

Heart attack / Myocardial infarction (MI)

A heart attack is a medical emergency and you should call 999 for an ambulance immediately. It happens when there's a sudden loss of blood flow to a part of the heart muscle. Without enough blood and oxygen your heart can be seriously damaged.

Symptoms of a heart attack

Heart attack symptoms vary from person to person. They can include:

- pain or discomfort in your chest that happens suddenly and doesn't go away
- pain that spreads to your left or right arm, or to your neck, jaw, back or stomach. For some people the pain or tightness is severe, while for others it's uncomfortable. It may feel like heaviness, or a burning pain similar to indigestion
- feeling sick, sweaty, light-headed or short of breath.

It's possible to have a heart attack without experiencing all these symptoms, and it's important to remember everyone experiences pain differently. This is common in the elderly or people with diabetes, as the condition can cause nerve damage which affects how you feel pain.

What causes a heart attack?

Most heart attacks are caused by coronary heart disease (CHD).

CHD causes your coronary arteries to become narrowed by a gradual build-up of fatty deposits called atheroma.

If a piece of atheroma breaks off, a blood clot forms around this to try and repair the damage to the artery wall.

This clot can block your coronary artery – either a partial blockage (known as NSTEMI) or total blockage (STEMI). This causes your heart muscle to be starved of blood and oxygen. Other less common causes of a heart attack include:

- spontaneous coronary artery dissection (SCAD)
- drug misuse
- hypoxia (a sudden drop in oxygen levels in the body).

How is a heart attack diagnosed?

The ambulance team will do an electrocardiogram (ECG) to detect whether you're having a heart attack.

If the ECG shows you're having a heart attack, you're likely to have emergency treatment as soon as you arrive in hospital.

If the ECG doesn't confirm a heart attack you might need further tests to investigate if you are having a heart attack, including:

- an assessment of your symptoms and medical history
- physical examinations, including measuring your blood pressure and monitoring your heart rhythm and heart rate
- blood tests including a troponin test to detect if there's been any damage to your heart muscle
- further ECGs
- an echocardiogram

You might hear a heart attack being called acute coronary syndrome (ACS), myocardial infarction (MI) or coronary thrombosis while you're at hospital.

How is a heart attack treated?

Quick treatment to get the blood flowing to your heart muscle again is important. This can reduce the amount of permanent damage to your heart and save your life.

Many people need to have emergency treatment to restore the blood flow:

- Coronary angioplasty re-opens the blocked coronary artery by inserting one or more stents. This helps keep the narrowed artery open.
- Thrombolysis involves giving you 'clot-busting' medicine to dissolve the blood clot that's blocking the coronary artery.
- Coronary bypass surgery helps to restore normal blood flow by using a blood vessel from your leg, arm or chest in your heart to bypass the blocked artery.

You might not have these treatments if your doctor decides it's not safe or necessary.

Recovering from a heart attack

You'll usually stay in hospital for about two to five days after having a heart attack. This depends on what treatment you've had and how well you're recovering.

Many people make a full recovery after a heart attack, but you might not be able to do everything you used to. Going to cardiac rehabilitation can help you get back to normal as quickly as possible.

A heart attack can be a frightening experience and it can take time to come to terms with what's happened. It's natural to be worried about your recovery, feel scared, frustrated and isolated.

How can I reduce my risk of having a heart attack?

We often speak about the part risk factors play in causing heart and circulatory conditions. There are some risk factors you can control, and some you can't.

The good news is there are many things you can do to be healthier and reduce your risk:

- eat healthily
- be physically active
- keep to a healthy weight and lose weight if necessary
- don't smoke
- cut down on alcohol
- control high blood pressure
- control cholesterol levels
- control blood sugar levels (if you have diabetes).