

HEART SERIES HI

# LIVING WITH ANGINA

Chest  
Heart &  
Stroke  
Scotland





**Chest Heart & Stroke Scotland improves  
the quality of life for people in Scotland  
affected by chest, heart and stroke illness,  
through medical research, influencing  
public policy, advice and information and  
support in the community.**

The information contained in this booklet is based on current guidelines and is correct at time of printing. The content has undergone peer, patient and expert review.

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# INTRODUCTION

The aim of this booklet is to provide information for people with angina and their family and friends, to help them to manage their angina.

This booklet is in two sections:

- The first part of the booklet (pages 6-26) contains information about what angina is, how and why it happens, how it is diagnosed, and how it is treated.
- The second part of the booklet (pages 27-47) looks at what you can do to help yourself. It provides information about what you can do to prevent angina and heart disease progressing, and it looks at ways of helping you manage your angina so that you can carry on with your life.

## IN AN EMERGENCY

### **What should I do if I think I am having an angina attack?**

If you are having symptoms of angina it is important to stop what you are doing and rest. Use your GTN tablets/spray as instructed by your doctor to relieve symptoms.

The following is an example of how to manage an angina attack.

- **Stop what you are doing, sit down and try to relax**
- **Use your GTN spray (1-2 puffs squirted under your tongue)**
- **If the pain goes away within 5 minutes, continue what you were doing at a slower pace**
- **If the pain does not go away within 5 minutes, use another dose of GTN spray**
- **If the pain continues after a further 5 minutes (that is 10 minutes since the onset of your pain) phone 999 for an ambulance**

**If your pain is unbearable, gets worse or you develop other symptoms (such as breathlessness, sweating, palpitations, nausea) do not wait for 10 minutes – phone 999 for an ambulance straight away.**

## **Frequently asked questions about GTN**

### **Q: ‘If I use my GTN and the feeling wasn’t angina, will I do myself harm?’**

A: No. If you use your GTN and it wasn’t necessary, the worst thing likely to happen to you is a headache.

### **Q: ‘My symptoms are only a bit uncomfortable, should I wait a bit?’**

A: No. If you are having any symptoms use your GTN spray/tablets. Sometimes people think that if they have to use their tablets or spray a lot it means that they are worse; others think that by not using their spray it means they are better. In fact neither of these ways of thinking is correct.

### **Q: ‘Can I become dependent on my GTN?’**

A: No. There is no limit to the number of occasions you can take GTN. It is not addictive and your body will not become used to it with frequent use.

### **Q: ‘Why do I have to put my GTN tablets under my tongue?’**

A: If you swallowed your GTN tablets, it would take a long time for you to feel the effect because it needs to be absorbed through your digestive system. By dissolving the tablets under your tongue the medication is taken into your blood immediately and can give you relief from your symptoms within 5 minutes.

# UNDERSTANDING ANGINA

## What is angina?

Angina symptoms happen when the blood supply to your heart becomes restricted and the heart muscle is not getting enough oxygen to meet its needs. It is normally brought on by situations in which the heart needs to work harder than normal and therefore more oxygen needs to be supplied to the heart. This can happen during physical exertion or emotional stress. It can also be brought on by exposure to cold or windy weather or after a heavy meal.

If angina is brought on by physical activity or stress and is relieved by rest or glyceryl trinitrate (GTN) tablets or spray (a medicine to relieve the pain of angina) it is called **stable angina**.

If angina happens at rest or during the night and is not always relieved by GTN it is called **unstable angina**. If you experience angina symptoms at rest or during the night and they are not relieved by GTN, you should call 999 for an ambulance.

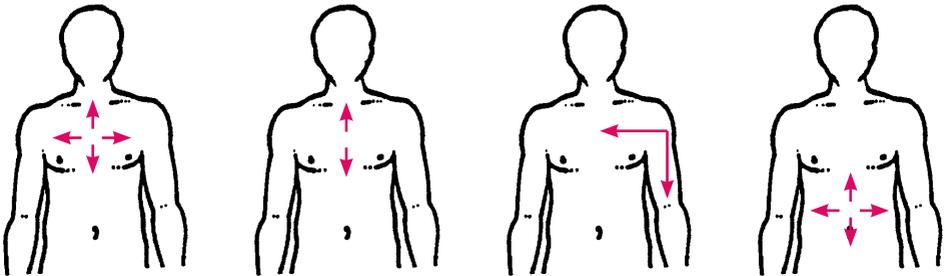
Unstable angina happens when the blood supply to your heart is severely restricted. This type of chest pain is unpredictable.

Unstable angina can occur if you have never had angina before. However, it can also happen if your normal stable angina suddenly becomes worse. If this happens, you should seek urgent medical help.

## What does angina feel like?

Symptoms will differ from person to person. Angina is typically felt as discomfort in the middle of your chest; it may start off as a dull pain or ache. It is often described as heaviness, burning, tightness, constriction, squeezing, or a heavy weight or pressure sensation on your chest.

Angina symptoms may spread to your throat or neck, jaw, shoulders or between your shoulder blades. There may also be numbness, tingling, aching or heaviness in your left or right arm or both arms. In some people, angina can feel very similar to indigestion or heartburn.

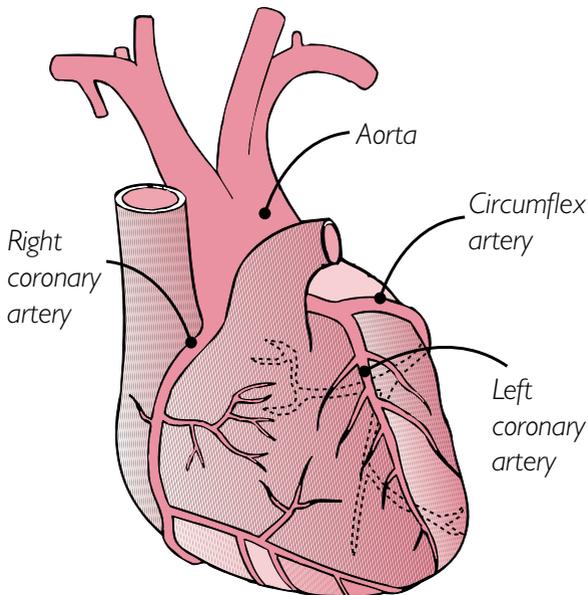


Angina can also cause breathlessness — more than you would normally expect with exercise or even when resting. Sometimes breathlessness is the only symptom.

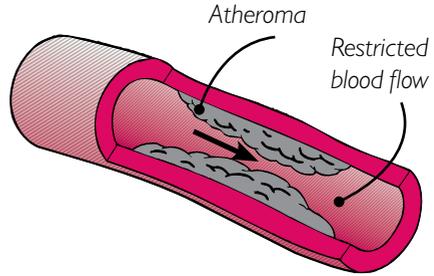
## What causes angina?

Your heart is a muscular pump that ensures that fresh blood (containing oxygen and nutrients) is delivered throughout your whole body and carbon dioxide and waste products are taken away. Like any muscle, your heart requires its own blood supply to keep it working efficiently. It gets this blood supply from the three main coronary arteries which are known as the right and left coronary arteries and the circumflex artery.

Sometimes, a fatty substance, called atheroma, builds up in the lining of one (or more) of the arteries throughout your body. The atheroma narrows the artery and causes a restricted blood flow. This is known as atherosclerosis.



When this build up of atheroma affects your coronary arteries it is called 'coronary artery disease' or 'coronary heart disease' (CHD).



When you make demands on your heart by increasing your heart rate during physical activity or when you are upset or angry, the narrowed arteries cannot supply your heart muscle with oxygen quickly enough and angina symptoms develop.

### **What causes coronary heart disease?**

Certain factors have been shown to increase your risk of developing coronary heart disease (CHD). These are called **risk factors**.

Some of these risk factors you cannot alter. These include:

- A strong family history of CHD or stroke (that is you have a father or brother who developed CHD or a stroke before they were 55, or a mother or sister before they were 65)
- Your age: the risk of CHD increases with increasing age
- Your gender: men have a greater risk of CHD than women

There are some risk factors that, with the help of doctors and nurses, can be identified and treated to reduce your risk of CHD. These include:

- High blood pressure
- High levels of cholesterol in your blood
- Diabetes

Other risk factors are to do with lifestyle, and can be changed. These include:

- Smoking
- Eating an unhealthy diet
- Being overweight
- Lack of physical activity
- Excessive alcohol intake

The more risk factors you have, the greater your risk of developing CHD.

## **What is the difference between angina and a heart attack?**

Although a heart attack is also often associated with chest pain there are important differences between angina and a heart attack.

Angina happens when the blood supply to a part of your heart is **partially** blocked; there is no permanent damage to the heart muscle. A heart attack (also known as myocardial infarction or MI) happens when the blood supply becomes **completely** blocked, either by the formation of a blood clot or by a loose piece of atheroma blocking one of your coronary arteries. This prevents vital blood supply getting to the heart. This can result in damage to the part of your heart muscle which that particular coronary artery was supplying.

If you have symptoms of unstable angina or a heart attack, your condition may be described as Acute Coronary Syndrome (ACS) until tests can confirm if it is a complete blockage or a partial blockage. This is important so that the appropriate treatment can be given to you as quickly as possible. ACS is an umbrella term for a range of conditions that mean your heart is suddenly not getting enough oxygen.

### **What else can cause chest pain?**

You should never ignore pain in your chest; always speak to your doctor if you are unsure what is causing your pain.

Chest pain does not necessarily mean that you have coronary heart disease. It could be related to

- Joint or muscle pain: this is often worse when you are changing position or pressing on your ribs or breastbone
- An undiagnosed lung condition
- Stomach problems: indigestion after a meal or acid reflux on bending over
- Gall bladder problems: colicky pain after a fatty meal may suggest gallstones
- Stress, anxiety or panic attacks

# DIAGNOSIS OF ANGINA



## **How is angina diagnosed?**

An assessment of your overall health is necessary. This is done either in a rapid-access chest pain clinic, a cardiology clinic or by your GP.

Your doctor will assess the likelihood that you have angina. This may be done by:

- Asking about where your symptoms are, and what they feel like
- Asking about what brings on your symptoms and what relieves them
- Checking whether you have any risk factors for heart disease

- Taking an ECG (electrocardiogram). This gives a record of the electrical activity of your heart when you are at rest
- Measuring your weight and blood pressure
- Taking blood to check for anaemia, diabetes and high cholesterol
- Ruling out other possible causes of your symptoms

### **Will I need further tests or investigations?**

If your doctor has enough information he may be able to diagnose angina without the need for further tests.

There are some circumstances when further tests or investigations are necessary, for example if:

- Your diagnosis is not clear
- Your doctor needs more information
- You have not responded to medication
- You do not have typical symptoms
- You might benefit from heart surgery

### **Exercise electrocardiogram (ECG)**

Also known as a treadmill test or an exercise test, an exercise ECG is used to help diagnose coronary heart disease and assess its severity.

During this test an ECG records the activity of your heart as you make it work harder by walking on a treadmill. A qualified member of staff will supervise you throughout your test.



## **Echocardiogram**

Sometimes referred to as an 'echo', this is an ultrasound scan of the heart that shows its structure and function. During an echo very high frequency sound waves are bounced off your heart and recorded by a computer, which makes a picture on the screen showing the structure of your heart. The speed and direction of blood flow within the heart can also be looked at during this procedure.

Sometimes a stress echo will be needed. This is when an echocardiogram is performed during or after exercise to see how your heart responds to 'stress'. If you are not able to exercise, a drug may be given that will make your heart beat harder and faster.

## **Coronary angiography**

Under local anaesthetic, a thin tube (known as a catheter) is inserted into a main artery in your wrist, arm or groin and then passed gently through the blood vessels until it reaches your heart.

When it reaches the coronary arteries a dye is injected and x-ray pictures are taken. The dye shows up clearly on x-ray films so an image of the coronary arteries is formed showing the site and extent of any narrowing.

### **CT (computerised tomography) coronary angiography**

A CT coronary angiography scan also takes x-ray pictures of your heart and coronary arteries. Unlike the 'invasive' coronary angiography described above, CT coronary angiography is non-invasive, which reduces the risk of complications.

The scanner can take a picture at a certain point during your heartbeat, giving images of your heart and arteries. A special dye is injected into the arm to give a clear image.

### **Myocardial perfusion scintigraphy**

During this procedure a small amount of radioactive material is injected into your blood stream. A special camera is then able to show the heart muscle working and assess the amount of narrowing of the arteries. This is usually done both when you are resting and when your heart is beating a bit faster (for example due to exercise).

# TREATMENT OF ANGINA

## How is angina treated?

### The main aims of treatment are:

- To control your symptoms of angina
- To help you maintain as high a level of activity as possible
- To improve your quality of life
- To help prevent further damage and worsening of the narrowing to your coronary arteries

The management of angina includes:

- Making positive and lasting lifestyle changes
- Taking medicines to relieve symptoms, prevent future symptoms and reduce the risk of a heart attack or stroke
- Surgical interventions

## **WHAT MEDICINES ARE USED TO TREAT ANGINA?**

Angina medication aims to:

- Provide immediate relief from symptoms
- Prevent future episodes of angina
- Reduce the risk of complications such as heart attack and stroke

### **Medicines to relieve immediate symptoms of angina**

**Glyceryl trinitrate (GTN)** is used to relieve the immediate symptoms of angina.

- GTN is available as a spray (to be sprayed under your tongue) or as tablets (to be placed under your tongue). It works very quickly (in 1-2 minutes) but the effect lasts for just 20-30 minutes.
- You should use your GTN spray/tablets when you get symptoms of angina for rapid relief. It is a good idea to take GTN sitting down especially when experiencing angina as it can cause dizziness.
- You can also use your GTN before doing any activity that you know brings on your angina.
- The most common side effects of GTN are headaches, dizziness and facial flushing. These will not usually last for long.
- If you drink alcohol at the same time you use your GTN it can make the side effects of the GTN worse.

- GTN tablets have a short shelf life and so need to be replaced every 8 weeks when open. You should write on the bottle when they were opened and always keep a spare bottle.
- The spray has a two- to three- year shelf life. This should be on the bottom of the spray.

### **How to use your GTN**

If you are having angina symptoms, stop what you are doing and rest. Use your GTN tablets/spray as instructed by your doctor to relieve symptoms.

The following is an example of how to use your GTN to manage an angina attack.

- **Stop what you are doing, sit down and try to relax**
- **Use your GTN spray (1-2 puffs squirted under your tongue)**
- **If the pain goes away within 5 minutes, continue what you were doing at a slower pace**
- **If the pain does not go away within 5 minutes, use another dose of GTN spray**
- **If the pain continues after a further 5 minutes (that is 10 minutes since the onset of your pain) phone 999 for an ambulance**

## **Medicines to prevent future episodes of angina**

You may also be offered another medicine, or combination of medicines, to help prevent episodes of angina in the future and help you stay as active as possible. This is usually a medicine called a beta-blocker or a calcium channel blocker.

**Beta-blockers** reduce the work the heart has to do by slowing down the heart rate.

- The most common side effects of beta-blockers are cold hands and feet, disturbed sleep, tiredness and dizziness.
- Beta-blockers can also cause impotence and loss of libido. If this happens, you should discuss it with your nurse or doctor.
- Some people should not take beta-blockers, for example people with asthma.
- Do not stop taking your beta-blockers suddenly. If you need to stop taking them, your doctor will reduce the dose gradually.

**Calcium channel blockers** work by relaxing the blood vessels, which will increase the blood supply to the heart.

- The most common side effects of these medicines are swollen ankles, headaches, flushing and dizziness.

If your symptoms don't respond to this treatment or you experience side effects your doctor may recommend a change of dose, a different medicine, or a combination of medicines.



Other medicines that you may be offered to prevent future episodes of angina include long-acting nitrates, nicorandil and ivabradine.

**Nitrates** improve blood flow to the heart by widening the blood vessels, which reduces the work that the heart has to do. Long-acting preparations of nitrates are used to prevent episodes of angina. These take longer to work than GTN but keep working for much longer.

- Some preparations are 'slow release' or 'modified release' tablets. When you swallow these they gradually release a steady amount of nitrate which is absorbed into your body. Some preparations come as skin patches or ointments which release a steady amount of nitrate into the bloodstream through the skin.
- Nitrates should be taken at the times prescribed for them to work effectively.
- Common side effects such as headache, dizziness and flushing will usually disappear in a couple of weeks.

- If you are taking nitrates, you should not take medicines for erectile dysfunction (impotence) such as Viagra®. Safer alternatives are available; you should discuss this with your doctor.

**Nicorandil** relaxes the blood vessels, increasing the supply of blood to the heart, but in a different way to calcium channel blockers, so people who cannot take calcium channel blockers might be able to take nicorandil.

- Headache is a common side effect in people taking nicorandil. It will usually go after a couple of weeks. Ask your pharmacist for a suitable painkiller if you need to take one.
- Dizziness is also fairly common. You should be careful driving until you know if this affects you.
- Occasionally people taking nicorandil develop ulcers. These can be in the mouth, or in the stomach. Tell your doctor if you get a mouth ulcer, or have unusual stomach pains.
- If you are taking nicorandil, you should not take medicines for erectile dysfunction (impotence) such as Viagra®. Safer alternatives are available; you should discuss this with your doctor.

**Ivabradine** slows down the heart rate, reducing the amount of work the heart needs to do.

- Common side effects include headache and dizziness.
- A number of people experience visual disturbances (seeing bright lights and changes in light intensity) when they are taking ivabradine.

- You should not drink grapefruit juice if you are taking ivabradine.
- Ivabradine interacts with a number of other medicines. Always check with your doctor or pharmacist before taking any other medicine that has not been prescribed for you.

## **Medicines to reduce your risk of heart attack or stroke**

People with angina have a higher risk of having a heart attack or stroke in the future. To reduce this risk, as well as making lifestyle changes, you should be offered aspirin (to stop blood clots forming in your heart arteries) and a medicine called a statin (to reduce the formation of fatty deposits in your blood vessels). You may also be offered an angiotensin-converting enzyme (ACE) inhibitor, especially if you have another condition that increases your risk of heart disease.

See the CHSS booklets *Reducing the risk of heart disease* and *Reducing the risk of stroke* for more information.

## **How will the doctor find the right medicines for me?**

As you have read, there are several groups of medicines that are used to prevent angina. Your doctor will prescribe the most effective combination for you. Your doctor will base this on current UK guidelines with the aim to keep you well and symptom free.

Different groups of medicines work differently and also have different side effects. It is a case of finding the most effective one for you with the fewest side effects.

You may need to take a combination of medicines as this is often most effective.

If your angina is not being controlled with a combination of medicines, it is likely that your doctor will refer you to a cardiologist.

***Remember it is very important to take your angina medicines in the doses and at the times prescribed. Speak to your doctor or phone NHS 24 for advice if a dose is missed or repeated.***

## **HOW ELSE CAN ANGINA BE TREATED?**

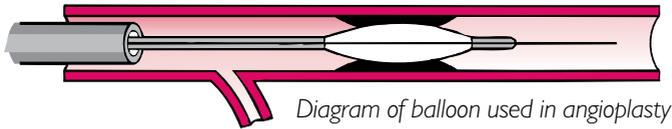
For some people with angina, surgery is preferred as an initial intervention. In other people, surgery may be recommended if angina does not respond to medication.

The purpose of the following interventions is to relieve the symptoms of angina and improve quality of life. They will not cure angina or the cause of it. You will still need to work on reducing any risk factors, and you will probably need to continue taking some medication to prevent symptoms recurring and reduce your risk of further complications.

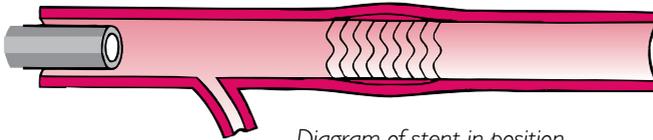
### **Percutaneous coronary intervention**

Percutaneous coronary intervention (PCI) involves stretching narrowed areas of coronary arteries to improve blood flow. PCI is performed in a similar way to a coronary angiogram, but once the catheter is in place the narrowed coronary artery is stretched open with a tiny balloon which is at the tip of the catheter (balloon angioplasty). In most cases a metal 'stent' will be placed in the artery. A stent is a cylinder of metal mesh, which acts like a scaffold to keep the artery open. The artery heals around the stent making it a permanent part of the artery.

You will not be aware that the stent is there. There are several different types of stents. Depending on the results from your angiogram, your doctor will decide which is the right one for you. Sometimes stents are used that slowly release medicines directly to the narrowed area to help prevent the problem recurring.



*Diagram of balloon used in angioplasty*



*Diagram of stent in position*

Dual antiplatelet treatment (aspirin plus another antiplatelet medicine) is usually prescribed after stent insertion to prevent a blockage. This is usually continued for at least a year, depending on the type of stent you have had. It is important that you follow the instructions regarding the length of time you need to keep taking these medicines.

### **Coronary artery bypass graft**

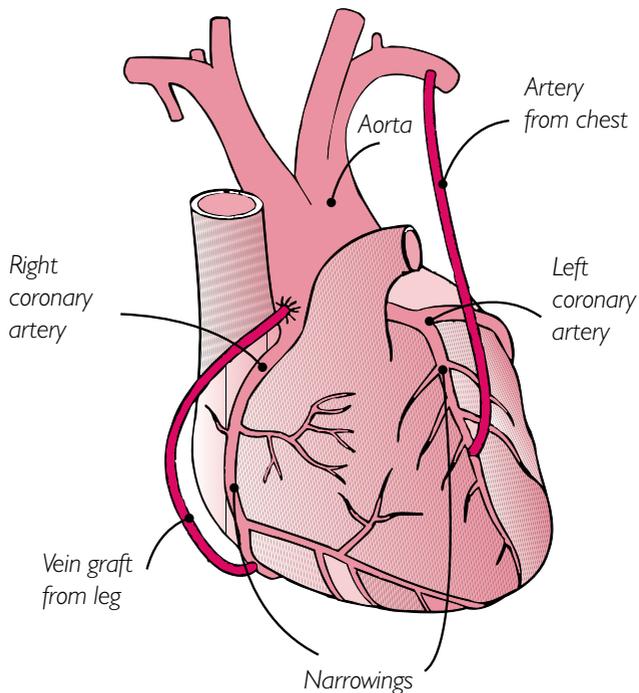
This is commonly referred to as a 'bypass'. Your cardiologist will discuss the options with you and what will be best for you, as not everyone with angina will be suitable for this surgery. You will have the chance to ask questions and decide whether or not you want to proceed.

During this surgery, the surgeon bypasses the affected artery by using a blood vessel taken from your leg or chest, to provide a new route for the blood supply to your heart.

Bypass surgery can be performed on more than one narrowed coronary artery hence 'double' and 'triple' bypass surgery.

Bypass surgery usually involves opening the chest and having a heart-lung machine take over the circulation while the heart is stopped during the operation. A small number of surgeons perform keyhole bypass surgery, which is done without the need to open the chest or stop the heart; however, this is only suitable for a minority of people.

Most people have no angina after this operation and are able to take up a good level of activity and be free from symptoms. For others, there may still be some angina and tiredness. This is because the bypass will reduce angina and the risk of heart attack, but some smaller arteries may remain narrowed. In this case medication will still be vital to get the best quality of life possible.



## WHAT CAN I DO TO HELP MYSELF?

If you have angina, maintaining your health and developing a healthy lifestyle is important to help prevent your symptoms from getting worse and to reduce your risk of having a heart attack or stroke.

Managing your cholesterol, blood pressure and diabetes (if relevant) are areas where you and your doctor can work together to reduce risk.

Stopping smoking, keeping active, maintaining a healthy weight, and watching what you eat and drink are all positive steps that you can take to reduce your risk and keep your heart healthy.

It is also important to take any medicines as prescribed.



## **Manage your blood pressure**

High blood pressure is an important risk factor in coronary heart disease. Left untreated, high blood pressure slowly damages the blood vessels making them more susceptible to atherosclerosis. The arteries become narrower and more rigid, reducing blood supply to the heart.

By lowering your blood pressure and keeping it well controlled you can help to reduce your risk of heart disease and stroke.

High blood pressure can usually be successfully treated. In order to keep your blood pressure well controlled it is likely that you will have to take one or more medicines for the rest of your life. If you are prescribed medicines to lower your blood pressure, make sure that you take them as prescribed. It is important that you do not suddenly stop taking your medicines.

Certain lifestyle changes can also help to lower blood pressure and therefore reduce the risk of coronary heart disease. These include:

- Taking regular exercise and being more active
- Eating a healthy diet with more fruit and vegetables, reducing your salt intake and keeping alcohol within recommended limits
- Maintaining a healthy weight

Remember to have your blood pressure checked regularly as recommended by your doctor.

For more information see the CHSS booklet *Living with high blood pressure*.



## **Manage your cholesterol**

High cholesterol contributes to your risk of heart disease and stroke. Too much cholesterol in your blood leads to the buildup of atheroma, which causes the blood vessels to narrow and harden and reduces blood flow. Depending on the blood vessel involved, this can cause heart disease or a stroke.

If your cholesterol level is too high, your doctor may prescribe a medicine called a statin to lower the amount of cholesterol your body makes. Your doctor will monitor long-term statins treatment with blood tests and discuss possible side effects and any possible interactions.

There are also things that you can do to help reduce your cholesterol level. These include:

- Reducing your fat intake, especially saturated fats, by replacing fat from animals in meat, dairy produce and processed foods with fat from plant oils and fish
- Eating at least five portions a day of fruit and vegetables
- If you are overweight, trying to reduce your weight to the recommended level
- Trying to keep physically active

See the CHSS factsheet *Cholesterol* for more information.

## **Manage your diabetes**

Diabetes is one of the major risk factors for heart disease and stroke. People who have diabetes are up to 5 times more likely to develop heart disease and stroke than people who do not.

Diabetes that is not well controlled contributes to damage to the blood vessels and the build-up of fatty deposits in the arteries, which increases the risk of heart disease and stroke. People who have diabetes are also more likely to have high blood pressure and high cholesterol – also risk factors.

Diabetes is controlled by diet, tablets or insulin injections, or often by a combination of these depending what type of diabetes you have. It is important that you take any medicines as prescribed.

Target levels for your blood glucose will be agreed with your doctor or nurse. It is important that you keep as close as possible to these target levels.



You should have an annual review of your glucose control, blood pressure, cholesterol, weight, general circulation and signs of the complications of diabetes, such as eye, nerve, kidney and cardiovascular disease.

There are also things that you can do to improve control of your diabetes and reduce your risk of heart disease and stroke. These include:

- Having your blood pressure and cholesterol checked regularly and treated if necessary. If you have diabetes your target blood pressure and cholesterol level may be lower than normal
- If you are overweight, trying to reduce your weight to your recommended level
- Eating a healthy diet
- Limiting your alcohol intake
- Keeping physically active

See the CHSS factsheet *Diabetes: the links with heart disease and stroke* for more information.

## **Stop smoking**

If you smoke one of the most important things you can do for your health is to stop smoking.

Smoking is a major risk factor for coronary heart disease.

- Smoking roughens the lining of the blood vessels, encouraging atheroma to form.
- Smoking makes the blood 'stickier'. This increases the chance of clots forming that can cause heart attacks and strokes.
- Smoking increases blood pressure and speeds up the heart.

### **Where can I get help?**

There is a lot of help and support available. The first point of contact when you are considering stopping smoking should be your GP, practice nurse or local pharmacist. They will be able to advise you about local services including your local NHS stop-smoking service.



Other useful resources to help you stop smoking are:

- **Smokeline** (0800 84 84 84): Scotland's national stop-smoking helpline, open every day from 8am to 10pm. Smokeline advisers give free advice and information about how to stop smoking, and information about free stop-smoking services provided by every health board in Scotland.
- **www.canstopsmoking.com**: provides online information and support.

See the CHSS factsheet *Stopping smoking* for more information.

## **Keep physically active**

In stable angina, regular physical activity can reduce your symptoms and your risk of heart disease or stroke.

You should always exercise within the limitations of your angina and never exercise if you feel any pain, discomfort or severe breathlessness.

- You should never be so out of breath that you can't carry out a conversation.
- You should stop if you feel pain or severe breathlessness and use your GTN spray or tablets as instructed.

If you are unsure about how much exercise you can manage, or have unstable angina, speak to your doctor about what you can do. A gentle amount of activity may well be appropriate.

## **What are the benefits of regular exercise for angina?**

- Increases exercise capacity – allowing you to carry out day-to-day tasks more easily.
- Strengthens your heart muscle.
- Can help reduce the frequency and severity of angina.
- Can help reduce anxiety and depression.
- Reduces tension, encourages relaxation and sleep.
- Can give you a sense of well being and confidence.
- Helps to control cholesterol.
- Helps you to lose weight.
- Helps to lower high blood pressure.
- Helps prevent clots in blood.
- Improves control of blood sugars.

## **What type of exercise should I do and how much?**

- If you are not used to being physically active, start slowly and gradually increase the amount and intensity of exercise.
- Choose an exercise that keeps you moving, for example swimming, walking, cycling or dancing.
- Remember that some exercises may require you to warm up and cool down.

- Aim to do 30 minutes of physical activity on most days of the week. This does not have to be done all in one go; for example, it can be divided into three 10-minute sessions, or two 15-minute sessions.
- Aim to do some form of physical activity every day as part of your daily routine.

### **Can exercise be harmful?**

If you are unsure about what to do, discuss it with your doctor or other health care professional first.

**Remember: if you experience chest pain or severe breathlessness whilst you are exercising, stop, rest, use your GTN spray/tablets**

- Avoid any exercise that involves staying in the same place and straining to lift or move something (static exercise) such as heavy weight lifting. This strains your heart and increases your blood pressure.
- Vigorous competitive sports, such as rugby, football or squash are not recommended unless discussed with your doctor first. There may be a more gentle form of the sport that you could get involved in, such as walking football.
- Skiing may not be ideal due to the combination of high altitude, physical effort and cold air.
- Swimming is normally a suitable exercise if you have stable angina. Heated pools are preferable; most public swimming pools are kept at about 29 degrees,



which is ideal. You shouldn't hold your breath when exercising, so enter and exit from the shallow end, and avoid diving or jumping in, swimming underwater or putting your face in the water for too long.

- Remember, if you experience any chest pain or severe breathlessness while swimming, stop, get out of the water, rest and take your GTN spray/tablets.

### **Eat a healthy diet**

Eat a healthy diet with a variety of high fibre, low fat foods, and at least five portions of fruit and vegetables per day.

### **Increase omega-3 fats**

Omega-3 fats are found in oily fish such as mackerel, herring, sardines, trout, salmon and pilchards (tinned or fresh). Omega-3 fats are important because they can help reduce:



- Cholesterol
- Blood pressure
- Inflammation, which can cause damage to the blood vessels

If you do not eat oily fish, try to include vegetable sources of omega-3 fats such as broccoli, spinach, walnuts and soya oil. The body can also make omega-3 fats from rapeseed oil.

### **Reduce saturated fat**

Reduce saturated fats and trans fats and replace them with unsaturated fats.

- Saturated fats are mainly found in animal sources such as butter, lard, fat on meat.
- Trans fats (hydrogenated fats) are mainly found in processed foods.
- Unsaturated fats are usually found in plant and fish sources, for example nuts, olive oil, salmon.

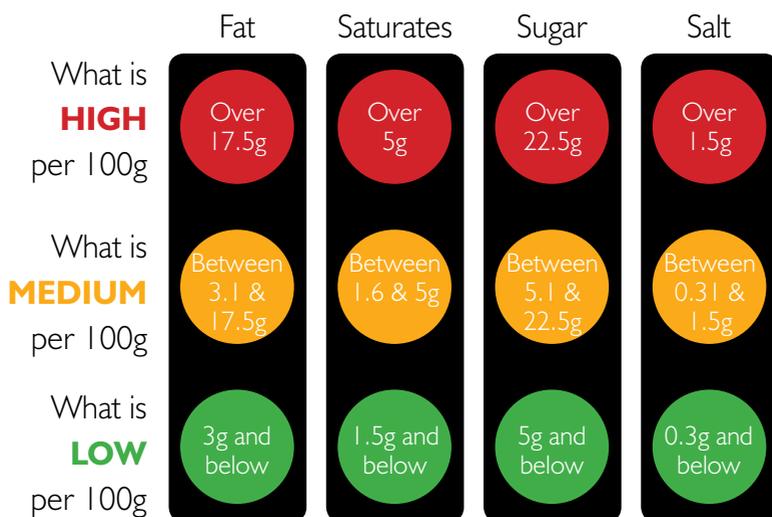
## Reduce your salt intake

Too much salt can raise your blood pressure, which increases your risk of heart disease and stroke. By reducing your salt intake it is possible to reduce your blood pressure and the associated health problems.

Tips for reducing the amount of salt you eat include:

- When you are buying food, check the nutrition labels
- When you are cooking food, you can use herbs, spices, black pepper, chilli or lemon to add flavour to your food instead of salt
- Shake the salt habit – taste your food before adding salt

See the CHSS factsheets *Healthy eating* and *Salt* for more information.



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## **Control your weight**

Aim to be as close as you can to your ideal weight. You can find out what this is from your doctor or nurse. Being overweight or obese increases your risk of heart disease and stroke. If you are overweight, reducing your weight can help to lower your blood pressure and cholesterol levels thereby reducing associated problems.

You gain weight when you take in more calories (from food) than you use up (being active). If you combine exercise with a healthy, balanced diet, you will lose weight more effectively.

See the CHSS factsheet *Losing weight* for more information.

## **Moderate your alcohol intake**

Alcohol can be enjoyed in moderation but people who regularly drink more than the recommended amount are at increased risk of heart disease and stroke.

Alcohol can increase your risk of heart disease and stroke by:

- Increasing your blood pressure
- Affecting your cholesterol levels
- Damaging heart muscle, causing irregular beating of the heart
- Causing you to gain weight

**Men should drink no more than 3–4 units per day** – about one pint of higher-strength beer (5% ABV).

**Women should drink no more than 2–3 units per day** – about one 175ml glass of wine (12% ABV).



Everyone should have **at least two alcohol-free days per week**. Try not to drink more than your daily recommended allowance in one day. If you have had more than this, you should avoid alcohol for at least 48 hours.

Avoid binge drinking (more than 8 units or 3 pints of beer for men or more than 6 units or 2 large glasses of wine for women).

If you have a concern about the amount of alcohol you drink, speak to your doctor or contact Alcohol Focus Scotland (see 'Useful addresses and websites' section).

See the CHSS factsheet *Healthy eating* for more information.

## **How does stress affect angina?**

Emotional stress is a normal (and important) part of everyday life. The role of emotional stress in causing angina and heart disease is not entirely clear, but we do know that how people react to stress is important.

How you react to stress is important in determining how much risk it puts on your heart:

- Sometimes stress can cause you to feel frustrated or angry. These reactions may put you at greater risk of heart disease.
- People who feel stressed sometimes turn to unhealthy behaviours, such as smoking, drinking, and over-eating.

It is therefore important to recognise when you are feeling under stress, and how you react when you are in these situations.

Once you recognise your patterns of stress, you may be able to develop strategies to cope with stress that are less harmful, for example relaxation exercises or breathing control.

Steps for Stress ([www.stepsforstress.org](http://www.stepsforstress.org)) is a useful website that guides you through recognising stress in your life, and finding ways of coping with it.

See the CHSS factsheet *Living with stress and anxiety* for more information and tips on recognising and coping with stress.

## **Making changes**

Making lasting changes for your health can be hard. Choose what you want to do and start with small steps that are achievable and in your reach.

## LIVING WITH ANGINA

By using your medications in the right way and following advice to lower your risk factors, there is no reason that you will not be able to enjoy many of the activities you enjoyed before.

### **Keeping active**

People with angina are often worried that too much physical exertion will put a strain on their heart. However, regular physical activity is encouraged in people with angina — it can help your heart get fitter and improve blood supply to your heart, reducing your symptoms and enabling you to be more active in your everyday life.

Keep up your activity plan to gradually build up your fitness. If you get angina while you are exercising, slow down a bit or rest. You should find that this happens less often as you get fitter.

Consider joining a suitable exercise group. CHSS has community heart support groups which provide ongoing support to people who are living with heart conditions. These groups often include suitable physical activities ranging from chair and yoga-type exercises, relaxation and mindfulness, gym-style exercise, swimming, bowling and badminton.

As well as benefitting from the physical activity, these groups will help you to increase your confidence, support and encourage you, and provide you with



a chance to meet others to share experiences and knowledge.

Contact CHSS to see if there is a group in your area.

### **Friends and family**

Sharing and talking about your angina with friends and family is a helpful way of reducing fears and concerns that you both may have. Many people find it hard not to be overprotective. Try to discuss with them what support you would find helpful and what they can do if you are having an angina attack. It is much easier to get the right help and support from family and friends if they have an understanding of your condition and you all know what to do.

### **Work**

Most people will be able to return to work following a diagnosis of angina. If your job is very physically demanding or very stressful, you may need to make some changes, for example to the type of work you do, or the hours that you work.

Discuss your return to work with your doctor and your employer to make sure that it is right for you.

## Sex

Many people with angina (and their partners) are anxious about resuming sexual activity. They worry that the physical exertion will bring on angina symptoms or damage their heart. Like any other physical activity, sexual activity will increase the heart rate and raise the blood pressure, but this will not damage your heart.

If you experience angina symptoms during sexual activity, you should stop, rest and use your GTN tablets/spray as usual.

As with other forms of physical activity, you can also use your GTN spray *before* sexual activity to prevent angina symptoms occurring.

Relationships and sexual intimacy can alter after a diagnosis of angina. Talking to your partner about how you feel and any worries you may have will make it easier for you both to cope with the situation before it becomes a problem.

Some people find their desire for sex alters or they experience impotence (they are unable to sustain an erection). Impotence is also a possible side effect of some medications and if you experience this you should talk to your GP. Always check with your doctor before using medicines such as Viagra<sup>®</sup>, as they interact with GTN and other nitrates.



## **Driving**

If you experience angina while driving you must stop the car safely – immediately.

For safety reasons the DVLA (Driver and Vehicle Licensing Agency) has strict guidelines about who may and may not drive in particular circumstances.

### **Group 1 Licence Holders: Motorcars and Motorbikes**

You may continue to drive if you have angina (even if you need medication) unless you get angina while resting, driving, or due to emotion. If this happens, you must stop driving until your symptoms are well controlled.

You must not drive for at least one week after angioplasty or percutaneous coronary intervention (PCI) and for four weeks after bypass surgery (CABG).

You do not need to notify the DVLA, but you should inform your insurance company.



## **Group 2 Licence Holders: Lorries and Buses**

Your licence may be refused or revoked if your symptoms continue (whether treated or untreated). You must inform the DVLA — you are not always allowed to drive in this category with a diagnosis of angina.

You may be allowed to re-license when you have been free from angina for at least six weeks, provided that the exercise requirements can be met and there is no other disqualifying condition.

You must stop driving for at least six weeks after angioplasty or a PCI, and at least three months after bypass surgery.

You may be allowed to re-license after this time provided that there is no evidence of significant impairment of left ventricular function, the exercise requirements can be met and there is no other disqualifying condition.

If you are in any doubt about your fitness to drive please ask your doctor.

## **Travel**

You are allowed to fly as a passenger as long as your angina is stable. If you require assistance or early boarding you should contact the airline in advance to make arrangements. Make sure you are not carrying heavy luggage and that you have your medication, especially GTN, in your hand luggage.

Declare having angina or coronary heart disease when arranging travel insurance to ensure that you have the appropriate cover.

See the CHSS factsheets *Air travel* and *Sympathetic insurance companies* for more information.



## **Depression and low mood**

It is not uncommon for people with angina to develop depression. As well as the physical symptoms you are experiencing, you may also feel unsure about the future, worried that exertion might bring on your angina symptoms, or be unable to do some of the things that you normally enjoy doing.

This can affect your mood and how you behave, including becoming withdrawn from normal activities.

If you have been feeling low for much of the time over the last few weeks or have lost interest and pleasure in doing the things you used to enjoy, try to talk to someone about how you are feeling. Your GP or practice nurse are both good people to speak to, or call the CHSS Advice Line on 0800 801 0899 (call free from landlines and mobiles).

Remember, whatever the cause, depression can be treated, and there is help available for you. The first step is to tell someone how you are feeling.

See the CHSS factsheet *Coping with low mood and depression* for more information.

## HELP FROM CHEST HEART & STROKE SCOTLAND

**CHSS-affiliated heart groups** offer ongoing support for those living with heart conditions. They are independently run and provide a source of supported exercise, information, signposting, confidence and reassurance and are an invaluable part of learning to live with a heart condition.

The **Cardiac & Respiratory Support Service** provides volunteer befrienders who help to reduce social isolation for people with long-term heart conditions.

The **Voices Scotland** programme aims to build a national network of people affected by chest, heart or stroke illness, who are involved with the NHS to help to have their say. Voices Scotland can support you to get involved through workshops, which aim to give you the knowledge, skills and confidence to work with the NHS, to help plan new and better services.

**CHSS health information** provides a full range of booklets, factsheets, posters and DVDs on all aspects of heart illness.

**CHSS Advice Line Nurses** provide confidential, independent advice on all aspects of heart illness. For advice, or for further information about any of our services:

- Call 0808 801 0899 (Mon-Fri 9.30am-4pm) FREE from landlines and mobiles
- email: [adviceline@chss.org.uk](mailto:adviceline@chss.org.uk)

## OTHER USEFUL ADDRESSES AND WEBSITES

### **Alcohol Focus Scotland**

166 Buchanan Street, Glasgow G1 2LW

Tel: 0141 572 6700

Website: [www.alcohol-focus-scotland.org.uk](http://www.alcohol-focus-scotland.org.uk)

*Alcohol Focus Scotland works to reduce alcohol harm to individuals, families, communities and Scotland as a whole, through the implementation of effective alcohol control policies and legislation.*

### **Blood Pressure UK**

Wolfson Institute, Charterhouse Square,  
London EC1 6BQ

Tel: 020 7882 6255 / 5793 (general enquiries)

Tel: 020 7882 6218 (support queries & medical advice)

Email: [help@bloodpressureuk.org](mailto:help@bloodpressureuk.org)

Website: [www.bloodpressureuk.org](http://www.bloodpressureuk.org)

*Blood Pressure UK, previously known as the Blood Pressure Association, is the UK charity dedicated to lowering the nation's blood pressure to prevent disability and death from stroke and heart disease.*

### **British Heart Foundation Scotland**

Ocean Point One, 94 Ocean Drive, Edinburgh EH6 6JH

Tel: 0131 555 5891

Heart helpline: 0300 330 3311

(Monday - Friday 9am-5pm)

Website: [www.bhf.org.uk](http://www.bhf.org.uk)

*The British Heart Foundation provides information, help and support on all heart health issues.*

## **Action on Depression**

21-23 Hill Street, Edinburgh EH2 3JP

Tel: 0131 226 8152

(general enquiries not a crisis service)

Email: [admin@actionondepression.org](mailto:admin@actionondepression.org)

Website: [www.actionondepression.org](http://www.actionondepression.org)

*Action on Depression is a national Scottish organisation working with and for people affected by depression.*

## **Diabetes UK Scotland**

The Venlaw, 349 Bath Street, Glasgow G2 4AA

Tel: 0141 245 6380 | Fax: 0141 248 2107

Careline Scotland: 0141 212 8710

(Monday to Friday 9am - 7pm)

Email: [scotland@diabetes.org.uk](mailto:scotland@diabetes.org.uk)

Website: [www.diabetes.org.uk](http://www.diabetes.org.uk)

*Diabetes Scotland is dedicated to putting the interests of people with diabetes first, through the best in campaigning, research and care.*

## **Driver and Vehicle Licensing Agency DVLA**

Medical Advisors

DVLA, Longview Road

Swansea SA99 1DA

Medical Helpline: 0870 600 0301

Email: [medadviser@dvla.gsi.gov.uk](mailto:medadviser@dvla.gsi.gov.uk)

*For safety reasons, the DVLA (Driver and Vehicle Licensing Agency) has strict guidelines about who may and may not drive. If you or your physician would like further clarification, information is available on the government website [www.dvla.gov.uk](http://www.dvla.gov.uk)*

## **Heart UK**

7 North Road, Maidenhead SL6 1PE

Helpline: 0345 450 5988

(Monday - Friday from 10am to 3pm)

Email: [ask@heartuk.org.uk](mailto:ask@heartuk.org.uk)

Website: [www.heartuk.org.uk](http://www.heartuk.org.uk)

*HEART UK is a national charity for patients and their families which combines the rich skills of research scientists and the caring and knowledgeable attention of doctors, nurses and dietitians, in order to support all those at risk of inherited high cholesterol and cardiovascular disease.*

## **Take life on one step at a time**

Website: [www.takelifeon.co.uk](http://www.takelifeon.co.uk)

*Take Life On is a campaign run by the Scottish government initiative Healthier Scotland. It aims to promote everyday changes to diet and lifestyle which can provide significant health benefits and will help to reduce the risk of cancer, heart disease and diabetes, and can make you feel really good about yourself.*

## **Smokeline**

Tel: 0800 84 84 84

Call free or chat online 7 days a week: 8am-10pm

Website: [www.canstopsmoking.com](http://www.canstopsmoking.com)

*Telephone advice and support to those who wish to stop smoking, their family and friends. Smokeline also provides a free copy of their helpful guide to stopping smoking.*

**Do you have any  
questions about chest,  
heart or stroke illness?**



**Ask the nurse  
0808 801 0899**

Call **FREE** from landlines and mobiles  **Helplines  
STANDARD**

**[www.chss.org.uk](http://www.chss.org.uk)**

## HEART PUBLICATIONS

Booklets	
<b>H1</b>	Living with Angina
<b>H2</b>	Reducing the Risk of Heart Disease
<b>H3</b>	Understanding Heart Disease
<b>H4</b>	Living with High Blood Pressure
<b>H5</b>	Living with Heart Failure
<b>H6</b>	Living with a Pacemaker
<b>H7</b>	Heart Attack: A Guide to your Recovery
<b>H8</b>	Understanding Heart Valve Problems
<b>H9</b>	Understanding Atrial Fibrillation
<b>H10</b>	Living with an ICD

Factsheets – Free	
<b>F1</b>	Smoking
<b>F2</b>	Salt
<b>F3</b>	Cholesterol
<b>F4</b>	Warfarin
<b>F6</b>	Holiday information
<b>F7</b>	Travel and motor insurance
<b>F13</b>	Air travel
<b>F17</b>	Diabetes: links with heart disease and stroke
<b>F18</b>	Coping with tiredness and fatigue
<b>F22</b>	How to make the most of a visit to your doctor
<b>F23</b>	Living with stress and anxiety
<b>F24</b>	Healthy eating
<b>F30</b>	Just move!
<b>F37</b>	Coping with low mood/depression
<b>F39</b>	Understanding the need for change after a heart attack
<b>F40</b>	Losing weight
<b>F41</b>	Financial support for people affected by chest heart or stroke illness

A full publication list is available from Head Office.  
Rosebery House, 9 Haymarket Terrace, Edinburgh EH12 5EZ Tel: 0131 225 6963

### ORDER FORM

Please send me the following:

TITLE	No. of copies

**Up to 100 booklets free, up to 100 factsheets free**

If you wish to order more than 100 booklets or factsheets please contact the Health Information team at the address above.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Tel: \_\_\_\_\_ Email: \_\_\_\_\_

**Chest Heart & Stroke Scotland is a wholly independent Scottish charity. We receive no core funding from Government or any public body or private agency.**

**We need your help to achieve our aim of improving the lives of those in Scotland with chest, heart and stroke illness. See insert for more information.**



## **CONTACT US**

### **Head Office**

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Rosebery House  
9 Haymarket Terrace  
Edinburgh EH12 5EZ  
Tel: 0131 225 6963  
Fax: 0131 220 6313  
Open Mon – Fri

### **West Office:**

Chest Heart & Stroke Scotland  
West of Scotland Regional Office  
The Hub, 70 Pacific Quay  
Glasgow G51 1DZ  
Tel: 0300 1212 111  
Email: [westoffice@chss.org.uk](mailto:westoffice@chss.org.uk)  
Open Mon – Fri

### **North Office:**

Chest Heart & Stroke Scotland  
North of Scotland Regional Office  
5 Mealmarket Close  
Inverness IV1 1HS  
Tel: 0300 1212 777  
Email: [northoffice@chss.org.uk](mailto:northoffice@chss.org.uk)  
Open Mon – Fri

**[www.chss.org.uk](http://www.chss.org.uk)**



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**November 2015**