



Resource Library

Cardiac Clinic

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Derby and Derbyshire
Integrated Care Board



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Derby City Council

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CARDIAC CONDITIONS

What is an arrhythmia?

An arrhythmia is an abnormal heart rhythm. Your heart is controlled by a conduction system which sends out electrical impulses. This causes a heartbeat.

Arrhythmias are caused by a problem in this conduction system, which can make your heart beat too slowly, too quickly, or in an irregular way. There are different types of arrhythmia, the most common are:

- Atrial fibrillation is the most common irregular, often fast heart rhythm.
- Supraventricular tachycardia (SVT) is a very fast heart rhythm. There are different types of SVT. Most are due to electrical impulses not travelling normally from the top chambers of the heart to the bottom chambers of the heart
- Atrial flutter is usually a fast heart rhythm where the top chambers of the heart contract at a very fast rate compared to the lower chambers. This can cause the top chambers to beat extremely fast, sometimes up to 300 beats per minute (bpm)
- Tachybrady syndrome (sick sinus syndrome) causes periods of very fast or slow heart beats. Is your heart rate fast or slow?
- Sinus tachycardia is when your heart beats in a regular way and faster than 100 bpm
- Sinus bradycardias is when your heart beats in a regular way and 60 bpm or below

If you have sinus tachycardia or sinus bradycardia it doesn't mean there's something wrong with your heart and you might not need treatment. Sometimes it can be due to an underlying condition which you may need treatment for, so your doctor might want to send you for further tests to find out more.

What are the symptoms of an arrhythmia?

The symptoms you have depend on what type of arrhythmia you have. The most common symptoms include:

- palpitations (a thumping or fluttering sensation in your chest)
- dizziness
- feeling as if you may 'black out'
- breathlessness
- chest discomfort
- feeling tired.

CARDIAC CONDITIONS

Stable Angina

This is the most common type of angina. It tends to happen when your heart works harder, such as when you're walking uphill, and goes away when you rest.

You'll usually know when it's likely to happen and the pain or discomfort is similar to what you've had before. Stable angina lasts five minutes or less, and improves if you rest or take your medication.

Unstable Angina

Unstable angina can feel different to your normal angina symptoms. It can happen even when you're resting. Unstable angina feels more severe and lasts longer. Your symptoms might not improve when you rest or take medication.

If your symptoms don't improve when you rest or take medication, you should call 999 immediately.

Causes of Angina

The most common cause is coronary heart disease. This is when the arteries that supply your heart muscle with blood and oxygen are narrowed by a fatty substance called plaque. It means less blood flows to your heart muscle and can cause angina symptoms.

There are common triggers for angina pain, like:

- physical activity
- emotional stress
- cold weather
- eating a meal.
- Risk factors for angina

There are several risk factors that can increase your risk of coronary heart disease and angina. They include:

- stress
- smoking
- diabetes
- obesity
- high cholesterol/high blood pressure
- family history of heart disease
- older age (45+ for men and 55+ for women).

CARDIAC CONDITIONS

What is coronary heart disease?

Coronary heart disease (CHD) is when your coronary arteries become narrowed by fatty material within their walls. These arteries supply your heart with blood containing high levels of oxygen. Over time, a fatty material called atheroma (sometimes known as plaque) can build up inside your coronary arteries. This process is called atherosclerosis. Eventually, your arteries may become so narrow that they cannot get enough blood to your heart.

What are the symptoms of coronary heart disease?

CHD develops slowly over time and the symptoms can be different for everyone. Some people do not know they have CHD before they have a heart attack. Angina is the name given for chest pain or an uncomfortable feeling that happens when blood flow to your heart muscle is reduced. It is a common symptom of CHD.

You might also feel pain or an uncomfortable feeling in your;

- shoulders
- arms
- neck
- jaw
- back
- stomach.
- shortness of breath
- feeling faint
- feeling sick

What can you do to prevent coronary heart disease?

Living a healthy lifestyle can help lower your risk of developing CHD. There are lots of changes you can make. These include:

- eating a healthy diet
- staying physically active
- quitting smoking
- maintaining a healthy weight
- reducing how much alcohol you drink.

CARDIAC CONDITIONS

What is a stroke?

While there are different types of stroke and different ways strokes can happen, all types of strokes can disrupt the blood flow to your brain. If the blood flow to the brain is interrupted, brain cells can get damaged because they are not getting the oxygen and nutrients they need.

A stroke can affect you in different ways, depending on which part of the brain has had the disrupted blood supply. This can affect your speech, as well as the way you think and move.

Signs of a stroke - Act **F.A.S.T** to recognise the signs:

Facial weakness – can the person smile? Has their mouth or eye drooped?

Arm weakness – can the person raise both arms?

Speech problems – can the person speak clearly and can they understand what you're saying?

Time – it's time to call 999 immediately if you see any of these symptoms.

It's called **F.A.S.T** because timing is important if you're having a stroke. You could lose millions of nerve cells for every minute without treatment. The longer you wait, the less chance of speech, movement and abilities coming back to what they were. Acting F.A.S.T really is lifesaving.

Are you at risk of having a stroke?

Factors that increase your risk (chance) of having a stroke include:

- If you've previously had a stroke or heart attack
- If you're aged over 55
- If a close relative (parent, grandparent, brother or sister) has had a stroke
- If you have high blood pressure
- If you have high cholesterol levels
- If you have diabetes
- If you have a type of irregular heartbeat called atrial fibrillation (AF) – if you have AF, the top chambers of your heart (your atria) do not pump blood through your heart as well as they should. If the chambers are not emptied properly, this can lead to a blood clot forming within the chamber. If this happens, there's a risk that it can travel to your brain and block the blood flow.

CARDIAC CONDITIONS

Reducing the risk of stroke

There are many things you can do to help lower your chances of a stroke:

- eat healthily
- be physically active
- keep to a healthy weight and lose weight if necessary
- do not smoke
- cut down on alcohol
- have regular check-ups to pick up risk factors such as high blood pressure, high cholesterol or diabetes – you can have a regular check up with your GP if you are aged over 40. If you think you may be more at risk because of your family background and you are aged below 40, talk to your GP about what other checks may be available to you
- control high blood pressure
- reduce high cholesterol
- control blood sugar levels (if you have diabetes).
- Keep atrial fibrillation under control (if you have the condition)

For more information on risk factors and cause of stroke, visit the NHS webpage on strokes. <https://www.nhs.uk/conditions/stroke/>

What is a Heart Attack?

A heart attack happens when the blood supply to the heart muscle is cut off. This is often caused by a clot in one of the coronary arteries. The heart is still pumping blood around the body during a heart attack. The person will usually be conscious and breathing.

What are the 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

CARDIAC CONDITIONS

Other less common symptoms include:

- a sudden feeling of anxiety that can feel similar to a panic attack
- lots of coughing or wheezing due to a build-up of fluid in the lungs.
- 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 more likely in elderly people or people with diabetes, as the condition can cause nerve damage which affects how you feel pain.
- Discomfort in the chest can be caused by many things from a heart attack to indigestion

A heart attack and cardiac arrest are not the same.

What are the symptoms of a cardiac arrest?

A cardiac arrest is an emergency that usually happens without warning. If someone is in cardiac arrest, they collapse suddenly and:

- will be unconscious
- unresponsive, and
- not breathing or not breathing normally – this may mean they're making gasping noises.
- Without immediate treatment, the person will die. If you see someone having a cardiac arrest, phone 999 immediately and start CPR

How is a cardiac arrest treated?

A cardiac arrest is an emergency. If you're with someone who's having a cardiac arrest, call 999, start CPR and use a defibrillator if there's one nearby. Follow instructions from the 999 operator until emergency services take over.

Here is a demonstration on how to give CPR:

<https://www.youtube.com/watch?v=BQNNOh8c8ks>

DID YOU KNOW WE RUN EMERGENCY FIRST AID COURSES? Contact us for more information on when our next course is running.

Risk Factors

High cholesterol

Cholesterol is a fatty substance in your blood. Too much of it can increase your risk of heart and circulatory diseases.

Cholesterol levels: what is normal?

The information below is just a guide. What matters is your individual risk. Talk to your doctor about your results and what levels you should aim for.

Result

Healthy level (mmol/L)

Total cholesterol	5 or below
HDL (good cholesterol)	1 or above
Non-HDL (bad cholesterol)	4 or below
Fasting triglycerides (when you're asked not to eat for several hours before the test)	1.7 or below
Non-fasting triglycerides (when you eat as normal before the test)	2.3 or below
Total cholesterol to HDL cholesterol ratio	6 or below

If you have been told you have a high cholesterol level, it means you have too much 'bad' cholesterol in your blood, which increases your risk a heart attack or stroke. But a high level of 'good' (HDL) cholesterol can help keep that 'bad' (non-HDL) cholesterol in check.

- You can try ways of getting more active, which will help lower your cholesterol but also help you sleep better and feel more energetic
- You can cut down on alcohol and stop smoking
- You can enjoy trying healthy foods and recipes that are good for your heart.

Statins are the main type of medicine used to reduce cholesterol. But there are other treatments available. Your doctor will let you know if you need to take any other drugs which help control your cholesterol levels.

Risk Factors

High blood pressure

High blood pressure is also called hypertension. Knowing your blood pressure could save your life.

What counts as high blood pressure?

There are three different stages of high blood pressure:

- **Stage one:** this is when your blood pressure is between 140/90 mmHg and 160/100 mmHg in the clinic, or 135/85 mmHg to 150/95 mmHg at home.
- **Stage two:** this is when your blood pressure is between 160/100 mmHg and 180/120 mmHg in the clinic, or over 150/95 mmHg at home.
- **Stage three:** this is when your systolic blood pressure is over 180 mmHg or your diastolic blood pressure is over 120 mmHg in the clinic. This stage is also called 'severe hypertension', and your GP will need to assess you urgently for further investigations.

Diabetes - can cause damage to your blood vessels. This can lead to a heart attack or a stroke

Obesity - being overweight can have a big impact on your health, especially if you carry weight around your middle.

Smoking - Smokers are almost twice as likely to have a heart attack compared to people who have never smoked.

Stress

Stress is our body's response to pressures from challenging situations in life. It can be a feeling of being overwhelmed or under pressure. It's normal to feel like this sometimes and a certain amount of stress can be healthy. But if you're feeling like this more and more over time and you're struggling to cope, it's time to make some changes. Stress itself isn't a mental health condition, but it's a sign that you are feeling worried about something.

Physical inactivity - The heart is a muscle, and like any other muscle it needs physical activity to help it work properly.

Family history of a condition is caused by a combination of your genes and habits you share with your family. This combination can increase your risk.

Management

What foods will make my high cholesterol worse?

If you have high cholesterol, it's most important to eat less saturated fat. Foods that are high in saturated fats are things like fatty and processed meat, pies and pastry, butter, cream, and coconut oil. Some foods contain dietary cholesterol but surprisingly they don't make a big difference to the cholesterol in your blood. These are foods like eggs, some shellfish like prawns and crab and offal such as liver, liver pate and kidney. They are low in saturated fat and so are fine to eat as part of a healthy diet.

What foods will lower my cholesterol?

The best way to eat a better diet is to swap your saturated fats with foods that are high in unsaturated fat like vegetable oils (sunflower, olive and rapeseed oil), nuts seeds and avocado and oily fish. A few small swaps can make a big difference to your cholesterol level. Many people say they don't notice the difference. Try:

- swapping butter to vegetable oil spreads like sunflower, olive or rapeseed oil spreads
- switching whole milk to skimmed milk
- using natural yogurt instead of sour cream or double cream
- replacing regular mince with leaner, lower fat options
- swapping red or processed meat for fish, turkey or chicken without the skin, or plant-based proteins such as lentils, soya or Quorn
- switch your crisps for unsalted nuts
- having reduced fat cheese instead of regular cheese
- ordering less takeaways.
- Eat fibre to lower cholesterol
- Eating high-fibre food can also help to lower your cholesterol. Fibre helps reduce the amount of cholesterol that is absorbed into the blood stream from your intestine.
- Make sure you get at least five portions of fruit and vegetables a day as these contain fibre along with other nutrients
- Eat plenty of other high fibre foods like pulses (such as lentils, beans and chickpeas) oats and seeds.
- Choose more wholegrain foods when you can, such as brown or granary bread over white.

Management

Can exercise help to lower cholesterol?

Yes it can. Getting your blood pumping by doing exercise will reduce your cholesterol. Being active helps your body move the bad cholesterol to your liver where it can be removed out of your system. You don't have to join a gym or go on long runs if you don't enjoy it, just look for chances to move more every day. Many people find that being active improves their mood so they make healthier food choices. You could try:

- taking the stairs instead of the lift
- a brisk walk instead of a slow walk
- vigorous cleaning / gardening

Will stopping smoking lower my cholesterol?

If you're a smoker you might already know you should stop if you have high cholesterol. Smoking increases 'bad cholesterol' and lowers 'good cholesterol', increasing your risk of heart attacks and stroke.

If you're struggling to stop smoking, talking to your GP is a great first step, or if you're in England you can call the NHS Stop Smoking Service on 0300 123 1044. These services will be able to give you useful advice on how to deal with cravings and gradually stop smoking.

Should I stop drinking if I have high cholesterol?

Cutting down on alcohol will help your liver to work better at removing bad cholesterol. It may also improve your heart health in other ways by helping you lose weight and lower your blood pressure.

Our top tips for drinking alcohol are to:

- drink less than 14 units of alcohol a week
- have a few days each week where you don't drink at all
- avoid binge drinking by drinking half what you usually would
- order a small glass of wine or half a pint of beer.
- By making some of these small changes you should see your cholesterol levels go down.

Management

How is high blood pressure treated?

How your high blood pressure is managed depends on a range of things, such as your health goals and the stage of your condition. The healthcare team at your GP practice will help you create a plan to reduce your blood pressure.

By making lifestyle changes, you can lower your blood pressure and keep it at a healthy level. Recent evidence shows that tackling obesity and staying active are especially important. You'll feel the benefits right away with improved sleep, more energy, and a better mood.

If your blood pressure is high or very high, your GP will usually offer you medicines

How can I lower my blood pressure?

Here are some of the ways you can reduce your chances of getting high blood pressure:

- Eating less salt
- Eating more fruit and vegetables
- Reducing how much alcohol you drink
- Being more active
- Losing weight

BMI Calculator

<https://www.nhs.uk/health-assessment-tools/calculate-your-body-mass-index/calculate-bmi-for-adults>

Top tips for exercising with a heart condition

- Avoid exercising outdoors when it is very cold or very hot.
- Stay well hydrated, especially on hot days.
- Don't exercise if you are unwell. If your exercise programme has been interrupted for any reason, gradually ease back into it.
- Stop exercising if you become really fatigued or severely short of breath and discuss your symptoms with your doctor.

Helpful Tools

ReviR free CPR course from phone:

www.bhf/revir 15 mins training for CPR from home using a pillow

Blood Pressure Reminder:

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- **Stage three:** this is when your systolic blood pressure is over 180 mmHg or your diastolic blood pressure is over 120 mmHg in the clinic. This stage is also called 'severe hypertension', and your GP will need to assess you urgently for further investigations.

Rating of Perceived Exertion Borg RPE Scale		
6		How you feel when lying in bed or sitting in a chair relaxed. Little or no effort.
7	Very, very light	
8		
9	Very light	
10		
11	Fairly light	
12		Target ranges: How you should feel with exercise or activity.
13	Somewhat hard	
14		
15	Hard	
16		
17	Very hard	How you felt with the hardest work you have ever done. Don't work this hard!
18		
19	Very, very hard	
20	Maximum exertion	

Helpful Tools

Exercise at home

This is made up of:

- a 15-minute warm up
- up to 25 minutes of conditioning
- a 10-minute cool down.

List of exercises

- CV- toes taps/progress to leg kicks
- Walk /jog
- Step ups/ faster or higher
- Half jacks/ jacks
- arm rolls / punches
- knees lifts/ high knees
- leg curls/ drop squat
- ladder walk/run
- step touch/ skate

Conditioning

- sit to stand
- biceps
- triceps
- chest or wall pushes
- shoulders
- back rows
- thighs
- Progressions/ adaptations
- Design a circuit 1 min cv and 1 min AR

Please get in touch for information on the online and in person exercise classes we have available for Carers.