Keep your heart healthy

BEATING HEART DISEASE TOGETHER

British Heart Foundation
About the British Heart Foundation

The British Heart Foundation is the nation’s heart charity, saving lives through pioneering research, patient care and vital information.

What you can do for us

We rely on donations to continue our vital work. If you would like to make a donation to the British Heart Foundation, please ring our credit card hotline on 0870 606 3399 or contact us through our website at bhf.org.uk/donate or send it to us at the address on the back cover.

British Heart Foundation website

You may find other useful information on our website at: bhf.org.uk
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About this booklet

This booklet aims to explain how, by making changes to your lifestyle, you can look after your heart and reduce your risk of developing certain heart conditions, such as coronary heart disease (angina and heart attack), or of having a stroke. These conditions are known as cardiovascular disease.

This booklet is for people who do not already have a heart condition. (If you do have a heart condition, you may find it more useful to read some of our other booklets listed on page 58 which have been specially written for people with heart conditions.)

We explain:

- what cardiovascular disease is
- the factors that can increase your risk of cardiovascular disease
- what happens if your doctor or nurse does a ‘heart health check’ for you, and what the results mean, and
- how you can look after your heart and reduce your risk of cardiovascular disease.

We explain the technical terms used in this booklet on page 65.

This booklet does not replace the advice that your
doctors or nurses may give you, but it should help you to understand what they tell you.
What is cardiovascular disease?

Cardiovascular disease is also called ‘heart and circulatory disease’. It means all diseases of the heart and circulation, including **coronary heart disease** (angina and **heart attack**), and **stroke**. Cardiovascular disease is the most common cause of death in the UK and causes more than one in every three deaths.¹

**Coronary heart disease**

Coronary heart disease begins when the **coronary arteries** (the arteries that supply blood and oxygen to the heart muscle) become narrowed by a gradual build-up of fatty material within their walls. This condition is called **atherosclerosis** and the fatty material is called **atheroma**.

In time, the artery may become so narrow that it cannot deliver enough oxygen-containing blood to the heart muscle when it needs it – such as when you are doing exercise. The pain or discomfort that happens as a result is called angina. For more information on angina, see our booklet *Angina*. 
If the atheroma becomes unstable, it may break off and lead to a blood clot forming. If the blood clot blocks the coronary artery, the heart muscle is starved of blood and oxygen, and may become permanently damaged. This is known as a **heart attack**. During a heart attack, life-threatening heart rhythms may develop. This is why a heart attack is a medical emergency. For more information about heart attacks, see our booklet *Heart attack*.

**If you ever think that you are having a heart attack, call 999 immediately.**
**Stroke**

Blood carries essential nutrients and oxygen to the brain. If atheroma develops in the arteries in the neck, it may interfere with the flow of blood to the brain. A *stroke* happens when the blood supply to part of the brain is cut off – for example, if a blood clot blocks an artery that carries blood to the brain.

Without a blood supply, brain cells can be damaged or destroyed. The brain controls everything the body does, so the damage caused by a stroke may affect our body functions or mental processes.

For more information on stroke, contact The Stroke Association. (Their details are on page 62.)
What increases the risk of having cardiovascular disease?

There are several different things which increase your risk of developing cardiovascular disease. These are called ‘risk factors’.

The risk factors for cardiovascular disease are:

- smoking
- high blood pressure
- high blood cholesterol
- physical inactivity
- being overweight
- having diabetes, and
- having a family history of heart disease.

Your risk of getting cardiovascular disease also depends on other factors, such as your age. The older you are, the more likely you are to develop cardiovascular disease.

Also, certain ethnic groups have a different level of risk. For example, South Asian people living in the UK are $1 \frac{1}{2}$ times more likely to die from coronary heart disease before the age of 75 than the rest of the UK population.\(^1\)

People’s income, and the type of jobs they do, all appear to have an effect on how likely they are to get cardiovascular disease. For example, people who work in
manual jobs have a higher rate of cardiovascular disease than people in other jobs, and people who live in poorer areas or are on lower incomes are also more likely to get the disease.

You can change some of the risk factors – such as your weight, whether you smoke or not, or your cholesterol level. These are sometimes called **modifiable risk factors**. But you can’t do anything about other factors, such as your age or your ethnic background.

**The more risk factors you have, the greater your chance of developing cardiovascular disease.** We explain more about what you can do about your risk factors on page 15.

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How can I find out about my risk of cardiovascular disease?

Your doctor, or a nurse, may carry out a **heart health check** to find out your risk of cardiovascular disease. This is sometimes called a **heart health assessment** or a **cardiovascular risk assessment**. A heart health check gives doctors and nurses information about your future risk and gives you valuable information on what you can do to keep your heart healthy. It can also help your doctor decide if you need treatment – such as medicine to protect your heart.

The assessment takes into account the risk factors you can change, as well as ones that you can’t change (for example, your age, ethnic group and family history).

So, the nurse or doctor will:

- ask you questions about your lifestyle – for example, whether you smoke, how much physical activity you do, and the type of food you eat
- take your weight, height and waist measurements
- measure your blood pressure
- do a blood test to measure your cholesterol
- ask about your ethnic background, and
- ask if there is any history of cardiovascular disease in your family.
A heart health check takes account of all the risk factors that may affect you, rather than focusing on just one thing (such as your cholesterol level). This is because the more risk factors you have, the greater your chance of having a ‘cardiovascular event’. (A cardiovascular event is when your doctor diagnoses you with coronary heart disease, or if you have a heart attack or stroke.)

Several computer programmes are now available for assessing the risk of having a cardiovascular event. (These programmes are not normally used for people who already have cardiovascular disease or who have diabetes, because those people are already at high risk, so their doctors are probably already giving them treatment to protect their heart.)

The nurse or doctor enters all the information that they have collected about you into the computer programme. The programme then works out your estimated risk of having a cardiovascular event over the next 10 years. The programme will give you a percentage ‘risk score’ from 1% to 100%, or a score between 1 and 100. Or, the doctor or nurse may give you a score between 1 and 10. The higher the number, the higher your risk. Or, instead of giving you a score, the doctor or nurse may just tell you if you have a high risk, a moderately high risk, or a low risk.
Depending on your risk score, your doctor or nurse may offer you advice on how to make certain healthy changes to your lifestyle to reduce your risk. They will be able to give you guidance and information on how you can do this, and help you set goals to try to achieve a healthier lifestyle. Your doctor or nurse may ask you to go back and have another heart health check later on, to see if the changes you have made have reduced your risk.

Some computer programmes also allow the nurse or doctor to show you on the computer how changing your lifestyle can reduce your risk. Making changes to your lifestyle can greatly reduce your risk of cardiovascular disease, particularly if you reduce several risk factors. Seeing on the computer how the lifestyle changes can lower your risk of cardiovascular disease can be very motivating, and can encourage you to make those changes.

If your risk of having a cardiovascular event is more than 20% (or 20 in 100, or 2 in 10) over the next 10 years, you are considered to be at high risk. Current guidelines suggest that, if you are at **high risk**, you may need to be treated with medicines to reduce your risk and protect your heart, such as statins (which help to lower cholesterol levels).

If your doctor tells you that you have a **moderately high**
risk or a low risk but you have high cholesterol levels or high blood pressure, he or she may prescribe statins to lower your cholesterol, or medicines to lower your blood pressure, to reduce your risk and protect your heart.

Your doctor or nurse may want to take your blood pressure again, or do another cholesterol test, on a different day before they start you on your medicine. Your age, ethnic group and family history will also influence the decision about whether you need to take medicine.

How often you need to have a heart health check depends on the risk score you get when it is first worked out. If you have a low risk, you may not need to have another assessment for some time. However, if your risk score is high, your doctor or nurse may suggest that you have another assessment within the next few months.

Even if your risk of cardiovascular disease is low, you will still benefit from looking at your lifestyle to make sure that you are keeping yourself and your heart healthy.
How can I reduce my risk of cardiovascular disease?

Coronary heart disease, heart attacks and strokes can often be prevented and there are many things you can do to reduce the risk of them happening to you and help keep your heart healthy. On page 9, we explained what the major risk factors for cardiovascular disease are. The ones you can do something about are:

• smoking
• high blood pressure
• high blood cholesterol
• physical inactivity
• being overweight, and
• diabetes.

Your risk of having a heart problem or a stroke depends on how many risk factors you have, and how strong each risk factor is – for example, how high your blood pressure or cholesterol level is.

Research shows that making changes to your lifestyle can have a major effect on reducing your risk. On the next pages we explain more about each of the risk factors and what you can do about them. Knowing about risk factors – how they affect your health and how they increase your
risk – may help you make the lifestyle changes and can help you feel more in control of your heart health.

For more information, you can order our DVD called *Risking it* – a guide on how to reduce the risk of cardiovascular disease. (See page 57.)
Smoking

Smoking is one of the major causes of cardiovascular disease. People who smoke are almost twice as likely to have a heart attack as people who have never smoked.¹

If you are a smoker, stopping smoking is the single most important step you can take to reduce the risk of having a heart attack and to live longer.

How does smoking damage your heart?
Smoking damages the lining of the arteries, which can lead to the build-up of atheroma (fatty material) in the arteries. The carbon monoxide in cigarette smoke reduces the amount of oxygen that the blood can carry to the heart and around the body. The nicotine in cigarettes stimulates the body to produce adrenaline, which makes the heart beat faster and raises blood pressure, which makes the heart work harder. Smoking may also make the blood more likely to clot. All of these things increase the risk of developing coronary heart disease, or of having a heart attack or a stroke.

What is second-hand smoke?
Second-hand smoke, or passive smoking, is where non-smokers inhale other people’s smoke. Second-hand
smoke can also be harmful. Research shows that non-smokers who live with smokers have a greater risk of heart disease than those who don’t live with smokers.¹

**What you can do**

Quitting smoking has huge health benefits and it’s never too late to give up. Most smokers want to stop smoking. Some people find it hard to give up, but about 11 million people in the UK have successfully stopped smoking.² Being determined is essential, but there are also things you can do to increase your chances of stopping.

You can ask your doctor or practice nurse for information, advice and support about ways to help you stop smoking, such as:

- practical tips on how to stop
- joining a stop-smoking clinic or stop-smoking group
- using nicotine-replacement products, or
- taking medication to help you stop smoking.

See page 61 for details of organisations that can offer information and support for people who want to give up.
Practical tips to help you stop smoking

Make a date to give up, and stick to it! Throw away all your tobacco, lighters and ashtrays.

Draw up a plan of action. Think about what could help you stop smoking – such as using a nicotine-replacement product – and have it ready before the date you plan to quit.

Keep busy, to help take your mind off cigarettes. Try to change your routine, and avoid the shop where you usually buy cigarettes.

Get support. Let your family and friends know you are quitting. Some people find that talking to friends and relatives who have stopped can be helpful.

Treat yourself. If you can, use the money you are saving by not smoking to buy yourself something special.

For more information on smoking, see our booklets Smoking and how to give up or Smoking and your heart.
Blood pressure

Blood pressure is the pressure of the blood in your arteries. You need a certain amount of pressure in your body to keep the blood flowing.

Your heart pumps blood around your body through the arteries, by contracting and relaxing. When your heart contracts, the blood is forced through the arteries. This is when your blood pressure is at its highest point and is called the **systolic pressure**. When your heart relaxes between beats, your blood pressure reaches its lowest point, known as **diastolic pressure**.

The two pressures are written as two numbers – for example, 120/80mmHg. (‘mmHg’ stands for millimetres of mercury.) The first number is the systolic pressure and the second is the diastolic pressure.

**The target for the general population is to have a blood pressure below 140/85.** (Or, for people who have had a heart attack or a stroke, or who have coronary heart disease or diabetes, the target is to have a blood pressure below 130/80.)³
What is high blood pressure?

High blood pressure – also known as hypertension – is when your blood pressure is constantly higher than the recommended level. If you have high blood pressure, you run a higher risk of having a heart attack or a stroke, and over time it can cause the heart to become abnormally large, or the pumping action of the heart to become less effective.

High blood pressure rarely makes people feel ill, so the only way of knowing if you have high blood pressure is to have it measured. Your doctor or nurse can measure it for you. If you have a heart health check, your doctor or nurse will take your blood pressure as part of the assessment.

What causes high blood pressure?

In over nine out of every ten people, there is no definite cause of high blood pressure. However, the following can all play a part.

- not doing enough physical activity
- being overweight
- having too much salt in your diet
- drinking too much alcohol
- not eating enough fruit and vegetables.

Genes are another factor. So, if one or both of your
parents have (or had) high blood pressure, you have a greater chance of developing it too.

What you can do

If you have high blood pressure, it is essential to control it. Even reducing your blood pressure by a small amount can lower your risk of problems in the future.

To reduce your blood pressure, or prevent it from getting high, you can do the following things.

• do more physical activity.
• keep to a healthy weight.
• cut down on salt.
• cut down on alcohol.
• eat more fruit and vegetables.

We explain more about how to do all these things on pages 27 to 53.

If you do develop high blood pressure, your doctor may prescribe medicine to help reduce your blood pressure and protect your heart.

For more information on blood pressure, see our booklet Blood pressure.
Cholesterol

What is cholesterol?
Cholesterol is a fatty substance which is found in the blood. It is mainly made in the body. Cholesterol plays an essential role in how every cell in the body works. However, too much cholesterol in the blood can increase your risk of heart problems.

Cholesterol is carried around the body by proteins. These combinations of cholesterol and proteins are called lipoproteins. There are two main types.

- **LDL** (low-density lipoproteins) is the **harmful** type of cholesterol. This is sometimes called **LDL cholesterol**.
- **HDL** (high-density lipoproteins) is a **protective** type of cholesterol. It is sometimes called **HDL cholesterol**.

**Having too much harmful cholesterol in your blood can increase your risk of getting cardiovascular disease.** The risk is particularly high if you have a **high level of LDL cholesterol** and a **low level of HDL cholesterol**.

What causes high cholesterol?
One of the causes of high blood cholesterol levels among people in the UK is eating too much saturated fat. (See page 47 for examples of foods that contain saturated fat.)
However, some people have high blood cholesterol even though they eat a healthy diet. For example, they may have inherited a condition called familial hyperlipidaemia (FH).

**Triglycerides**

Triglycerides (TG) are another type of fatty substance in the blood. People who are very overweight, eat a lot of fatty and sugary foods or drink too much alcohol are more likely to have high triglyceride levels.

People with high triglyceride levels have a greater risk of developing cardiovascular disease than people with lower levels.

**How are cholesterol and triglyceride levels measured?**

Total cholesterol, LDL and HDL and triglyceride levels are all measured using a blood test. They are measured in units called millimols per litre of blood, or ‘mmol/l’. If you are having a heart health check, it is likely that you will have your cholesterol measured as part of the assessment.

The test is sometimes done as a fasting test. This means that you will be asked not to eat or drink anything apart from water for 12 hours before having your blood test.
What you can do

To help you reach a healthy cholesterol level and reduce your risk of cardiovascular disease, you need to do the following.

• **cut right down on saturated fats** and replace them with monounsaturated fats and polyunsaturated fats.
• **reduce the total amount of fat you eat.**
• **cut down on foods containing trans fats.**

We explain more about the different fats and which foods they are found in on pages 44 to 48.

Doing **regular physical activity** can help increase your HDL cholesterol (the ‘protective’ type of cholesterol).

For more information on other ways of reducing your cholesterol, see our booklet *Reducing your blood cholesterol.*

**Will I need to take cholesterol-lowering medicine?**

Whether you need to take cholesterol-lowering medicine or not depends not just on your cholesterol level, but also on your overall risk of cardiovascular disease.

If you don’t have a high cholesterol level, but you do have an overall high risk of cardiovascular disease, it is likely that you will benefit from taking cholesterol-lowering
drugs (for example, statins) to protect your heart.

For more information on cholesterol, see our booklets *Reducing your blood cholesterol*, *Eating for your heart*, *Food should be fun … and healthy!* and *Cut the saturated fat.*
Keeping active

In the UK, people who are not physically active are twice as likely to have a heart attack as people who do regular physical activity.\textsuperscript{4} People who do regular physical activity have half the risk of dying from coronary heart disease compared with people who are not active.\textsuperscript{4}

In England about seven out of every ten adults do not do enough physical activity to benefit their health.\textsuperscript{5}

The type of activity recommended for heart health is moderate, rhythmic (aerobic) exercise such as \textit{brisk walking, cycling or swimming}. Walking is particularly good as you can often build it into your daily routine.

Physical activity has other health benefits too. It can help to:\textsuperscript{4}

\begin{itemize}
\item lower your blood pressure
\item improve your cholesterol levels
\item control your weight
\item reduce the risk of diabetes or help control diabetes
\item prevent blood clotting
\item relieve stress and anxiety and help improve feelings of wellbeing
\item improve muscle and bone strength, and
\item reduce the risk of certain types of cancer.
\end{itemize}
What you can do

Aim to do at least 30 minutes of moderate-intensity physical activity a day on at least five days a week. ‘Moderate-intensity activity’ means that the activity should make you feel warm and breathe more heavily than normal, but you should still be able to talk.

This amount of activity will help to protect you against cardiovascular disease and will help protect your heart. However, if you are not used to this amount of activity, it is important that you build up to this level over a period of time.

You can do the 30 minutes all in one go, or in shorter bouts of at least 10 minutes at a time.

You can get the benefit of being more active from everyday activities – such as walking, doing housework, gardening, or climbing stairs. Why not try getting off the bus one stop earlier, or climb the stairs rather than taking the lift or escalator? Any increase in activity will benefit your health. And whatever your level of fitness or your age, you can benefit from being more active. It’s never too late to start.
Whatever sort of exercise you do …

• Gradually build up the amount of activity you do by starting slowly at a level that suits you, and then gradually build up the time you spend doing the activity and how often you do it.
• Each time you exercise, start slowly for the first few minutes and build up gradually. At the end, spend some time going more slowly and cooling down.
• Avoid doing activities after a large meal, or when it is very cold or very hot, or at high altitudes.
• Don’t exercise if you feel unwell.
• If you have any condition which you are taking prescribed medicine for, get advice from your GP before you start exercising.
• Always check with your GP if you’re not sure about how much or what sort of exercise you should be doing.
• Stop exercising if you feel tired, breathless, dizzy or sick, or if you have pain or feel unwell in any way, and contact your doctor for advice.
• Choose a variety of exercises and ones that you enjoy, to keep you motivated.
• Try to do something every day.
To find out more about walking groups, leisure centres and exercise classes in your local area, ask at your local town hall or library.

For more information about how to get more active, see our booklets *Get active!, Put your heart into walking, Get kids on the go!* and *Physical activity and your heart*. You may also be interested in taking part in our ‘Get active’ events. See our website, [bhf.org.uk](http://bhf.org.uk).
Keeping to a healthy weight and body shape

Being overweight can increase your risk of developing cardiovascular disease. Keeping close to a healthy weight will help you control your blood pressure and reduce the work your heart has to do. It will also help lower your cholesterol level, and reduce your risk of developing diabetes. If you already have diabetes, controlling your weight will help you keep your diabetes under control.

In England, almost seven in every ten men, and six in every ten women, are either overweight or obese (very overweight).\(^5\) Worryingly, the numbers of people being classed as overweight or obese are increasing rapidly.

If you eat a lot of fatty foods, sweet foods or sugary drinks, you are more likely to put on weight. This is because these foods are very high in calories. If you eat more calories than your body burns up, the extra calories are stored as fat and too much fat results in putting on weight. You are even more likely to put this weight on if you are physically inactive.
Are you a healthy weight and body shape?

Your weight

The chart on the next page is a guide to find out if you are an ideal weight. (This is a healthy weight for your height.) If you fall into the ‘Overweight’ or ‘Very overweight’ category in the chart, your health may be at risk.

Take a straight line up or down from your weight, and a line across from your height (without shoes). Put a mark where the two lines meet to find out if you are a healthy weight. This is only an approximate guide.
Weight in stones

Adapted from a height/weight chart by kind permission of the Food Standards Agency.
Your body shape

People who carry too much weight around their middle have a greater risk of developing coronary heart disease, high blood pressure and diabetes.

One way of finding out if your body shape is increasing your risk of coronary heart disease is by measuring your waist with a tape measure. Your doctor or nurse may also do this as part of your heart health check.

To measure your waist, find the bottom of your ribs and the top of your hips. Measure around your middle at a point mid-way between these. For most people this will be at the level of the tummy button. Breathe out normally and take the measurement. Try to relax, and avoid breathing in while taking your measurement. Check your measurement in the box on the next page. 6,7

People of South Asian background are more likely to have a higher proportion of body fat to muscle than the rest of the UK population, and they also tend to carry this fat around their middle. So South Asians have a greater risk of developing problems such as cardiovascular disease at a lower waist size than other people in the UK.
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<thead>
<tr>
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<th>Your health is at risk if you have a waist size of:</th>
<th>Your health is at high risk if you have a waist size of:</th>
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</thead>
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<tr>
<td><strong>Men</strong></td>
<td>Over 94 cm (37 inches)</td>
<td>Over 102 cm (40 inches)</td>
</tr>
<tr>
<td><strong>Women</strong></td>
<td>Over 80 cm (32 inches)</td>
<td>Over 88 cm (35 inches)</td>
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<td><strong>South Asian men</strong></td>
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<td>Over 90 cm (36 inches)</td>
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<tr>
<td><strong>South Asian women</strong></td>
<td></td>
<td>Over 80 cm (32 inches)</td>
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</tbody>
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**What you can do**

If your body shape means you are at risk or at high risk, or if you are overweight, it is important to make healthy lifestyle changes that would reduce or prevent any further increase in your waist size and weight. This will improve your health and reduce your risk of cardiovascular disease.

The best way to lose weight and reduce your waist size is by:

- **reducing your calorie intake**, and
- **increasing your daily physical activity**.

You can reduce your calorie intake by:
- cutting down on the amount of fat and sugar in your
diet, and
• reducing your portion sizes.

We explain more about healthy eating on pages 42 to 50.

Being physically active plays a very important part in losing weight, as it burns up calories. For more information on how to increase the amount of physical activity you do, see page 27.

Try not to lose weight too quickly. Losing weight slowly and steadily – about one or two pounds (between half a kilo and 1 kilo) a week – is healthier, and you’re more likely to keep the weight off for good. People who follow a weight-loss programme that aims to lose a total of 5 to 10 kilos (about 10 to 20 pounds) – by losing between half a kilo and 1 kilo (about 1 to 2 pounds) a week – usually achieve their target weight loss. The good news is that research shows that losing even small amounts of weight can benefit your health.

If you have any questions about what or how much you should be eating, or how much physical activity you should be doing, ask your GP or practice nurse.

For more information on how to lose weight, see our booklets So you want to lose weight … for good: A guide to losing weight for men and women and Taking control of your weight.
Diabetes

Diabetes significantly increases the risk of cardiovascular disease and can cause other serious health problems too. Normally our body produces glucose (sugar) when we digest food. The cells in the body use the glucose for energy. A hormone called insulin helps the glucose to enter the cells, which helps to control how much glucose is in the blood. Diabetes develops when the body doesn’t produce enough insulin, or when the insulin that is made doesn’t work effectively. This leads to an abnormally high level of glucose in the blood.

**Type 1 diabetes** is when the body cannot make any insulin. This usually happens in children and young adults.

**Type 2 diabetes** is the more common type and happens when not enough insulin is produced, or when the insulin made in the body doesn’t work properly. It tends to develop gradually as people get older – usually after the age of 40. It is closely linked with being overweight and not being physically active. People are also more likely to develop this condition if there is a family history of diabetes.

Almost two million adults have been diagnosed with
diabetes in the UK. However, this number is increasing all the time, and it is worrying that Type 2 diabetes is now being diagnosed more in younger people. It is estimated that, by 2010, about three million people will have been diagnosed with diabetes.

Having diabetes puts you at a much higher risk of developing cardiovascular disease. High glucose levels may affect the artery walls, encouraging atheroma to develop.

If you have diabetes, you are more likely to have high cholesterol levels and high blood pressure. Diabetes also increases the effect of some of the other risk factors for cardiovascular disease – such as smoking and being overweight.

If you have a heart health check, your doctor or nurse may do a blood test to check your glucose level, to check for diabetes.

What you can do

If you don’t have diabetes, you can greatly reduce your risk of developing it by controlling your weight (see page 31) and doing regular physical activity (see page 27).

If you have diabetes, it is very important to make sure you control your blood sugar, blood pressure and
cholesterol. This will help to keep your risk of cardiovascular disease as low as possible. **Doing more physical activity, eating a healthy, balanced diet, and controlling your weight and body shape, will all help to reduce your risk.** (For information about all these, see pages 27 to 53.) If you are diagnosed with diabetes, you may also need to take medication such as statins (a cholesterol-lowering medicine) to help protect your heart.

For more information, see our booklet *Diabetes and your heart*.
Family history

If you have a family history of cardiovascular disease, your own risk of developing the condition is increased. A family history means if your father or brother was under the age of 55 when they were diagnosed, or if your mother or sister was under 65.

Some risk factors, such as being overweight, are sometimes related to lifestyle habits that are passed on from one generation to the next. However, it is also likely that genes are responsible for passing on the risk of cardiovascular disease. Genes can also be responsible for passing on other conditions such as high blood pressure or high cholesterol levels, and both of these conditions increase the risk of getting cardiovascular disease.

Having a family history of cardiovascular disease is a ‘non-modifiable’ risk factor – that is, it’s a risk factor that you can’t change. However, even if you have a family history of the disease, you will still benefit greatly from controlling any other risk factors you may have. This way, you will make sure you reduce your risk as much as possible.
What you can do

If you have a family history of cardiovascular disease, it is important that you eat a healthy, balanced diet, keep your weight down, take regular physical activity and don’t smoke. (See pages 17 to 53.) These will all help protect your heart.

It is important to tell your doctor if you have a family history of cardiovascular disease. He or she may want to check your blood pressure and cholesterol or carry out a heart health check.
Healthy eating for your heart

In this section we explain how to eat a healthy, balanced diet to help protect your heart. The main points are as follows.

- **eat plenty of fruit and vegetables** (see page 43).
- **choose healthier fats** (see page 44).
- **eat oily fish regularly** (see page 48).
- **reduce the amount of salt you eat** (see page 49).
Eat plenty of fruit and vegetables

There is good evidence that eating a diet that includes a wide range of fruit and vegetables is good for your heart and can reduce the risk of developing cardiovascular disease.10

What you can do

Aim to eat at least five portions of a variety of fruit and vegetables a day.

Different fruit and vegetables contain different combinations of vitamins and minerals, so aim to eat a variety to get the most benefit.

Fresh, frozen, chilled, canned and dried fruit and vegetables, salads and 100% juice, all count. Try to eat canned vegetables that are low in salt, and fruit canned in natural juices, rather than in syrup.

There is no evidence that taking vitamin tablets or supplements has the same benefits as eating fruit and vegetables.
Choosing healthier fats

Foods containing fat are made up of a combination of saturated fats, monounsaturated fats and polyunsaturated fats. Choosing healthier fats can help to protect your heart. But remember that all fats are high in calories. So, if you are watching your weight, you should limit the amount of all the fats you eat.

What you can do

To help improve your cholesterol level and reduce your risk of cardiovascular disease, you need to do the following.

- **Cut right down on saturated fats** and replace them with monounsaturated fats and polyunsaturated fats. Reducing the amount of saturated fat you eat will help protect your heart, even if you don’t have a high cholesterol level. See pages 46 and 47 for examples of foods containing all these fats.

- **Reduce the total amount of fat you eat.** This is especially important if you are overweight. For example, cut down on foods such as pastries, crisps and biscuits, and replace them with healthier alternatives such as fruit or vegetables. Or, at mealtimes, cut down on the amount of fatty foods you eat by filling up with starchy foods such as bread, pasta or rice instead –
particularly the wholegrain versions of these foods.

- **Cut down on foods containing trans fats.** Trans fats are found naturally in very small amounts in foods such as dairy foods and meat. Trans fats are also formed when vegetable oils are ‘hydrogenated’ and turned into solid fats to make processed foods such as some cakes, biscuits, pastries, crackers and hard margarines. Foods that have ‘hydrogenated oil or fat’ or ‘partially hydrogenated oil or fat’ in the list of ingredients are likely to contain trans fats. Trans fats increase the total cholesterol and LDL cholesterol.

### Using food labels

To find out if a product has ‘a lot’ or ‘a little’ fat and saturated fat, look at the nutrition information label. Compare the ‘Per 100g’ figures with the information below.  

<table>
<thead>
<tr>
<th>This is a lot (per 100g of food)</th>
<th>This is a little (per 100g of food)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20g of fat or more</td>
<td>3g of fat or less</td>
</tr>
<tr>
<td>5g of saturates or more</td>
<td>1g of saturates or less</td>
</tr>
</tbody>
</table>
Choosing healthier fats

To help protect your heart, you need to cut down on saturated fats and trans fats and replace them with monounsaturated and polyunsaturated fats. Omega-3 fats are good for your heart too.

<table>
<thead>
<tr>
<th>Unsaturated fats</th>
<th>Monounsaturated fats</th>
<th>Polyunsaturated fats</th>
</tr>
</thead>
</table>
| **Which foods are these fats found in?** | Found in:  
- olive oil and rapeseed oil  
- avocado  
- nuts and seeds (almonds, cashews, hazelnuts, peanuts and pistachios.).  
Some margarines and spreads are made from monounsaturated fats. | Found in:  
- corn oil, sunflower oil and soya oil  
- nuts and seeds (walnuts, pine nuts, sesame seeds and sunflower seeds).  
Some margarines and spreads are made from polyunsaturated fats. |
<table>
<thead>
<tr>
<th>Omega-3 fats</th>
<th>Saturated fats</th>
<th>Trans fats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Found in:</td>
<td>Found in:</td>
<td>Found in:</td>
</tr>
<tr>
<td>fish oil</td>
<td>• butter</td>
<td>• pastries</td>
</tr>
<tr>
<td>oily fish</td>
<td>• hard cheese</td>
<td>• cakes</td>
</tr>
</tbody>
</table>
such as       | • fatty meat  | • biscuits |
herring,      | • meat products| • crackers |
mackerel,     | • biscuits    | • hard     |
pilchards,    | • cakes       | margarines.|
sardines,     | • cream       | Foods that |
salmon, trout | • lard        | have ‘hydrogenated|
and fresh tuna| • dripping    | oil or fat’ or|
              | • suet        | ‘partially   |
              | • ghee        | hydrogenated|
              | • coconut oil | oil or fat’ in| oil or fat’ in the|
              | and palm oil. | list ofingredients are| likely to contain|
                                  |              | trans fats. |
Oily fish and omega-3 fats

Eating oily fish regularly can help reduce the risk of coronary heart disease and help protect your heart. Oily fish provides the richest source of a particular type of omega-3 polyunsaturated fat.

Omega-3 fats are found mainly in fresh and canned oily fish such as herring, mackerel, pilchards, sardines, salmon and trout, and in fresh tuna (but not canned tuna).

What you can do

Aim to eat two portions of fish a week. One of the portions should be oily fish. (One portion of oily fish is 100 grams or 4 ounces of fish, or half a medium can of fish.)
Cutting down on salt

People who have a lot of salt in their diet are more likely to have high blood pressure. Most people eat far more salt than they need. It is recommended that adults have no more than 6 grams of salt a day\(^{12}\) – that’s about one teaspoonful.

It is the sodium in the salt that contributes to high blood pressure. There is sodium in all types of salt, whether it’s salt in grains, crystals or flakes.

What you can do

• **Cut down on processed foods that contain a lot of salt.** Three-quarters of the salt we eat is ‘hidden’ \(^{13}\) in foods such as ready meals, packet and canned soups, instant noodles, ketchups and sauces, sausages and burgers, and salty savoury snacks. See *Using food labels* on the next page for how to find out how much salt a food contains.

• **Don’t add salt to your food at the table.**

• **Cook without adding any salt.** Use extra pepper, herbs, garlic, spices or lemon juice to add flavour to your food instead.

You will find that, within a few weeks, your taste buds will get used to less salt. You won’t like salty foods and you’ll be able to appreciate other flavours more.
For more information on healthy eating and on using food labels, see our booklets: *Food should be fun … and healthy!, Guide to food labelling, Cut the saturated fat, Salt – Facts for a health heart* and *Eating for your heart.*
Other things you can do

Alcohol

If you drink alcohol, make sure you drink within sensible limits.¹⁴
- **men** should drink **no more than 3 to 4 units a day**.
- **women** should drink **no more than 2 to 3 units a day**.

These guidelines apply whether you drink every day, once or twice a week, or just occasionally.

1 unit of alcohol =
- half a pint (300ml) of beer, bitter, lager or cider (3% to 5% alcohol by volume)
- or a pub measure (25ml) of spirits such as gin, vodka, whisky or rum
- or a small glass (100ml) of wine (10% alcohol by volume)
Moderate drinking – between 1 and 2 units of alcohol a day – may offer some protection against coronary heart disease.\(^{14}\) However, if you don’t already drink alcohol, there is no need for you to start, as there are much healthier ways to look after your heart. There is little evidence that red wine has any specific benefits over other alcoholic drinks.

Drinking more than the sensible limits shown on page 51 does not protect the heart and can actually lead to damage to the heart muscle, high blood pressure, stroke and some cancers. Alcohol is high in calories too, and so it can lead to weight gain.

Everyone should avoid binge drinking. It is better to have just a small amount regularly rather than large amounts in one go.

**Reduce stress**

Stress is not a direct risk factor for cardiovascular disease, but it is possible that stress may contribute to it, or perhaps bring on some of the symptoms.

The way that you deal with stress can encourage less healthy behaviour, such as smoking, drinking too much alcohol, and overeating. These can all increase your risk of developing cardiovascular disease.
If you often feel stressed or anxious, it is important to learn how to relax. Some people find that physical activity, yoga or other relaxation techniques can help.

There is a lot you can do to manage stress or anxiety. You may need to identify situations that make you feel stressed at home or at work and try to avoid them if you can. You may find it helpful to learn about techniques for managing stress. If you think you are stressed or very anxious, talk to your GP who will be able to help you decide on the best way to deal with it.

For more information, see our booklet *Stress and your heart*. 
Understanding your ‘cardiovascular risk score’

If your doctor or nurse carries out a heart health check, they may work out your ‘risk score’ or your ‘cardiovascular risk score’.

What is risk?
Risk describes the chances of something happening in the future – such as a heart attack or stroke, or the possibility of developing cardiovascular disease.

Risk is presented in various ways. It can be presented as an absolute risk or a relative risk.

Absolute risk
Absolute risk is your risk of developing a specific disease – such as cardiovascular disease – over a particular period of time (usually 10 years). This information gives you an idea of how likely you are to develop the disease. It is often given as a percentage between 1% and 100%, or as a number between 1 and 100. So, for example, if you’re a man living in the UK and you’re told that you have a 10% risk of getting cardiovascular disease over the next 10 years, it means that 10 in every 100 men in the UK with the same risk score as you will get the disease at some
time in the next 10 years. Another way of putting this is to say that you have a 1 in 10 chance of getting the disease. This means that 1 person in every 10 people with the same risk score is likely to get the disease.

Remember that having a 1 in 10 chance, or even a 5 in 10 chance, of developing cardiovascular disease doesn’t mean that you are definitely going to develop the disease. But the higher your absolute risk, the more likely you are to develop the disease. So a person with a 5 in 10 chance is much more likely to get cardiovascular disease than a person with a 1 in 10 chance.

**Relative risk**

Relative risk is used to compare risk in a group of people of the same age and sex.

For example, think of a 40-year-old woman who is a smoker. Her risk of having a cardiovascular event (such as a heart attack or a stroke) can be compared with the risk of other 40-year-old women who don’t smoke. Women who smoke have a higher risk of having a cardiovascular event than those who don’t smoke and so they will have a higher relative risk. So, the relative risk just compares the risk of a 40-year-old woman who is a smoker with the risk of other 40-year-old women.
Because relative risk is based only on modifiable risk factors – such as smoking, cholesterol or blood pressure – it can be used to encourage people to make lifestyle changes, such as giving up smoking or reducing their cholesterol or blood pressure. It can also be used to explain the benefits of taking medicines – for example, taking medicines for high blood pressure. Relative risk can’t be used to compare men with women, or to compare people of different ages. Only absolute risk can be used for this.

Remember – the absolute risk tells you how likely you are to have a cardiovascular event. The relative risk just compares you with other people of your own age and sex.

For more information about your own individual risk, please ask your doctor or nurse.
For more information

British Heart Foundation website

bhf.org.uk
For up-to-date information on coronary heart disease, the BHF and its services.

DVD

Risking it
A DVD on how to reduce the risk of cardiovascular disease.

Booklets

To order any of our booklets:
- call the BHF Orderline on 0870 600 6566, or
- email orderline@bhf.org.uk, or
- visit bhf.org.uk/publications.

You can also download many of our publications from our website.

For information on other BHF booklets, and on videos and DVDs, ask for a copy of the Heart health catalogue.

Our booklets are free of charge, but we would welcome a donation. (See page 2 for how to make a donation.)
Heart Information Series

This booklet is one of the booklets in the 
Heart Information Series. The other titles in the 
series are as follows.

1  Physical activity and your heart
2  Smoking and your heart
3  Reducing your blood cholesterol
4  Blood pressure
5  Eating for your heart
6  Angina
7  Heart attack
8  Living with heart failure
9  Tests for heart conditions
10 Coronary angioplasty and coronary bypass surgery
11 Valvular heart disease
12 Having heart surgery
13 Heart transplantation
14 Palpitation
15 Pacemakers
16 Peripheral arterial disease
17 Medicines for the heart
18 The heart – technical terms explained
19 Implantable cardioverter defibrillators (ICDs)
20 Caring for someone with a heart condition
21 Returning to work with a heart condition
22 Diabetes and your heart
23 Cardiac rehabilitation
24 Atrial fibrillation
25 Keep your heart healthy
My progress record
This is a personal health record for people who are interested in keeping their heart healthy. You can use it to keep a record of important information, and to chart the progress you are making in tackling your risk factors for coronary heart disease. For example, this could include how you are getting on with giving up smoking, reducing your blood pressure, losing weight or reducing your cholesterol. It also contains information about coronary heart disease to help you make informed decisions about your health. Your nurse or doctor may be able to order a copy for you, or you can order a copy from the British Heart Foundation (see page 57), and work through it with your health professional.

Heart health magazine
Heart health is a free magazine, produced by the British Heart Foundation especially for people with heart conditions. The magazine, which comes out six times a year, includes updates on treatment, medicines and research and looks at issues related to living with heart conditions, like healthy eating and physical activity. It also features articles on topics such as travel, insurance and benefits. To subscribe to this free magazine, call 0870 850 5281 or go to bhf.org.uk/hearthealthmag.
Emergency life-support skills

Heartstart UK
For information about a free, two-hour course in emergency life-support skills, contact Heartstart UK at the British Heart Foundation. The course teaches you to:
- recognise the warning signs of a heart attack
- help someone who is choking or bleeding
- deal with someone who is unconscious
- know what to do if someone collapses, and
- perform cardiopulmonary resuscitation (CPR) if someone has stopped breathing and his or her heart has stopped pumping.

Stopping smoking
The following helplines can offer help and advice for people who want to stop smoking.

BHF Smoking Helpline
0800 169 1900
Website: www.bhf.org.uk/smoking

NHS Smoking Helpline
0800 169 0 169
Website: www.gosmokefree.co.uk
QUIT
Quitline: 0800 00 22 00. Website: www.quit.org.uk
QUIT also has helplines in different languages.

ASH (Action on Smoking and Health)
Phone: 020 7739 5902. Website: www.ash.org.uk

Useful organisations
Blood Pressure Association
Phone: 020 8772 4994. Website: www.bpassoc.org.uk

British Dietetic Association
Phone: 0121 200 8080. Website: www.bda.uk.com
Email: info@bda.uk.com

British Nutrition Foundation
Phone: 020 7404 6504. Website: www.nutrition.org.uk

Chest, Heart and Stroke Scotland
Phone: 0131 225 6963. Website: www.chss.org.uk

Diabetes UK
Careline: 0845 120 2960. Website: www.diabetes.org.uk
Email: info@diabetes.org.uk

Food Standards Agency
Websites: www.eatwell.gov or www.food.gov.uk

Heart UK
(The cholesterol charity) Helpline: 0845 450 5988.
Website: www.heartuk.org.uk Email: ask@heartuk.org.uk
The Stroke Association
Helpline: 0845 3033 100. Website: www.stroke.org.uk
Email: info@stroke.org.uk

Toast
(The Obesity Awareness and Solutions Trust)
Helpline: 0845 045 0225. Website: www.toast-uk.org.uk
Email: enquiries@toast-uk.org

Walking the Way to Health
Website: www.whi.org.uk

Weight Concern
Website: www.weightconcern.co.uk
Email: enquiries@weightconcern.org.uk

WeightWise
Website: www.bdadweightwise.com

Physical activity
www.activeplaces.com
A database of information on sports facilities in England.

BHF National Centre for Physical Activity
Phone: 01509 223 259. Website: www.bhfactive.org.uk
References


## Technical terms

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<th>Definition</th>
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<td>aerobic exercise</td>
<td>Repetitive, rhythmic exercise involving the large muscle groups. It is usually moderate-intensity activity that makes your heart beat faster for a period of time. Examples include brisk walking, cycling and swimming.</td>
</tr>
<tr>
<td>angina</td>
<td>Heaviness or tightness in the centre of the chest which may spread to the arms, neck, jaw, back or stomach. Angina is caused by the heart muscle not receiving enough blood and oxygen from the coronary arteries.</td>
</tr>
<tr>
<td>atheroma</td>
<td>Fatty material within the walls of the arteries.</td>
</tr>
<tr>
<td>atherosclerosis</td>
<td>The build-up of fatty material within the walls of the arteries.</td>
</tr>
<tr>
<td>cardiac arrest</td>
<td>When the heart stops pumping.</td>
</tr>
<tr>
<td>cardiovascular disease</td>
<td>Diseases affecting the heart and circulatory system, including coronary heart disease (angina and heart attacks) and stroke.</td>
</tr>
<tr>
<td>cholesterol</td>
<td>A fatty substance mainly made in the body by the liver.</td>
</tr>
<tr>
<td>circulation</td>
<td>The movement of blood around the body, pumped by the heart.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>--------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>coronary arteries</td>
<td>The arteries that supply the blood to the heart muscle.</td>
</tr>
<tr>
<td>coronary heart disease</td>
<td>When the walls of the coronary arteries become narrowed by a gradual build-up of fatty material called atheroma.</td>
</tr>
<tr>
<td>diabetes</td>
<td>A disease caused when the body does not produce enough insulin, or when the cells of the body can no longer use the insulin. This can lead to abnormally high sugar levels in the blood.</td>
</tr>
<tr>
<td>dietitian</td>
<td>A health professional who is an expert in food and nutrition and who can offer advice on healthy eating and special diets.</td>
</tr>
<tr>
<td>familial hyperlipidaemia (FH)</td>
<td>An inherited condition in which the blood cholesterol level is very high.</td>
</tr>
<tr>
<td>heart attack</td>
<td>When one of the coronary arteries becomes blocked by a blood clot and part of the heart muscle is starved of oxygen, causing damage to the heart.</td>
</tr>
<tr>
<td>high blood pressure</td>
<td>When the pressure of the blood flowing through your arteries is abnormally high.</td>
</tr>
<tr>
<td>omega-3</td>
<td>A type of polyunsaturated fat found in oily fish such as herring, mackerel, pilchards, sardines, salmon, trout and fresh tuna.</td>
</tr>
<tr>
<td><strong>saturated fat</strong></td>
<td>A type of fat found mainly in food from animal sources – particularly dairy and meat products.</td>
</tr>
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</tr>
<tr>
<td><strong>statin</strong></td>
<td>A drug used to reduce cholesterol levels.</td>
</tr>
<tr>
<td><strong>stroke</strong></td>
<td>An injury to the brain caused by the flow of blood to the brain being interrupted, for example by a blood clot blocking an artery that carries blood to the brain.</td>
</tr>
<tr>
<td><strong>total cholesterol</strong></td>
<td>The total amount of cholesterol in the blood.</td>
</tr>
<tr>
<td><strong>triglycerides</strong></td>
<td>A fatty substance found in the blood.</td>
</tr>
<tr>
<td><strong>unsaturated fat</strong></td>
<td>A type of fat found mainly in foods from plant sources and some fish sources. Unsaturated fats include polyunsaturated fats and monounsaturated fats.</td>
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Have your say

We would welcome your comments to help us produce the best information for you. Why not let us know what you think? Contact us through our website at bhf.org.uk/contact. Or, write to us at the address on the back cover.
Acknowledgements

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