



**Irish Heart
Foundation**

The National Stroke & Heart Charity

A HEALTHY CHOLESTEROL

to reduce your risk
of heart disease
and stroke



A healthy cholesterol

You probably already know that cholesterol has something to do with heart disease and stroke. But like many people, you may be confused about cholesterol, all the different fats you eat, what happens to them in your body and how they affect your heart.

In this booklet, we will answer your most commonly asked questions about cholesterol.

One of the best ways to prevent heart disease and stroke is to keep your cholesterol at a healthy level.



First, a few facts

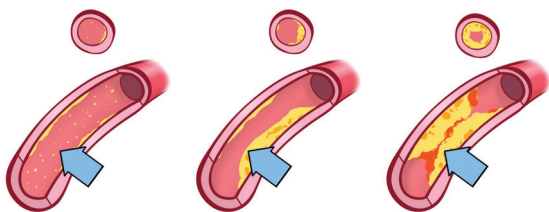
- Your blood vessels - arteries and veins - and your heart are together called your cardiovascular system. Diseases that affect the cardiovascular system are called cardiovascular diseases. These include angina, heart attacks and strokes. For convenience we will mostly use the terms heart disease and stroke in this booklet.
- The main cause of cardiovascular disease is called hardening of the arteries or atherosclerosis.
- Cardiovascular disease is the biggest cause of death in Ireland for both men and women. However, for many people heart disease and stroke can be delayed or even prevented. Healthy eating, being physically active and not smoking all help to reduce your chances of these diseases.
- One of the best ways to prevent heart disease and stroke is to keep your cholesterol at a healthy level. This booklet will outline ways to help you do this.
- Cardiovascular disease can be inherited, so if someone in your family has the disease, it is likely you may also get it.
- Having high cholesterol affects people of all ages.
- If you already have heart disease, or there is a history of heart disease or stroke in your family, making small healthy changes now can make a difference to your life today and in the future.

Why is cholesterol important?

Having high cholesterol levels in your blood is one of the risk factors which increases your chances of getting heart disease and stroke.

What is cholesterol?

Cholesterol is a type of fat found in your blood. You need a certain amount of cholesterol for all your body cells and to produce important hormones. However, if there is too much cholesterol in your blood, it sticks to your artery walls to form atheroma or plaque.



Cholesterol in the blood sticks to artery walls to form plaque. This plaque builds up and may block the artery.

As a result of this build-up on the artery walls, your arteries become narrowed. This process is called hardening of the arteries or atherosclerosis.

- If an artery supplying the heart muscle becomes blocked completely, the heart muscle becomes damaged. This is known as a heart attack.
- If an artery to the brain is completely blocked, it damages the brain. This is called a stroke.

Where does cholesterol come from?

Cholesterol is made in the body mainly by the liver. This is often called blood cholesterol. The body can produce all the cholesterol it needs to carry out its many functions and can usually maintain a healthy level of blood cholesterol. However, sometimes the balance goes wrong and there is an increase in blood cholesterol. This may result from inherited problems or from eating too much saturated (animal) fat or too many foods from the top shelf of the Food Pyramid (see pages 9 and 10).



The level of cholesterol in your blood is affected by the amount of saturated fats you eat every day.

Some foods such as eggs, liver and shellfish contain cholesterol. However, the amount of cholesterol in these foods does not greatly affect the amount of cholesterol in your blood. You can eat foods that contain cholesterol in moderation as part of a healthy varied diet.

If you do not have a high blood cholesterol level, you can eat up to 7 eggs a week. However if you have been diagnosed with a high cholesterol level, you may be advised to eat less eggs, depending on your diet.

Confused about cholesterol?

The relationship between cholesterol and heart disease, stroke and diseases of the blood vessels is very complicated but it helps to look at how cholesterol is carried around in the bloodstream.

There are two main types of cholesterol - HDL cholesterol (high density lipoprotein) and LDL cholesterol (low density lipoprotein).

HDL

HDL cholesterol is called good cholesterol or healthy cholesterol, because it mops up cholesterol left behind in your arteries and carries it to your liver where it is broken down and passed out of your body.

Regular physical activity and exercise can help increase your HDL level.

High levels of HDL cholesterol can protect you against having a heart attack or a stroke.

LDL

LDL cholesterol travels from your liver through your arteries to other parts of your body. LDL is called bad cholesterol because it sticks to the walls in your arteries - making them narrow. This reduces the blood supply to your heart or brain.

Eating too many foods high in saturated fat can raise your LDL cholesterol.

High levels of LDL cholesterol increase your risk of heart disease and stroke.

What are triglycerides and how do they affect my heart?

Triglycerides are another type of fat found in your blood. Too much triglyceride in your blood can increase your chances of getting heart disease and stroke.

Could I have high triglycerides?

Yes, anyone can have high levels, but it is more likely if you:

- are overweight;
- drink too much alcohol;
- eat lots of sugary foods; or
- are not very active.

Ask your doctor to check your triglyceride levels.

Choose 3-5 or more servings of pasta, rice, potatoes or cereals



Confused about fats?

Fats in food are a mixture of:

- saturated fats;
- unsaturated fats which can be either mono-unsaturated fats or polyunsaturated fats; and
- trans fats

Saturated fats

Saturated fats are found in foods like butter, hard margarine, lard, cream, cheese, fatty meat, cakes, biscuits and chocolates. Vegetable oils such as coconut oil and palm oil are also high in saturated fat. Check the food labels on processed and ready-made meals for the amount of saturated fats.

What effect do they have?

Saturated fats can raise your LDL (bad) cholesterol and increase your chances of heart disease or having a stroke.

Monounsaturated fats

Monounsaturated fats are found in many foods but the main sources include olive, peanut and rapeseed (canola) oil, spreads that contain these oils, as well as avocados, seeds and some nuts (for example cashews, almonds and peanuts).

What effect do they have?

Monounsaturated fats can help lower the amount of LDL (bad) cholesterol in your blood and reduce your chances of heart disease and stroke.

Polyunsaturated fats

There are two main types of polyunsaturated fats: omega 3 fats and omega 6 fats. These fats are sometimes called essential fats because our bodies cannot make them and we have to get them from the food we eat.

Omega 3 fats

Omega 3 fats are found in oily fish such as salmon, mackerel, trout, herring and sardines. Tuna is also an oily fish. However, if you're using tinned tuna, make sure the label says that omega 3 fats have been replaced, as these healthy fats are normally lost during the tinning process.

What effect do they have?

Omega 3 fats can help your heart to keep a healthy rhythm and prevent blood clots. They can also help to lower another type of fat in the blood called triglycerides (see page 6).



Omega 6 fats

Omega 6 fats are found mainly in vegetable oils such as sunflower, safflower, corn, soya bean and sesame oils. Soya beans and some nuts, for example walnuts, hazelnuts and brazil nuts, also contain Omega 6 fats.

What effect do they have?

Omega 6 fats can help to lower LDL (bad) cholesterol and reduce your chances of heart disease and stroke.

Trans fats

Trans fats are mainly found in processed foods such as cakes, biscuits, pastries and deep-fried foods. If a food's list of ingredients contains the words 'hydrogenated oils' or 'hydrogenated fat', it is likely to contain trans fats.

What effect do they have?

Trans fats lower your HDL (good) cholesterol and raise the level of LDL (bad) cholesterol in the blood.

The Food Pyramid

Not needed for good health.

Foods and drinks high in fat, sugar and salt

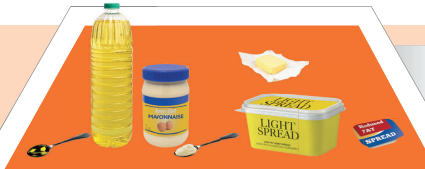


NOT every day

For adults, teenagers and children aged five and over

Most people consume snacks high in fat, sugar and salt and sugar sweetened drinks up to 6 times a day (Healthy Ireland Survey 2016). There are no recommended servings for Top Shelf foods and drinks because they are not needed for good health.

Fats, spreads and oils



In very small amounts

Use as little as possible. Choose mono or polyunsaturated reduced-fat or light spreads. Choose rapeseed, olive, canola, sunflower or corn oils. Limit mayonnaise, coleslaw and salad dressings as they also contain oil. Always cook with as little fat or oil as possible – grilling, oven-baking, steaming, boiling or stir-frying.

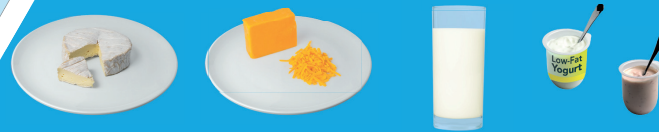
Meat, poultry, fish, eggs, beans and nuts



2 Servings a day

Choose lean meat, poultry (without skin) and fish. Eat oily fish up to twice a week. Choose eggs, beans and nuts. Limit processed salty meats such as sausages, bacon and ham.

Milk, yogurt and cheese



3 Servings a day

5 for children age 9–12 and teenagers age 13–18

Choose reduced-fat or low-fat varieties. Choose low-fat milk and yogurt more often than cheese. Enjoy cheese in small amounts. Women who are pregnant or breastfeeding need 3 servings a day.

Wholemeal cereals and breads, potatoes, pasta and rice



3-5* Servings a day

Up to 7* for teenage boys and men age 19–50

Wholemeal and wholegrain cereals are best. Enjoy at each meal. The number of servings depends on age, size, if you are a man or a woman and on activity levels. Watch your serving size and use the Daily Servings Guide below.*

Vegetables, salad and fruit



5-7 Servings a day

Base your meals on these and enjoy a variety of colours. More is better. Limit fruit juice to unsweetened, once a day.

*Daily Servings Guide – wholemeal cereals and breads, potatoes, pasta and rice

Active	Child (5–12)	Teenager (13–18)	Adult (19–50)	Adult (51+)	Inactive	Teenager (13–18)	Adult (19–50)	Adult (51+)
		3–4	4	4–5		3–4		3
	3–5	5–7	5–7	4–5		4–5	4–6	4

There is no guideline for inactive children as it is essential that all children are active.

Average daily calorie needs for all foods and drinks for adults

Active 2000kcal Inactive 1800kcal Active 2500kcal Inactive 2000kcal

Serving size guide



Cereals, cooked rice and pasta, and vegetables, salad and fruit
Use a 200ml disposable plastic cup to guide serving size.



Cheese
Use two thumbs, width and depth to guide serving size.



Meat, poultry, fish
The palm of the hand, width and depth without fingers and thumbs, shows how much you need in a day.



Reduced-fat spread
Portion packs found in cafes can guide the amount you use. One pack should be enough for two slices of bread.



Oils
Use one teaspoon of oil per person when cooking or in salads.



Drink at least 8 cups of fluid a day – water is best



Get Active!

To maintain a healthy weight adults need at least 30 minutes a day of moderate activity on 5 days a week (or 150 minutes a week); children need to be active at a moderate to vigorous level for at least 60 minutes every day.

Use the Food Pyramid to plan your healthy food choices every day and watch your portion size



Is your cholesterol level too high?

Your cholesterol can be measured by your doctor, who knows your family history. If a family member has high cholesterol, heart disease or has had a stroke, it's really important you ask your doctor to do this test. You can do this on any visit to your doctor.

If your results show a blood cholesterol level greater than five mmol/l (the measurement used for cholesterol levels), or your doctor is concerned about your HDL (good) or LDL (bad) cholesterol, he or she will arrange for another test. You will need to fast for 12 hours to get more information on your HDL and LDL cholesterol.

If you already have had a heart attack, bypass surgery or angioplasty, it is very important that you keep your LDL at or below 2.5 mmol/l. Your doctor will most likely suggest medication together with healthy eating and other lifestyle changes outlined in this booklet.

As well as HDL and LDL levels, the more detailed test will show triglyceride levels - another type of fat - see table below and details on pages 5 and 6.

If you need to change any aspects of your cholesterol or triglyceride levels, your doctor will advise you on changes in lifestyle and may recommend medication. If you are prescribed medication, it is important that you follow the instructions carefully.

Cholesterol	Healthy levels mmol/l
Total cholesterol	Less than 5
LDL cholesterol	Less than 3
HDL cholesterol	More than 1
Triglycerides	Less than 2

For people with established heart disease or diabetes plus other risk

Total cholesterol	Less than 4.5
LDL cholesterol	Less than 1.8

How can I lower my cholesterol?

- Get down to a healthy weight - being overweight means your heart has to work harder to pump blood around the body.
- Be more physically active every day.
- Choose fish twice a week including one oily fish
- Eat more fruit and vegetables.
- Eat more wholegrain varieties of cereals, breads, pasta and rice. Choose jacket potatoes.
- Choose lean meats.
Trim fat off meat and skin off chicken.
Drain oil from cooked dishes containing minced meat.
- Choose low-fat dairy products.
- Choose low-fat spreads made from sunflower or olive oil.
- Choose less foods from the top shelf of the Food Pyramid.
- Use low-fat healthy ways of cooking, like grilling or oven-baking, instead of frying.



Cholesterol-lowering foods

If you have high cholesterol, there is now a range of foods which can help lower your cholesterol. These include spreads, yoghurts and milk. These foods have ingredients which stop your body absorbing cholesterol.

If you have high cholesterol levels, you may benefit from using these products as part of a healthy varied diet, but you should ask your doctor or dietitian to advise you, as these products can be expensive.

Cholesterol-lowering foods are not suitable for children under five years or for pregnant or breastfeeding mothers.

Cholesterol-lowering foods are not a replacement for cholesterol-lowering medicine prescribed by your doctor and are not a replacement for following a healthy diet and lifestyle.

If you are taking medicine for high cholesterol, it is important that you do not replace your medicine with these products and to still have a healthy diet to reduce your risk.



What if I have low HDL?

If your blood test showed that your HDL cholesterol is below the recommended levels (on page 11), you will need to increase this level to reduce your risk of heart disease and stroke.

You can increase the healthy HDL levels by:

- being more active;
- reducing your weight; and
- if you smoke, by stopping smoking.

Your doctor may also prescribe medication to raise your HDL levels.

What can I do if my triglycerides are too high?

- Follow the general advice for lowering your blood cholesterol on page 12 - this will also help lower your triglycerides.
- Oily fish, such as sardines, mackerel, trout or salmon can help lower your triglyceride levels. Try to eat oily fish (fresh or tinned) twice a week, for example, one main meal and one lunch serving.
- Oily fish, which contains omega 3 fatty acids, improves the blood circulation, reduces the stickiness of the blood and prevents your blood from clotting.
- If you drink alcohol, take no more than one drink (such as a small glass of wine or a half pint of beer) a day and go some days without any alcohol.
- Watch the amount of sweet foods you eat from the top shelf of the Food Pyramid, like biscuits, cakes, chocolate, sweets, fizzy drinks, jams, marmalades and sugars.
- Choose low-sugar or sugar-free fizzy drinks, mixers and tinned fruits in their own juice. Instead of sugar try artificial sweeteners or ideally try to reduce the amount of sugar you add to food and drinks.

Check out the other risk factors for heart disease and stroke. In addition to high cholesterol, the other risks are:

- smoking;
- high blood pressure;
- being overweight;
- diabetes;
- not being active;
- stress that you cannot control;
- your family history; and
- your age.

If you have high cholesterol plus any of these risk factors, it is important that you talk to your doctor.

For a healthy cholesterol and good heart health:

- eat more fruit and vegetables and wholegrain foods;
- eat less fatty foods;
- Choose fish twice a week including one oily fish;
- if you smoke, try to stop;
- be a healthy weight;
- be more physically active for at least 30 minutes 5 days a week;
- drink less alcohol;
- learn to relax - take time out for yourself; and
- have a regular blood pressure and cholesterol check with your doctor.



Sample menu

Breakfast

- High-fibre cereal with low-fat milk.
- Wholemeal bread or toast, with a thin layer of polyunsaturated or monounsaturated spread.
- Fruit juice or fresh fruit.

Mid-morning

- Fruit or wholemeal bread or a scone.

Lunch

- Large serving of salad or cooked vegetables.
- Small serving of low-fat cheese, egg, lean meat, poultry, sardines or salmon.
- Wholemeal bread or roll.
- Low-fat yoghurt or glass of low-fat milk.
- Fresh fruit.

Mid-afternoon

- Fresh fruit.

Main meal

- Large serving of salad or cooked vegetables.
- Moderate serving of fish (preferably oily), poultry, lean meat or low-fat vegetarian alternatives.
- Potato, rice or pasta.
- Glass of low-fat milk.
- Fresh fruit, cooked fruit, tinned fruit in its own juice, fruit-based dessert or low-fat milk pudding.

Supper

- Wholemeal bread or fruit.

Have about 8 to 10 glasses (1.5 litres) of fluids a day, preferably water.

Please make a donation today

The Irish Heart Foundation is Ireland's national charity dedicated to the reduction of death and disability from heart disease and stroke. Over 90% of our funding comes from public and business donations. We depend on your goodwill and generosity to continue our work.

If you found this booklet useful, please help our charity to continue to provide heart & stroke information by donating today.

You can make your donation today:

By post: Irish Heart Foundation
17-19 Rathmines Road Lower, Dublin 6.

Online: www.irishheart.ie

By phone: 01 6685001

Personal Details

Name: _____

Address: _____

Email: _____

Phone: _____

Mobile: _____

Credit or debit card (one off donation)

Amount:

€250* €100 €50 €25 Other € _____

Card Number:

Exp Date: / Security Code**:

Signature: _____ Date: ____ / ____ / ____

* If you donate €250 in one year (or €21 per month) we can claim tax back at no cost to you.

** Last 3 digits on the signature strip on the reverse of our card.

The Irish Heart Foundation is committed to best practice in fundraising and adheres to the **statement of guiding principles for fundraising** promoting transparency, honesty and accountability. Any personal information you provide will be held in accordance with the Data Protection Acts 1988 and 2003.

SEPA Direct Debit Mandate

Unique Mandate Reference:

Creditor Identifier: IE02ZZZ306322

By signing this mandate form, you authorise (A) the Irish Heart Foundation to send instructions to your bank to debit your account and (B) your bank to debit your account in accordance with the instruction from the Irish Heart Foundation.

As part of your rights, you are entitled to a refund from your bank under the terms and conditions of your agreement with your bank. A refund must be claimed within 8 weeks starting from the date on which your account was debited. Your rights are explained in a statement that you can obtain from your bank.

Please complete all the fields below marked*

*Bank Name: _____

*Address: _____

*Account Number (IBAN): _____

*Swift BIC: _____

Creditor Name: **IRISH HEART FOUNDATION**

Creditor Address: **17-19 RATHMINES ROAD LOWER, DUBLIN 6**

*Type of Payment: Recurrent (Monthly) One-off Payment

* Signature: _____ *Date Signed: _____

Please return completed form to the Irish Heart Foundation.

My monthly instalment amount is:

€21* €18 €15 €10 Other € _____ per month

*A regular gift of €21 per month could be worth an additional €9 from the Revenue Commissioners per month at no extra cost to you.

Your first contribution will be taken on either the 2nd or the 20th of the next available month. Please select which date you prefer.

2nd 20th

You will be notified in writing ten days in advance of your first direct debit. If you wish to cancel within 7 days of a direct debit payment please contact your own bank.

Preferences

I would like to hear about other IHF events, activities, awareness campaigns and appeals. Yes

Do you need a postal receipt: Yes No



Irish Heart Foundation

The National Stroke & Heart Charity

Irish Heart Foundation
17-19 Rathmines Road Lower, Dublin 6.

Phone: +353 1 668 5001

Fax: +353 1 668 5896

Email: info@irishheart.ie

Web:

www.irishheart.ie
www.stroke.ie



Funding:

The Irish Heart Foundation is the national charity fighting heart disease and stroke and relies on charitable donations for 90 per cent of its funding. We support, educate and train people to save lives, campaign for patients, promote positive health strategies, support research and provide vital public information. We need your support - through donations, as a volunteer or on our training courses.

This booklet is part-funded by the Irish Heart Foundation and part-funded by the Health Service Executive.



Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive

Published by the Irish Heart Foundation in 2014. For more information, contact the Irish Heart Foundation or your local HSE office:



The information provided by the Irish Heart Foundation in this booklet was correct and accurate at the time of publication to the best of the charity's knowledge.

Registered Charity Number CHY 5507. HPUT00375



WORLD LAND TRUST™

www.carbonbalancedpaper.com
CBP002053