oils.
- ▶ A number of margarines are lower in saturated fat and higher in unsaturated fats than butter. The Heart Foundation recommends one to one-and-a-half tablespoons of margarines containing plant sterols per day, as these margarines can help reduce the amount of cholesterol (total and LDL) you absorb. However, you should still take measures to reduce the amount of saturated fat in your diet.
- ▶ Margarine and oils made from polyunsaturated fats are also a major source of vitamin E, an important antioxidant that has been shown to prevent oxidation of LDL cholesterol, a key step in the artery-blocking process. However, research to date suggests that taking high-dose vitamin E supplements does not reduce the risk of developing heart disease.

Avoiding dietary cholesterol

Dietary cholesterol is found only in animal products, so one way to avoid it is to eat more plant products instead. If you have high cholesterol levels, or if you have or are at risk of heart disease, the Heart Foundation recommends:

- ▶ restricting the amount of organ meats such as brains, liver and kidney in your diet. Although these meats are quite low in saturated fat, they are very high in cholesterol; and
- ▶ limiting the amount of egg yolks you consume — egg yolks are high in cholesterol. In cooking, whole eggs can be replaced with egg whites or egg substitutes, as these do not contain cholesterol. Also, check the labels of processed foods, as they may often contain eggs.

However, when it comes to lowering cholesterol levels, reducing the amount of saturated fat you eat is thought to be more important than avoiding the cholesterol-containing foods mentioned above.

Increasing dietary fibre

Try to eat more complex carbohydrates (starch and fibre) as these are generally low in fat and contain little or no cholesterol.

- ▶ Fruits, vegetables and wholegrain cereals are naturally low in fat and calories, but high in starch and fibre. They are also good sources of vitamins and minerals.
- ▶ Dried beans and peas are an excellent source of fibre and protein that can be used in casseroles, soups, and stews.
- ▶ Foods containing soluble fibre, such as oat bran, are thought to have a favourable effect on cholesterol levels, although more research is needed in this area.
- ▶ Don't diminish the benefits of complex carbohydrate products by adding oily salad dressings, creamy sauces or fatty spreads.

Healthy weight

People who are obese are more likely to have high levels of LDL ('bad') cholesterol than people who are a healthy weight.

- ▶ Fat is high in calories, so reducing your fat intake will help you to eat fewer calories.
- ▶ You can achieve a healthy weight by decreasing the number of calories that you consume and increasing the number of calories that you burn off through physical activity.
- ▶ Cutting out or burning up 500 calories a day (3500 calories a week) through a combination of diet and physical activity can help you to lose about a kilogram per fortnight, depending on your weight.
- ▶ It is much more effective to establish a sensible, life-long healthy eating strategy than to go on a crash diet.
- ▶ Seek advice from your doctor if you are unsure of how to get the best results.

Physical activity

Physical activity is important to balance levels of LDL ('bad') and HDL ('good') cholesterol.

- ▶ Being active can help increase your HDL ('good') cholesterol levels.
- ▶ Increasing your physical activity can also help you lose weight, reduce your blood pressure, and improve both your cardiovascular and mental health.
- ▶ Try being active as a family (for example, take up hiking), and also build activity into your daily routine (for example, take the stairs instead of the lift).
- ▶ The Heart Foundation advises that 30 minutes of moderate activity each day is good for your heart and physical well-being. This can be accumulated in sessions of 10 minutes if it's not possible to do it all at once.
- ▶ Start with a comfortable level of activity, and build up gradually. If you have any concerns about your health, get advice from your doctor first.

Avoiding smoking

Cigarettes damage your heart and blood vessels in several ways, including reducing the level of 'good' HDL cholesterol in the blood. The good news is that quitting smoking can bring your HDL levels back to normal within months and can return your risk of heart disease to that of a non-smoker within 2–6 years.

The Heart Foundation recommends that people with abnormal cholesterol levels should avoid smoking.

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