



Chest
Heart &
Stroke
Scotland



LIVING WITH ANGINA



ESSENTIAL GUIDE

This Essential Guide is about living with angina.

It explains:

- What angina is and what causes it
- How angina is treated
- How to reduce and manage angina symptoms
- When to call a doctor



Important:

This is not medical advice. If you experience severe and unexplained chest pain and breathlessness for more than 10 minutes, call 999 for an ambulance.

What is angina?

Angina happens when the blood supply to your heart is limited. This means that your heart cannot get enough oxygen.

Angina usually happens when the heart is working harder than normal, so more oxygen is needed. This can be triggered by things like physical exercise, stress, extreme cold, or following a heavy meal.

There are two types of angina: **stable** and **unstable**.

Stable angina is brought on by physical activity or stress, and is quickly relieved by rest or medication.

Unstable angina happens at rest or during the night, and may not be relieved by medication. It is unpredictable, and can occur without warning. If you experience unstable angina, you should call 999 immediately.

What does angina feel like?

Angina symptoms are different from person to person. In most cases, though, angina is experienced as discomfort in the middle of your chest.

This might feel like a dull pain or ache, or a crushing, burning, tightness, or weight on the chest. It may spread to your throat and neck, your jaw, shoulders, or between your shoulder blades.

You may feel numbness, tingling, aching, or heaviness in your left or right arm.



Angina often causes **breathlessness** - more than you would expect based on the exercise or activity you have been doing. This can sometimes be the **only symptom**.

In some people, angina may feel very similar to heartburn or indigestion. How it feels for you will depend on how bad the angina is, but also which blood vessels are affected and how much they have narrowed.

There are other causes of chest pain besides angina, but if you aren't sure whether you are experiencing a heart problem, always err on the side of caution and call for help.



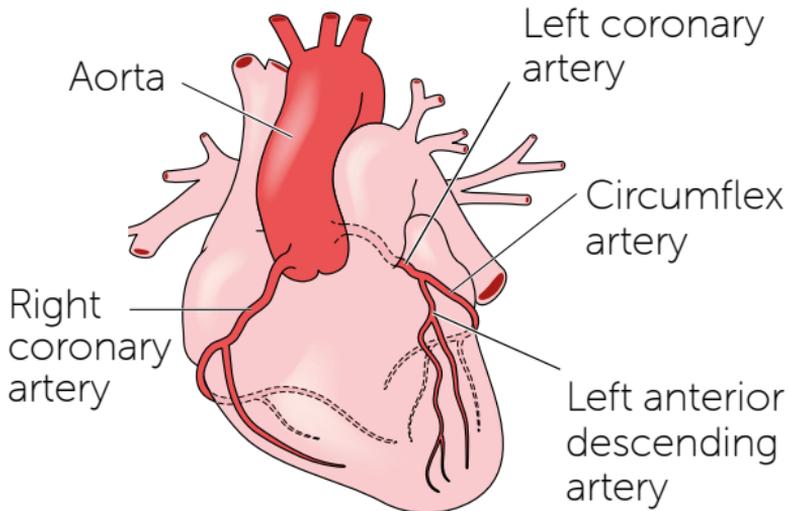
Other causes of chest pain include:

- Joint or muscle pain
- An undiagnosed lung condition
- Stomach problems or indigestion
- Gallstones
- Stress, anxiety, or panic attacks
- Hiatus hernia

Understanding angina

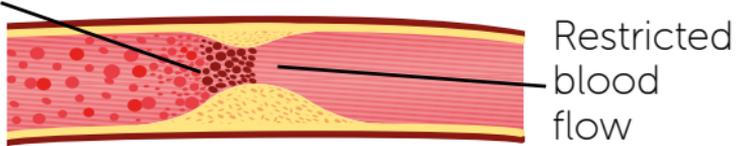
Your heart is a muscle, and like any other muscle, it needs oxygen to work. This means that, like the rest of your body, the heart has to be supplied with blood from the lungs to bring oxygen and nutrients, and to carry away carbon dioxide and waste.

Three arteries - the left, right, and circumflex coronary arteries - supply blood to the heart.



Sometimes, a fatty substance (**atheroma**) builds up inside an artery, narrowing the artery and reducing bloodflow (**atherosclerosis**). When this happens to the coronary arteries, it is known as **coronary heart disease (CHD)**.

Atheroma



Angina is a symptom of coronary heart disease. When the heart beats faster, it needs more oxygen. The narrowed coronary arteries are unable to carry enough blood to meet this increased demand, and the heart experiences **mild oxygen starvation**.

This causes the pain and tightness of angina. It's like how your legs hurt when you run too far or fast. Like that pain, it can be intense, but should pass without lasting harm.

This is also why you may breathe heavily: your body is trying to get more oxygen.

What causes coronary heart disease?

Coronary heart disease (CHD) is caused by a lot of different factors. Things which increase your risk of CHD are called **risk factors**.

Some of these risk factors are things you can't change, like **increasing age**, a **family history** of heart problem or stroke, or being of a certain **ethnicity** (CHD is more common in Afro-Caribbean or South Asian communities).

Other risk factors are to do with health problems or lifestyle, and can be treated. For example:

- High blood pressure
- High blood cholesterol levels
- Having diabetes or circulatory problems
- Smoking
- Being overweight
- Excessive alcohol intake

Angina is not a heart attack.

Heart attack and angina are related, and both cause chest pain. However, they are not the same thing, and **having angina does not mean you will have a heart attack.**

Angina happens when the heart's blood supply is **partially blocked**. There is no permanent damage to the heart muscle.

A **heart attack** (or myocardial infarction/MI) happens when the heart's blood supply is **completely blocked**. This can result in lasting damage, since the heart cells can't get any of the oxygen or nutrients they need to survive.

Having angina makes it more likely that you could have a heart attack in the future, as your arteries are already narrowed. However, with treatment and good management, you can live a full life with angina and never have a heart attack.

Diagnosing angina

If you have angina symptoms, you should contact your GP surgery as soon as possible. You may be assessed in a rapid-access chest pain clinic, a cardiology clinic, or by your GP.

There are several ways a health professional can judge whether you have angina:

Ask about your symptoms, how they feel, what causes them, and what relieves them.

Ask about family history and other risk factors.

Measure your weight and blood pressure.

Take blood samples to check for anaemia, diabetes, and high cholesterol.

Take an ECG (electrocardiogram) to record your heart's electrical activity.

Rule out other possible causes.

Further tests

If your health professional thinks you may have angina, or if they are unsure what is causing your symptoms, there are other tests you may be given. These might include:

Exercise electrocardiogram

Also known as a treadmill test or exercise tolerance test. Your heart activity is measured when you are active, usually walking on a treadmill.

Echocardiogram

This is an ultrasound scan of your heart, which shows blood flow and structure.

Coronary angiography

Dye is delivered through a catheter (a small tube inserted in your wrist, elbow, or groin) to your coronary arteries. An X-ray then shows any narrowing.

CT coronary angiography

Computerised tomography (CT) can be used to take a picture of your heart. Again, dye may be injected to make the image clearer.

Myocardial perfusion scintigraphy

A small amount of radioactive material is injected into your blood. A special camera can then show the heart muscle and blood flow working.

Treating angina

There are three main aims when treating angina. These are:

Immediate relief from symptoms

Preventing future episodes of angina

Reducing the risk of future health complications like heart attack or stroke

These aims can be met by medication, or by surgery. Treatment options are discussed in more detail on the next few pages.

It is also important to make sure you are managing any underlying health conditions and living a lifestyle that reduces your risk as much as possible.

It is important that you always talk to your health professional about medication. Make sure you understand how and when to take your medication.



Immediate relief

You may be prescribed glyceryl trinitrate (GTN), which can be taken when you are experiencing an angina attack.

Even when you have taken medication, you should also try to sit down and to rest and relax as much as possible.

Glyceryl trinitrate (GTN) is available as a spray or a tablet, both of which should be taken under the tongue. It acts quickly (within 1-2 minutes) but the effect lasts only 20-30 minutes.

GTN tablets have a short shelf life (around 8 weeks), so you should make sure that they are replaced regularly and that you know they are in date.

Using GTN spray

If you have frequent angina attacks, you may be prescribed a **GTN spray**.

If you start to have symptoms, tell someone, sit down, and wait to see if they pass on their own.

If you are still in pain or breathless after around a minute, use the spray. Spray 1-2 puffs of GTN under your tongue, and wait five minutes.

If the symptoms are still there **five minutes** after taking the spray, you should take the spray a second time.

If the symptoms are still there **five minutes after the second dose** (i.e. ten minutes after your symptoms started), you should **call 999**.

After using the GTN spray, you may feel light-headed or dizzy. Sitting or lying down can help.

Preventing future episodes

There are many different medications which you may be offered to reduce the chances of an angina attack. These are usually taken regularly, once or twice a day.

Beta blockers slow down your heart rate and reduce your blood pressure, reducing the work your heart has to do.

Beta blockers can cause cold hands and feet, tiredness, sleep disturbances, or dizziness.

Calcium channel blockers (CCBs) work by relaxing your blood vessels, which widens them and increases blood flow to the heart.

Common side effects include swollen ankles, headaches, flushing, and dizziness.

Nitrates widen the blood vessels, improving blood flow. They take longer to work than GTN, but the effects last for much longer.

Common side effects, like headaches, dizziness, and flushing, usually only last a couple of weeks. **While you are taking nitrates, you should avoid erectile dysfunction medications like Viagra™.**

Ivabradine slows down your heart rate. It should only be prescribed if you have chronic (long-term) stable angina, and if you are unable to take beta blockers or CCBs.

Common side effects of ivabradine include headache, dizziness, and visual disturbances. Ivabradine interacts with other medications, including over-the-counter medications, so it's very important you tell your doctor or pharmacist about any medications you may be taking. **You should not drink grapefruit juice if you are taking ivabradine.**

Surgical interventions

For some people, surgery may help to treat angina and reduce the risk of future attacks. These surgeries may be the first treatment offered, or they may be used in cases where the angina doesn't respond to medication.

It's important to know that these treatments **will not cure angina** or remove the cause of it. After surgical treatment, you will still need to work on reducing any risk factors. You may still need to take medication to prevent symptoms recurring and to reduce your risk of future complications.

The two main kinds of surgical treatment are **percutaneous coronary intervention**, where the artery is pushed open and a small scaffold called a stent is inserted to keep the artery open, and **coronary artery bypass graft**, where the affected artery is replaced with an undamaged artery from elsewhere in your body (usually your leg).

Percutaneous coronary intervention (PCI)

A small tube (**catheter**) is inserted into the blocked artery. A balloon at the tip inflates to open the artery wider (**balloon angioplasty**).

A **stent** - a specially-designed cylinder of metal mesh - may be inserted to hold the artery open. Some stents slowly release medicines to the surrounding area.

The artery will heal around the stent, making it a permanent part of the artery.

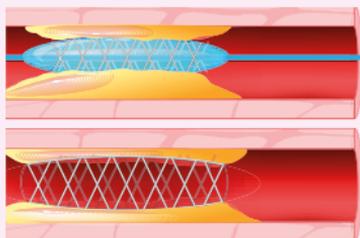


Diagram of balloon used in angioplasty

Diagram of stent in position

After a stent is placed, you will usually be prescribed aspirin and another antiplatelet (blood thinning) medication for up to a year. You should have scheduled follow-ups with a **cardiac rehabilitation team**.

Coronary artery bypass graft

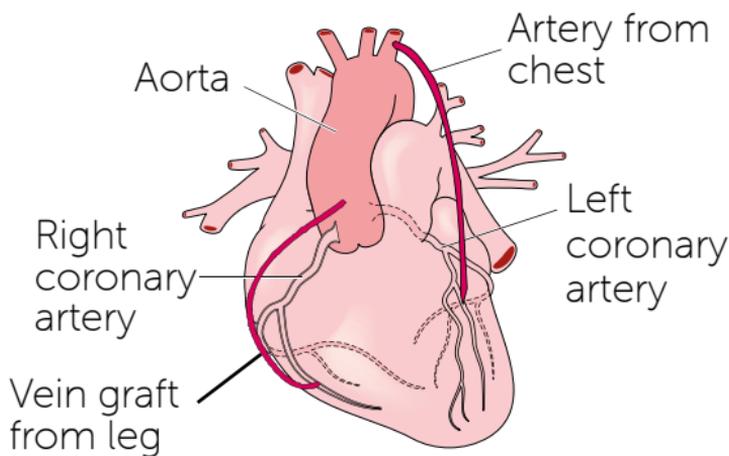
This is often called **bypass surgery**. Not everyone with angina can have this surgery, and you should only receive it after a period of discussion with your doctor. Ask any questions you may have, and make sure that you make your own choice whether to go ahead with the surgery.

The surgeon will take a section of blood vessel from your leg or chest, and will use this to bypass the affected section of your coronary artery. This redirects the blood flow past the narrowed point, allowing blood to reach the heart.

Bypass surgery can be performed on more than one narrowed coronary artery. If it is performed on two arteries, this is a **double bypass**. If all three coronary arteries are affected, you may need a **triple bypass**.

Bypass surgery usually involves opening your chest. A heart-lung machine will take over your circulation, while your heart is stopped for the duration of the operation.

In some cases, you may be able to have a **keyhole surgery**, without stopping the heart.



After bypass, most people have no angina symptoms. Some people may still experience symptoms, and you may need medication. You should have regular follow-ups with the **cardiac rehabilitation team**.

Reducing the risk of complications

You are likely to be offered two key medications when you are diagnosed with angina: **aspirin** and **statins**. You may also be offered an **angiotensin-converting enzyme (ACE) inhibitor**, especially if you have another health condition which increases your risk of heart disease.

Aspirin is an anti-platelet medication which is used to make your blood clot less. This reduces the risk of a blood clot forming and blocking your blood vessels.

Statins reduce the formation of fatty deposits in your blood vessels, meaning that they are less likely to be blocked.

ACE inhibitors reduce the activity of an enzyme which normally narrows your blood vessels. This drug lowers your blood pressure and widens blood vessels.

The main way to reduce the risk of future health complications - particularly heart attack or stroke, which can happen if your arteries continue to narrow - is to manage your lifestyle. Things like exercise, diet, and reducing stress can all reduce the risk of future health complications from your angina.

You can find out more about these lifestyle adjustments in Chest Heart & Stroke Scotland's booklet on **Reducing The Risk of Heart Attack and Stroke**.

Lifestyle changes might include:

- Stopping smoking
- Changing your diet
- Exercising more
- Reducing your alcohol intake
- Reducing stress
- Managing health conditions like diabetes
- Regular health checks

Finding support

One of the most important things you can do to support your mental and physical wellbeing with angina is to make sure you aren't facing it alone. Having people to talk to, people to check on you, and people who can help you to make any lifestyle changes will make your life much easier.

This support might come from:

Friends and family

Your doctor and medical team

Community support groups

Activity groups (e.g. a walking group)

A cardiac clinic

Work colleagues and employers

Remember, it's okay to ask for help!

Call our Advice Line FREE on 0808 801 0899

Keeping active

It is important to stay physically active to reduce the risk of further circulatory problems. However, heavy physical activity can also be a trigger for angina attacks.

If you aren't sure whether an exercise is safe for you, start small. If you feel discomfort or pain, stop and rest for a while before continuing.

The best forms of exercise are gentler approaches, such as walking, swimming, yoga, or pilates. Remember that household tasks and hobbies, such as gardening, can also count towards your physical activity.

You may wish to consult with a physiotherapist or occupational therapist, who will be able to help you adapt exercise to your needs.



Angina services and further information

CHSS heart groups

Chest Heart & Stroke Scotland have partnerships with a network of heart support groups.

You can find out if there's one near you at www.chss.org.uk/heart-information-and-support/how-we-can-help/support-for-you/heart-support-groups/

Advice Line

The Chest Heart & Stroke Scotland Advice Line is a service where you can speak to a healthcare professional about your condition.

Tel: 0808 801 0899

Email: advice@chss.org.uk

Voices Scotland

Voices Scotland is a patient network where you can have your say and share your experiences with services.

Web: www.chss.org.uk/voices-scotland

British Heart Foundation

A national charity which offers support and advice on a wide range of heart conditions, including angina.

Web: www.bhf.org.uk

NHS Inform

Information aimed at patients, written by specialists. Contains detailed information on treatment options.

Web: www.nhsinform.scot/illnesses-and-conditions/heart-and-blood-vessels/conditions/angina

Our publications are available for free to anyone in Scotland who needs them. Go to **www.chss.org.uk/publications** for all our resources, including other Essential Guides in this series.

For free, confidential advice and support from our **Advice Line nurses**, call: 0808 801 0899 (Mon-Fri 9.30am-4pm), text: NURSE to 66777 or email: adviceline@chss.org.uk.

Across Scotland, over one million people – that's one in five of us – are living with the effects of a chest, heart or stroke condition. We are here to help everyone who needs us. But we need your support to do this. Go to **www.chss.org.uk/supportus** to find out how you can help more people in Scotland.

If you would like this resource in an alternative format, please contact our Advice Line nurses.

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NO LIFE HALF LIVED

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