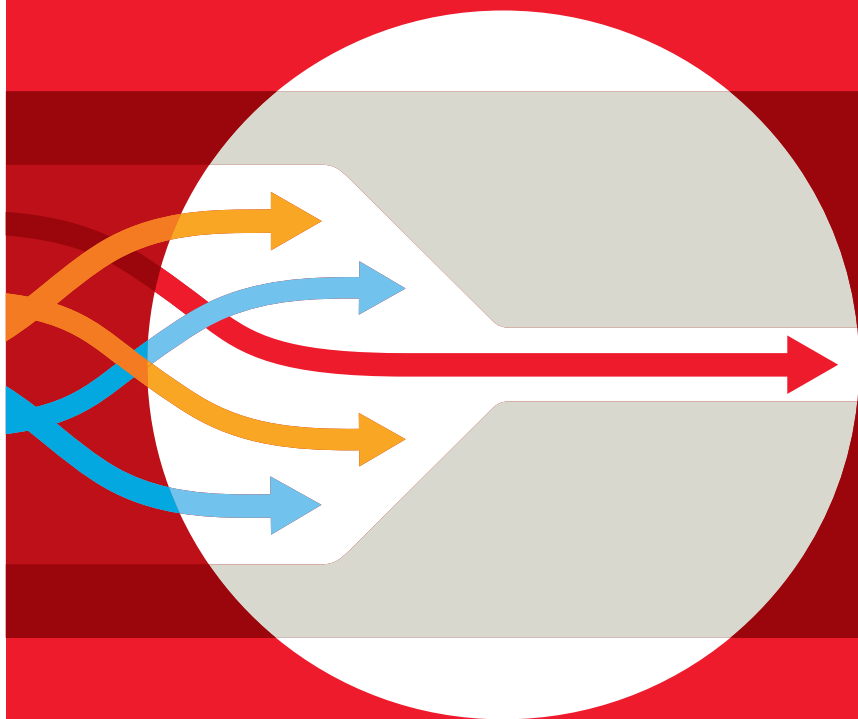




# Atherosclerosis

## Your quick guide



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Coronary heart disease is the UK's single biggest killer.

For over 50 years we've pioneered research that's transformed the lives of people living with heart and circulatory conditions. Our work has been central to the discoveries of vital treatments that are changing the fight against heart disease.

But so many people still need our help. From babies born with life-threatening heart problems to the many Mums, Dads and Grandparents who survive a heart attack and endure the daily battles of living with heart failure.

Join our fight for every heartbeat in the UK. Every pound raised, minute of your time and donation to our shops will help make a difference to people's lives.

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## What is atherosclerosis?

Atherosclerosis is the build-up of fatty material inside your arteries. It's the condition that causes most heart attacks and strokes. It can affect all your arteries but most often:

- the arteries that supply blood to your heart (coronary arteries)
- the arteries in your neck that supply blood to your brain (carotid arteries)
- the arteries that supply blood to your legs (peripheral arteries)



## What causes it?

We are not exactly sure why atherosclerosis can happen, but fatty material (atheroma) starts to build up in the lining of our artery walls when we are young. Without us knowing, our bodies try to deal with this by creating a seal over the fatty material. Over time this can get bigger and bigger.

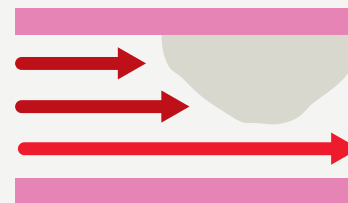


## How can this affect me?

It can be many years before the build-up has an effect. But once it gets to a certain size, your artery can get so narrow that it doesn't let enough blood through.

### How atheroma builds up

Fatty deposits cause a narrowing and restrict the flow of blood through the artery.



### Cross section



This can affect the way organs in your body work and it can lead to:

**Coronary heart disease** – when enough blood can't get to your heart muscle. This can cause the symptoms of angina (such as chest pain and shortness of breath). If the fatty material breaks down (or ruptures) it can completely block the artery and lead to a heart attack – and that's usually life threatening.

**Stroke** – when enough blood can't get to your brain. If the blood supply is limited for a short time this can cause a mini-stroke (called a TIA). If the fatty material breaks down (or ruptures) it can completely block the artery – and that's life-threatening.

**Peripheral arterial disease (or PAD)** – when enough blood can't get to your leg muscles. This can cause pain in your calves, hips, buttocks and thighs – usually when you are walking or exercising (called claudication).



## Isn't atherosclerosis a natural part of the ageing process?

Atherosclerosis is more common for people over 65.

Atherosclerosis is very common. One of the biggest risk factors is age. Having the risk factors listed over the page and having an unhealthy lifestyle means you're more likely to develop atherosclerosis when you are younger. So it's vital to see if there are any lifestyle changes you can make to reduce your risk.



## How would I know if I had it?

Many people with atherosclerosis don't know they have it until they get symptoms like angina or claudication. Unfortunately, sometimes the first time someone realises they have atherosclerosis is when they have a heart attack or stroke.



## Can it be reversed or slowed?

Atherosclerosis can't be stopped and current treatments can't reverse it. But there are things that can slow down its progress and dramatically lower your chances of a heart attack or stroke. Medicines can help to do this. Having a healthy lifestyle and managing your risk factors is vital too.



## How is it treated once you've been diagnosed?

Most people who have been diagnosed with a condition caused by atherosclerosis (angina, heart attack, stroke, PAD) are prescribed medicines to help protect them.

If you have had a heart attack or stroke or if you get symptoms like angina or claudication your doctor will work out if you need further treatment. You might have one of these tests:

- A coronary angiogram to look at your coronary arteries
- A neck scan to check your carotid arteries
- Scanning of your legs to look at the disease in your legs

### Medicines

You may need to take aspirin which helps to prevent blood clots from developing and medicines to lower your cholesterol – usually statins. You may be prescribed other medicines as well.

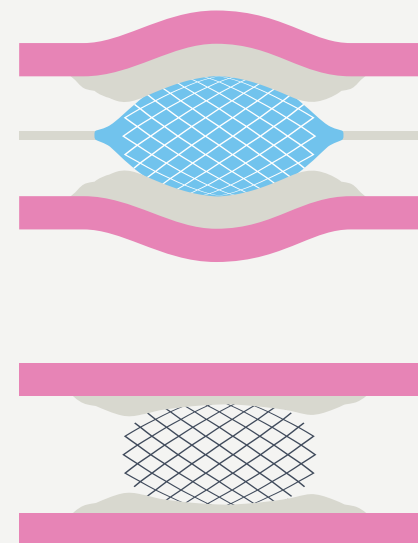


## Is there other treatment that I can have?

If you have disease in your coronary arteries, particularly if it is causing symptoms, then you might need an angioplasty and stent or coronary bypass surgery. Narrowings in your legs or the arteries in your pelvis can be treated with angioplasty and stenting or occasionally bypass surgery. If you have disease in one or both of the carotid arteries in your neck, these narrowings are sometimes treated by surgery.

### Stenting

A stent (a small hollow tube of stainless steel mesh) is placed inside your artery on a small balloon. The balloon is gently blown up so that it squashes the fatty deposits against the artery wall. This widens the artery so the blood can flow more easily. The balloon is let down and removed. The stent is left in place to keep the artery open.





## Sarah's story

Sarah was diagnosed with angina in 2012 and was referred to a cardiac team who gave her advice and reassurance.

"The cardiac nurse showed me what was going on in my heart and how it works – she even drew pictures. She drew a heart and then she drew arteries and showed me where the blockage was. She drew the heart cells that were starved of oxygen crying 'Feed me! Feed me!'

I was so frightened when I met her, and I walked out thinking 'I'm not frightened anymore'.

I've started an exercise regime, which I fit in by walking three miles after I've taken my daughter to school. I also do sit-ups at home, and when my mother looks after Ellie on Saturdays, I do a five-mile walk."



“Finding out what was wrong with me has changed my life for the better. I’ve made changes to my lifestyle and I feel like a different person now.”

Sarah, took control



## Can I have a test for it?

It’s a very good idea to have a risk assessment or health check which looks at your risk of having a heart attack or stroke due to atherosclerosis. If you’re over 40, you may be able to have a health check at your GP surgery.

Your doctor or nurse will check your blood pressure and cholesterol, make a note of your age and gender and ask you about your lifestyle and family history. Looking at all your risk factors together can help your doctor or nurse work out your chances of having a heart attack or stroke.

If your risk is low or moderate, your doctor or nurse will talk to you about your lifestyle. They’ll give you practical advice and suggest ways to lower your risk further and help to keep your heart healthy. It doesn’t mean that your risk will stay at this level. Your risk increases as you get older so it’s important that you keep your risk as low as you can.

If your risk of a heart attack or stroke is high, it’s likely that your doctor or nurse will advise you to take medicines to help reduce your risk. They will give you advice on making lifestyle changes and they will ask you to come back for regular check-ups.



## Reducing your risk factors for atherosclerosis

### What you can't control

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#### Age

The older you are, the more likely you are to develop atherosclerosis.



#### Gender

Men are more likely to develop atherosclerosis at an earlier age than women, but as women get older they soon catch up with men.



#### Family history

If your dad or brother developed heart or circulatory disease before they were 55, or your mum or sister before they were 65, then you're at higher risk.



#### Ethnicity

Some ethnic groups have a different level of risk. For example, South Asian people have a higher risk of developing Type 2 diabetes, which is a risk factor for atherosclerosis.



### What you can control

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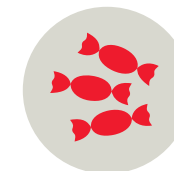
#### Smoking

If you're a smoker giving up is the single most important thing you can do for your heart health.



#### Diabetes

Diabetes can damage the walls of your arteries, increasing your risk, so it's important to keep your blood glucose (sugar) well controlled.



#### High blood pressure

More than 1 in 4 of us has high blood pressure. It's a silent threat as usually there are no symptoms. So get your blood pressure checked by your nurse or GP.



#### High cholesterol

Too much cholesterol in your blood can increase your risk.



#### Body weight

Being overweight or obese can increase your risk, particularly carrying too much weight around your middle.



#### Physical inactivity

Be active every day and aim to build up to a total of 150 minutes' exercise a week.



