



British Heart  
Foundation

# Coronary artery spasm

## What is coronary artery spasm?

People with coronary artery spasm – sometimes called **Prinzmetal's angina** or **variant angina** – experience angina symptoms, such as chest pain.

Angina is the pain or uncomfortable feeling that happens when the heart muscle does not get enough blood and oxygen. Angina is usually caused by coronary heart disease and typically develops during or after exercise, or when you have been physically exerting yourself.

For people with coronary artery spasm, these angina symptoms often occur at rest and can come on suddenly.

**FIGHT  
FOR EVERY  
HEARTBEAT**

bhf.org.uk

## What causes it?

The coronary arteries are the arteries that carry blood and oxygen to the heart muscle. Angina associated with coronary heart disease is caused by the build-up of fatty deposits in the coronary arteries, which lead to narrowing in one or more of the arteries. This process is called atherosclerosis.

Coronary artery spasm occurs when a coronary artery goes into 'spasm' – and suddenly narrows. This can deprive the heart muscle of blood and oxygen. This does not always mean that you have atherosclerosis, but fatty deposits can make the condition worse.

Coronary artery spasm occurs more in people who smoke, or who have high blood pressure or high cholesterol levels. It may also occur without a known cause, but can be triggered by:

- alcohol abuse/withdrawal
- the use of some recreational drugs – such as cocaine
- some medications
- exposure to cold
- high-stress situations.

## What are the symptoms?

The pain can be very severe, but usually subsides after a short time. Attacks tend to come in 'clusters' of two or three, and may occur every day at a predictable time, usually late at night or in the early hours of the morning. The pain can be accompanied by abnormal heart rhythms, which may need treatment.

If the spasms last long enough they can lead to a heart attack – it is vital that you call 999 if you think you, or anyone else is having a heart attack.

## Acute coronary syndrome (ACS)

For some people with underlying coronary heart disease, the symptoms of angina can become 'unstable' – where episodes of angina often occur without any trigger, including when at rest. This is called acute coronary syndrome (ACS) and it is important that it is checked out – as it can be difficult to distinguish between this and coronary artery spasm. People with coronary heart disease can also suffer from coronary artery spasm.

## Heart Helpline

**Our cardiac nurses and information support officers are here to answer your questions and give you all the heart health information and support you need.**

---

**Call us on 0300 330 3311**

---

**Similar cost to 01 or 02 numbers.  
Lines are open 9am - 5pm Monday to Friday.**

**This information does not replace the advice that your doctor or nurse may give you. If you are worried about your heart health in any way, contact your GP or local healthcare provider.**

## How is it detected and treated?

You may need a number of tests to diagnose coronary artery spasm, including an ECG, an echocardiogram and a coronary angiogram.

Coronary artery spasm is a chronic condition, however, its symptoms can usually be controlled using medication – to help relieve the spasms.

As well as avoiding the triggers for coronary artery spasm, it is also important to control your risk factors for coronary heart disease - and make healthy lifestyle choices. Try to eat a healthy balanced diet, get plenty of exercise and stop smoking.