

Cardiac Rehabilitation

Cardiac rehabilitation programme

This booklet has been created for patients who have undergone treatment for a heart attack at the hospitals within Coventry and Warwickshire. The first few days and weeks after your heart attack can be confusing and worrying for you and your family. This booklet will help you to understand what has happened to your heart. It contains useful advice for patients starting a cardiac rehabilitation programme, and aims to:

1. Help and support you during and after your hospital stay
2. Assist you in your recovery following your heart attack
3. Advise you of any lifestyle changes that will benefit your long-term recovery.

You may still have some questions and concerns after you have read this booklet. After you are discharged, you will be referred to your local Cardiac Rehabilitation Programme and they will be in contact with you to arrange follow up.

University Hospital Coventry & Warwickshire

Cardiac Rehabilitation Nurses: **Tel. 02476 965666 or Ext 25666**

Hospital of St Cross, Rugby

Cardiac Rehabilitation Nurses: **Tel: 01788 663463.**

E-mail: cardiacrehabilitation@uhcw.nhs.uk

George Eliot Hospital Cardiology Office/Rehabilitation Service:

Tel. 024 7686 519

Warwick Hospital

Cardiac Rehabilitation Nurses: **Tel. 01926 495321 or Ext 4927**

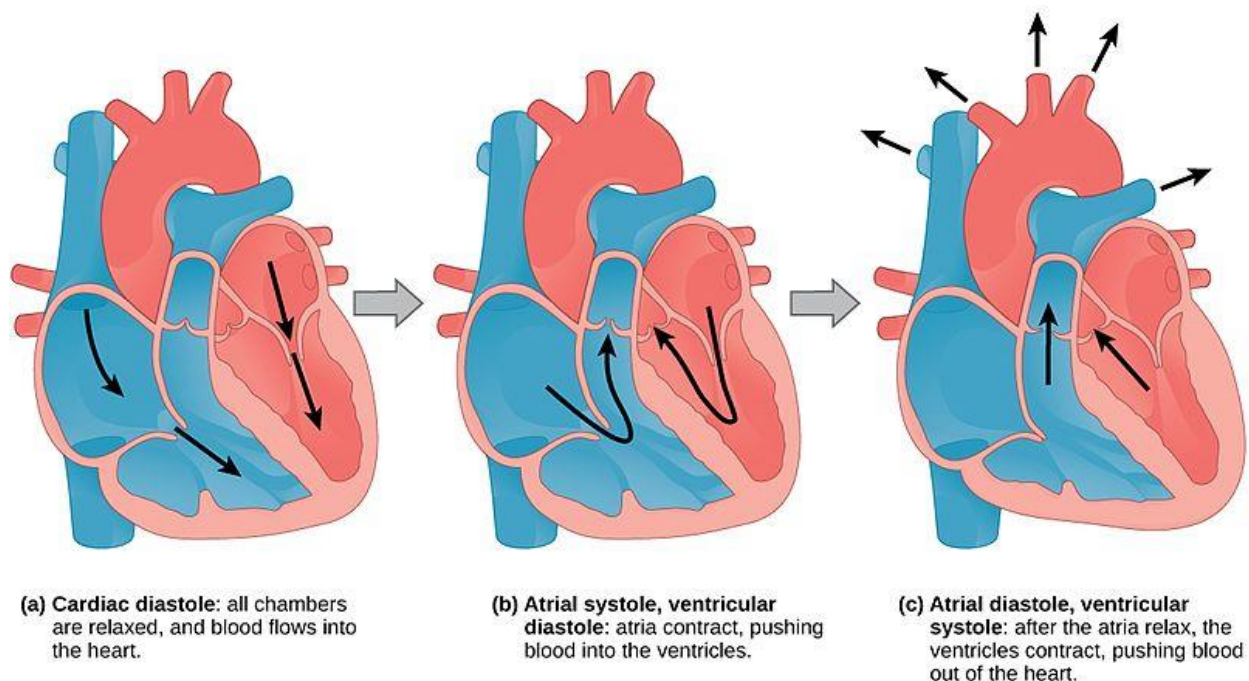


Understanding your heart and heart condition

What is the heart?

The heart is a strong muscle about the size of a fist. It lies in the centre of your chest and is tilted slightly to the left. The heart beats continuously throughout life, usually between 60 – 90 times per minute. It is divided into two sides, left and right, and has four chambers.

The heart's job is to pump blood, oxygen and nutrients to all parts of the body.

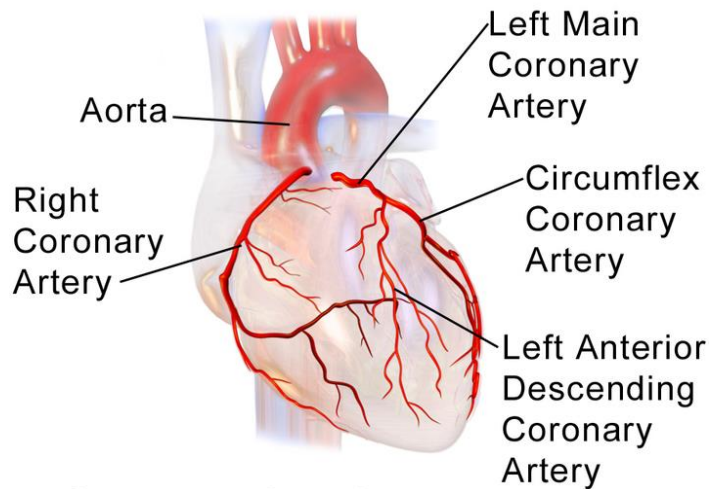


“[The Cardiac Cycle](#)” by CNX OpenStax is licenced under [CC BY 4.0](#)

When we breathe in we take in oxygen. This is important as it keeps all living tissues healthy and working well. The oxygen enters our blood stream and the left side of the heart pumps the blood around our body via the arteries, delivering oxygen and nutrients to the tissues, muscles and organs.

As the tissues use oxygen, they make carbon dioxide which is removed in the bloodstream. This is taken to the right side of the heart to be pumped to the lungs where we breathe out carbon dioxide and breathe in oxygen. This is a continuous process.

What are the coronary arteries?

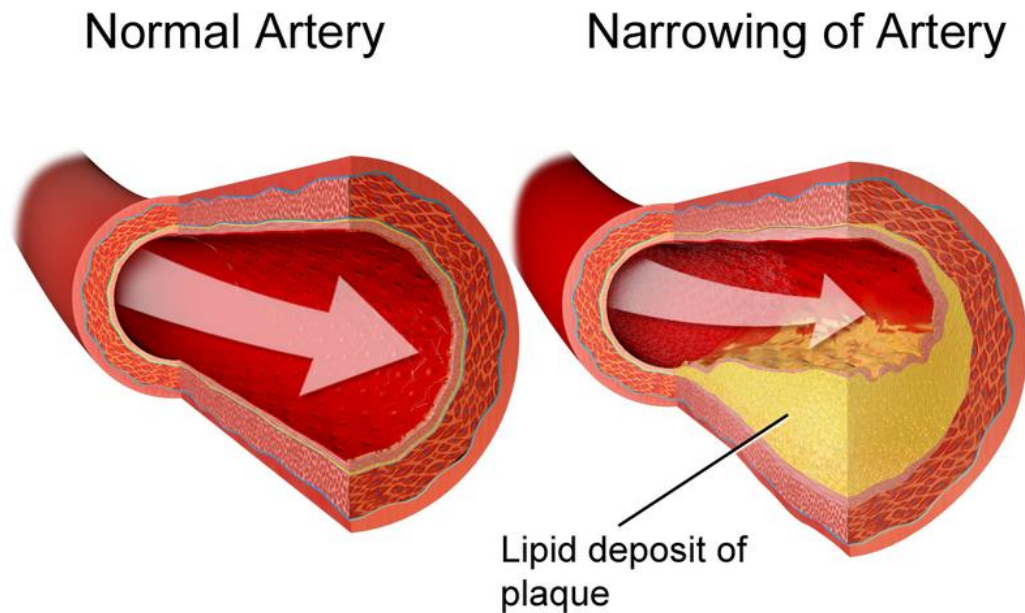


“[Coronary arteries](#)” by [BruceBlas](#) is licenced under [CC BY 3.0](#)

The heart muscle (**myocardium**) needs a blood supply and oxygen to do its job and this is supplied by the coronary arteries. There are three main branches of these arteries that circle the heart, which divide and subdivide like the branches of a tree.

The left coronary artery has two branches, the left anterior descending and the circumflex. These carry blood to the septum (the dividing membrane inside the heart) and left side of the heart. The right coronary artery carries blood to the right side and back of the heart.

What is coronary artery disease?



Coronary Artery Disease

“[Coronary artery disease](#)” by [BruceBlau](#)s is licenced under [CC BY 3.0](#)

This is when the coronary arteries narrow and is caused by a process known as **atherosclerosis**. Atherosclerosis is a build-up of fatty deposits in the arteries. All body arteries experience wear and tear after years of use. They become less elastic and fatty layers build up along the artery wall, forming a “plaque”.

This plaque can rupture, leaving a rough surface on the artery wall, which can interfere with the smooth flow of blood. This rupture also causes blood clots to form - these may block the artery completely, leading to a heart attack (myocardial infarction).

What is angina?

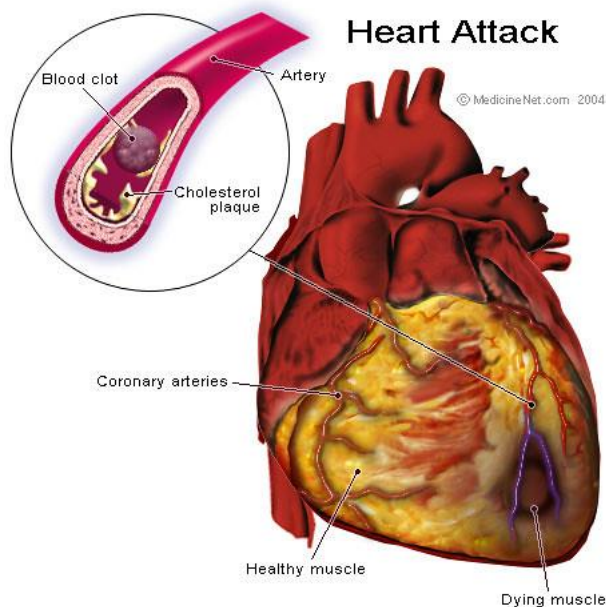
This is the pain arising from the heart muscle (**myocardium**) when it does not receive enough oxygen. This usually occurs during exercise, in the cold weather, on strong emotion/stress, after a heavy meal or during sexual intercourse. During these times, the heart has to work harder and therefore it requires more oxygen.

Patient Information

Because of the narrowing within the coronary arteries, the blood has difficulty getting through to the heart muscle to deliver oxygen. If the muscle does not receive enough new blood, and therefore new oxygen pain will be felt – this is angina.

You may feel **tightness, squeezing or aching** in the chest, or **pain or discomfort** in the neck, jaw, upper back or arms. You may also have **indigestion, shortness of breath and feel sweaty or dizzy**. Rest and nitroglycerin (**GTN**) are the quickest ways to relieve angina.

What is a heart attack?



[“Heart attack anatomy”](#) is licenced under [CC BY-SA 2.0](#)

A heart attack happens when the blood supply and therefore the oxygen supply to a part of the heart muscle is cut off. This happens if one of the coronary arteries becomes severely narrowed or blocked.

This will result in damage to the heart muscle. Pain is usually, **but not always**, severe and may happen at rest. The severity of the heart attack will depend on where the artery is blocked. If the blockage is at the far end of the artery, only a small area of heart muscle is affected. If, however, the blockage is at the beginning of an artery, then a large amount of heart muscle will be affected.

Treatment for a heart attack

The treatment for a heart attack will depend on whether the artery supplying your heart is fully blocked or partially blocked. For many people, an angiogram will be part of their treatment.

If an angiogram is the initial treatment done, it is called a primary percutaneous coronary intervention (PCI). This is done when the affected artery is fully blocked. It is done as an emergency procedure at University Hospitals Coventry and Warwickshire NHS Trust.

If the artery is partially blocked, you will be given medicines to stop blood clotting further. An angiogram will be organised for a day or so later. Sometimes, the angiogram may still be done quickly if you have ongoing pain or symptoms. This care pathway will be the same for patients who are admitted with unstable angina - this is where the artery is possibly partially blocked, but there is no damage to the heart yet.

For some patients, having an angiogram may not be appropriate or safe. Your doctors will explain this to you if it is decided to treat you with medications only.

The damage to your heart muscle caused by a heart attack forms a scar. Your heart will take 4-6 weeks to adjust to this while it heals and recovers. Although the scarred area of the heart is usually damaged permanently, the rest of the heart muscle should be able to continue to work as normal.

Coronary angiogram and stent procedure explained

This procedure is performed as an emergency after your admission to University Hospitals Coventry and Warwickshire NHS Trust.

It is undertaken in the Cardiac Catheter Suite. Here, a thin tube (catheter) is inserted into an artery in your groin or arm, after it has been numbed.

The catheter is passed into your arteries until it reaches the coronary arteries which deliver the oxygen and nutrients in your blood to make your heart muscles to work efficiently.

Patient Information

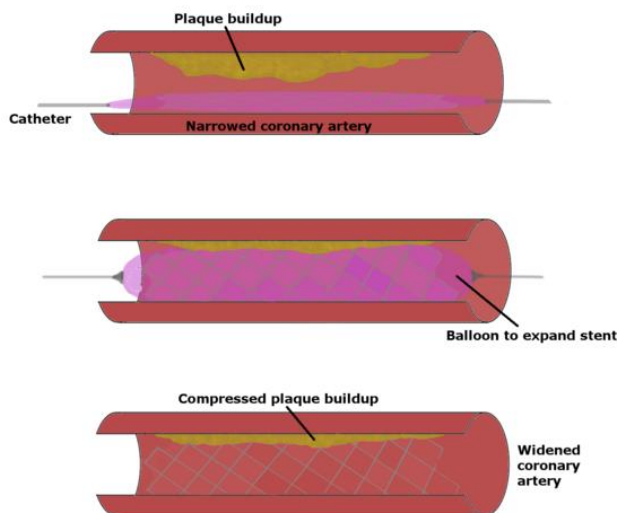
A dye is injected via the catheter into the coronary arteries. This is seen on X-ray images taken throughout the procedure. This part of the procedure is known as an **angiogram**.

When a blockage is identified, your doctor may decide to perform a **balloon angioplasty**.

During a balloon angioplasty, the doctor will pass a tiny, deflated balloon along the catheter until it reaches the blockage. It is then passed into the blocked area, where it is inflated and deflated a number of times to flatten the plaque (fatty plug blocking the artery) against the wall of the artery until it becomes opened up again.

A suction device may also be used to remove the clot which has formed as part of the blockage.

Often, a metal coil (stent) is inserted at this time and left in place inside the expanded artery wall to keep it open. The balloon and catheter are then removed.



“[Coronary stent](#)” by ETTon is licenced under [CC BY-SA 4.0](#)

If you were admitted as a **planned** admission to UHCW, the actual procedure is the same.

What happens to the stent after it is fitted?

The stent sits tightly against the wall of the artery. After a few weeks or months, your artery wall will grow to cover the metal mesh, so your artery will be held open permanently.

However, until this happens it is very important that you do your best to look after your stent and your artery. You will be prescribed aspirin and either clopidogrel or ticagrelor to prevent blood clots from forming within the stent and elsewhere in your arteries. You should take these tablets as directed by your doctor.

What happens if you have more chest pain after going home?

It is common for people to experience more pain in their chest in the first few days and weeks following a stent procedure. This is because your artery has suffered some trauma and bruising from the stent being fitted. You can have episodes of pain or discomfort as the stent settles into place. This pain is usually quite different from that of angina. It is felt quite locally in the chest and is often described as sharp or stabbing.

It is also very common to be more aware of your heartbeat, especially at night. You may feel more tired than usual. These feelings are usually a normal part of getting over a heart attack and should reduce over a couple of weeks.

Some people may experience further angina. This is because you may have other narrowing's within other coronary arteries that were not treated at the time of your emergency care. Very occasionally, there may be further problems with the stented artery, and this will require further treatment.

Coronary artery bypass surgery

If you have had heart surgery because of damage to your coronary arteries caused by your heart attack, you will have been given a separate booklet by the staff on Ward 11 at University Hospitals called 'Recovering from heart surgery – Going Home'. This will give you additional information on how you will expect to progress after your surgery. It also contains the contact numbers of your local cardiac rehabilitation service.

Taking part in the cardiac rehabilitation programme will make sure that you get maximum benefit after your procedure.

Cardiac Rehabilitation

What is a cardiac rehabilitation programme?

Whilst you were in hospital, you will have received some information about your local cardiac rehabilitation programme. The Cardiac Rehabilitation Programme is for patients who are recovering from either heart problems or heart surgery.

The programme takes place at your local hospital or at a community venue (Coventry), from as early as 10 days after discharge. It can be beneficial in several ways, whether you are mildly or severely affected by your heart disease. If you are severely affected by heart disease, this may affect your activities - the programme can help to restore your confidence, maximise your recovery and improve the quality of your life.

The programme also helps you to understand and gives you an opportunity to discuss prevention of heart disease - this includes lifestyle issues (such as dietary advice), medication and stress. Therefore, one of the best things you can do to help your recovery and stay healthy is to join the cardiac rehabilitation programme run by an enthusiastic team of healthcare professionals.

Your details will have been passed on to your local cardiac rehabilitation programme. They will contact you in the next few days, after you have gone home. You will find the contact details of your local cardiac rehabilitation programme at the front of this booklet.

General lifestyle advice

This section has been devised to support and advise you during your hospital stay and after discharge.

- Try to be positive and follow the advice in this booklet.
- Remember that everyone is different – do not compare yourself with others
- Try not to overdo things at first, because rest is an important part of recovery.
- You will find that you gradually feel stronger and more confident.

While you are in hospital

Everyone is an individual and will progress at different rates after their heart attack.

At first, you may be on bed rest for the first day or so. After that, your doctors and nurses will advise you about how much you can do each day.

As a general rule, if you were reasonably fit before the heart attack, it is expected that you will be able to walk around the ward, have a bath or shower and climb a flight of stairs before leaving hospital.

If you have mobility problems, you may find that you have already returned to your previous level of mobility before leaving hospital. If you are concerned about your ability to carry out activities, speak to the nurse looking after you.

It is normal to feel tired and it is important to have some time to rest each day. Too many visitors can be a problem. Talk to your nurse if this is bothering you.

Your emotions

Being told you have had a heart attack can lead to a whole range of feelings such as shock, disbelief and fear. You may feel low in mood, tearful and may have trouble sleeping. All these reactions are to be expected after a heart attack and may settle as you adjust to the changes your diagnosis can bring. Talking to others about how you feel may help.

Patient Information

Your friends and family may have similar feelings. They may be quite fearful of it happening again and want to protect you. Alternatively, they may be keen for you to return to your previous activities before you feel ready.

What can you do to help?

- Notice when you are feeling anxious and what may have caused this. Try to take 2 or 3 deep breaths and focus on your breathing while attempting to let go of your anxious thoughts.
- When you are able to, return to some of the activities you previously enjoyed. Exercise and activity can help to improve mood.
- Build relaxation into your everyday life. Learn relaxation techniques or incorporate relaxing activities into each day.
- Identify unhelpful thoughts that may lead to low mood and anxiety. Allow yourself to look at these from a different perspective and get support from others to challenge unhelpful thinking patterns.
- Don't be too hard on yourself. Notice the small changes in your recovery rather than focusing on getting back to "normal".
- Learn to self-reassure and tell yourself "It will be OK".
- Take control of the things you can control by healthy eating and exercise.

You can access further psychological support with IAPT. IAPT stands for Improving Access to Psychological Therapy and is an NHS service designed to offer short-term psychological therapies (CBT) to people suffering from anxiety, depression and stress. To book your initial appointment, call 024 7667 1090
leaving hospital

Going home after a heart attack can be an anxious time. Many people are worried about what they can or cannot do. The information written below can be used as a **guide** to general activities. Levels of fitness vary enormously so this information is meant as a general guide only. After a heart attack, some people need to do things at a slower pace to begin with. The Cardiac Rehabilitation team will advise you.

Patient Information

The amount of physical activity you can do will be based on many factors, including:

- The condition of your heart
- Your general health
- Your age
- How active you were before your heart attack
- The length of your hospital stay
- Your medication

Taking control of things that may put you at risk of another heart attack (see section on risk factors, page 15), and beginning an exercise programme can help you to feel better and get you back to doing your normal activities.

Remember:

- Everyone is different - do not compare yourself with others
- Your recovery will depend on how well you were before the heart attack, the size of your heart attack and ongoing problems like angina
- Getting better is not a race

Advice for the first few weeks after you have had a heart attack

1. It may take you a while to get used to being at home again and you and your family may feel nervous that you are leaving the security of the hospital. Make sure you get plenty of rest at first. A daily bath/shower is fine (but not too hot), as are simple household chores such as washing up, light cleaning, dusting and cooking. For advice on lifting heavy objects, this will be different for each patient. Please ask a member of the cardiac rehab team for individualised advice. Do not overtire yourself by entertaining too many visitors.

It is quite normal to feel emotional, but these feelings should pass as your recovery continues.

It is quite normal to feel generally more tired, and also to feel tired after you have done an activity which is more than you have managed so far since your heart problem.

Patient Information

2. If you have no symptoms or difficulties with such activity, you can start going for short walks. Walking is the most effective exercise for you at this stage.

Walk for approximately 5 minutes at your own pace the first time you go out. Walk on flat ground. Increase this gradually each day provided you are not getting breathless or experiencing any chest pains. Some people will be able to increase quickly, and some people will need to take things a bit more cautiously.

We advise you to increase slowly, by a minute or two each day, but if you find your walk very easy, then you can increase by more than that.

When walking, you should always have enough breath to talk in short sentences.

If you experience chest pains or heaviness in your chest during an activity, **stop** what you are doing, **sit down and rest**. Follow the advice you were given while in hospital with regard to what to do if you experience chest pains or the advice given later in this booklet about that.

3. Provided you have no symptoms or difficulties with this, build up your daily walks, increasing over the next few weeks to 30 minutes and then gently increase your pace each day. **When you find you are able to walk for longer than 20 minutes, you can do jobs such as weeding the garden and cleaning the car.**
4. After this time, you can gradually resume full activity. The daily walk can be speed up, but avoid undue tiredness, breathlessness, or chest pain. (Walking at a pace that leaves you warm and slightly out of breath, but still able to talk in short sentences is beneficial to your heart).

Benefits of exercise

The benefits of exercise are many and can be split up into short-term and long-term benefits. The short-term benefits of exercise following a heart event include improvements in;

- mood
- energy levels
- self-confidence

Research has also shown exercise to reduce anxiety, depression and stress.

Patient Information

Exercise for a long time reduces the risk of having another heart event, stroke, cancer and risk of diabetes and can lower blood pressure. Even if you have diabetes, exercise is a way to control your blood sugars a lot more effectively.

Focusing on the heart, exercise can:

- Improve the pumping ability of your heart - after a heart attack, your heart can be damaged and it is important we optimise the pumping ability of your heart.
- Improve circulation and blood supply to the heart itself

Focusing on the body, exercise can:

- Improve blood supply to the muscle
- Improve the ability of the muscles to take oxygen from the blood
- By making the muscles more efficient, the heart has to do less work when you are active or exercising.

The benefits of exercise are only kept if you exercise long-term and work at a sufficient level. This will let activities of daily living, like walking, to become easier and more manageable.

Please feel free to ask a member of your rehab team about the benefits of exercise.

Patient Information

Chest pains following a heart attack

What is angina?

Angina is pain coming from the heart.

When our heart does more work, it needs more oxygen. If the heart doesn't get enough oxygen because the arteries around it are narrowed, this can cause pain. The symptoms experienced are known as **angina**.

Everybody's angina is slightly different. It is important to report any changes in your symptoms to your GP.

Heart pain can occur in one, two, three or all of these places:

- Chest
- Arms (one or both)
- Jaw
- Back

Words people have used to describe heart pain:

- Heavy
- Tight
- Pins and needles (in arms)
- Ache
- Like toothache (in jaw)
- indigestion

Other symptoms you should tell your nurse or doctor about:

- Palpitations
- Breathlessness
- Swollen ankles
- Dizziness

Patient Information

Not all patients who have had a heart attack will get angina, but it is important that you understand how to manage the symptoms so that you and your family know what to do in case these symptoms occur.

Angina management

In hospital, you will have been given a **GTN spray**. This is a treatment which should be able to **relieve angina**. It works by making the blood vessels around the heart bigger, and therefore helps to get more oxygen to the heart muscle.

Looking after your GTN spray

The spray has approximately a 2 year life span.

Keep the spray with you if you go out.

Treating symptoms of angina

- Stop and rest. Sit down or lean on something. Close your mouth and take 1-2 puffs of your GTN spray under your tongue. Then wait for 5 minutes.
- If your angina has not gone, take your GTN spray again and wait for 5 minutes.

If angina has still not gone, call 999.

Angina (or suspected angina lasting for more than 10 minutes should be investigated and treated in hospital.

Continuing emotional responses

In the weeks after your heart attack, you may feel upset and anxious, especially when you first leave hospital and return to your normal activities.

Many people feel low in mood or tearful at times. These feelings may also affect your family. You may be worried about things like money, work or your role in the family. You may have trouble sleeping - hospital and worry can upset your normal sleeping pattern. You may find your temper is worse - this can be because you are frustrated at not being able to do what you want.

Patient Information

These responses are to be expected, and you should improve as you feel stronger and able to do more. However, if you continue to feel anxious or low in mood, you should tell your doctor or nurse. Don't be frightened to ask for advice.

It is important to consider how your family are feeling – they have had a frightening experience too. They may be blaming themselves for your heart attack and want to do anything to stop it happening again. This may make them seem overprotective. Talking to your family about how you are feeling may help to ease their anxieties and allow you to provide support to each other.

For family and friends

Once your loved one is home, you can help most if you:

- Let them do as much as they can on their own.
- Help - resist the temptation to nag. If you find yourself nagging, you may be worried about your loved one. Talk to friends or a member of the rehabilitation team or your doctor about your worries.

Also, be sure to take care of your own needs:

- Eat healthily
- Get enough rest
- Go for a walk or do some exercise each day.
- Let others help you! For example, with meals, errands and other jobs.

Medicines

Your prescribed medicines will be very important to reduce the risk of you having another heart attack.

This section contains brief information about some of the medication you may be taking.

Patient Information

In general:

- Read the information leaflet that comes with your medication
- Know when you should be taking your medication. Some need to be taken with food, some before food.
- Do not run out of your medication; get your next prescription in plenty of time.
- Store your medicines carefully as instructed on the information leaflet and ensure that children cannot access them.
- **Never** share your medication with anyone else.
- Before taking any over the counter medication (non-prescribed) or herbal medication check that it is safe to do so with the pharmacist.

Some people occasionally experience side-effects from certain medicines, but there are almost always alternatives available. If you think that you are having a reaction to your medication, discuss this with your doctor.

All medicines have an approved name (often used in hospital), like Atenolol, and many also have one or more brand names. In these cases, both names will be on the box. If you are not sure about your medicines, please ask a doctor, pharmacist or nurse.

Doctors can use many different medicines in heart disease and some medicines have more than one use.

What medicines are usual following a heart attack?

Most people take several medicines following a heart attack. Some of these medications are only required for a short period of time. Others are recommended for life because they will help you to remain as fit as possible in the long-term, and to reduce the risk of any further problems with your heart.

You will have been given a 28 day supply of medication from the hospital. Remember to order your repeat prescriptions in good time from your GP, and do not stop taking any medicines without discussing it with your doctor.

Patient Information

The following medicines are commonly prescribed:

Aspirin

Low-dose aspirin is an antiplatelet medicine. This means it reduces the stickiness of blood, which reduces the risk of blood clots forming.

Clopidogrel and ticagrelor

These are also antiplatelet medicines and help to prevent blood clots. Clopidogrel or ticagrelor can be used together with aspirin and may be prescribed for 12 months depending on the type of stent used. It is very important that you continue taking one of these drugs as prescribed to reduce the risk of small clots forming around your stent. Taken in combination with aspirin, they will reduce the risk of a further heart attack.

A beta-blocker (e.g. Bisoprolol)

This medicine will slow your heart rate and reduce the risk of abnormal heart rhythms. It may also help your heart to pump blood around more efficiently and your blood pressure may also be reduced. These effects will reduce the risk of having a further heart attack. The dose of this medicine will be increased gradually by your GP. This will give you the best possible benefit from the medicine long-term so do not be concerned.

An angiotensin-converting enzyme (ACE) inhibitor (e.g. Ramipril).

This medicine is used to reduce the workload for your heart by reducing your blood pressure. It is easier then for your heart muscle to pump blood around your body. It will also protect your heart. The dose of this medicine will be increased gradually by your GP. This will give you the best possible benefit from the medicine long-term, so do not be concerned.

Statin (e.g. Atorvastatin).

This reduces the cholesterol level (as discussed above). This is very important to help control further build-up of fatty areas (plaques) which restrict blood flow in your coronary arteries. It is very important for you to know what your cholesterol level is – ask your cardiac rehab nurse. As cholesterol is produced overnight in your body, this medicine works best when taken at night. You must avoid eating grapefruit or drinking grapefruit juice as this can alter the level of statin.

Patient Information

GTN Spray

Tablets and sprays provide rapid relief from the chest pain associated with angina. **Remember to carry your GTN spray with you all the time.** You can purchase GTN spray over the counter at a pharmacy in an emergency. Always read the instructions and expiry dates.

Although the medicines above are commonly advised, treatments may vary depending on other factors such as whether you have complications or other diseases.

Prescription pre-payment certificate

If you normally pay for your prescriptions and are not exempt from the fee, then it may be worth obtaining a pre-paid certificate. These are usually for 3 or 12 months and can save you money.

You can get more advice and information about this from: Tel 0300 330 1341 (Advisors Mon-Fri 8-6pm, Sat 9-3pm) or online at:

www.nhsbsa.nhs.uk

Other activities

Sexual activity

Some people worry about resuming sex. For a few weeks, it is best avoided. If you are able to walk without discomfort, then a return to sexual relationships should not cause any problems. If sex causes angina chest pains, tell your doctor.

Some men find that they have problems getting or maintaining an erection (erectile dysfunction) after having a heart attack. These problems can be caused by emotional stress or by medication such as beta-blockers. However, impotence can also have other causes. Speak to your GP who can check what is causing your problems and advise you on treatment. Various treatments (including medication) are now very effective for the treatment of erectile dysfunction.

If you are considering using Viagra, please consult your GP.

If you have any other questions, please discuss them with your GP or a member of your Cardiac Rehabilitation team.

Travel

Is it safe for me to go on holiday?

Most people with a heart condition are able to go on holiday. If your heart condition is stable, well controlled and you feel well, you should be okay. However, we've got some handy hints and tips if you, or a member of your family, have a heart condition. When planning your holiday, you should think about:

- Staying in accommodation that's easy to reach and close to any amenities.
- Taking a relaxing holiday. Don't go to destinations that are too hilly or do activities that are too vigorous unless you're confident that you're recovered and are fit enough for that level of activity.
- Keeping an up-to-date list of all your medication and doses in your purse or wallet, just in case you lose any of them, including the generic and brand name of your medicines.
- Taking enough medications with you to last throughout your holiday.
- If you are travelling by air or going overseas, get a letter of explanation from your GP regarding your condition, drugs, allergies and any medical devices you may have (for example, a pacemaker or ICD).
- Making sure you have the right travel insurance to cover your condition.

Can I travel by air?

According to expert guidance from the British Cardiovascular Society, most people with heart and circulatory disease can travel by air safely without risking their health. **However, you should always check with your GP or heart specialist that you are fit enough to travel by air, particularly if you've recently had a heart attack, heart surgery or been in hospital due to your heart condition.**

If you're given the go ahead to take a holiday that involves air travel and think you'll need assistance at the airport terminal or during the flight, let the airport or airline know well in advance. This may include help with your luggage or early boarding to the plane.

If you need to, it's safe to use your glyceryl trinitrate (GTN) spray while on the plane.

Patient Information

If you need to take medications that are liquids, creams or gels over 100ml in your hand luggage, then you'll need a letter from your doctor and approval from the airline before you travel.

If you are flying through times zones, it may be difficult to keep to your pattern of taking your medications. Your GP or practice nurse will be able to advise you on how best to deal with this.

Further information can be obtained from the UK Civil Aviation Authority at www.caa.co.uk.

Am I safe to walk through the airport security systems?

If you have a pacemaker or an ICD, you should take your device identification/card with you and inform the airport staff that you have a device inserted. If you are asked to pass through the security system, walk through at a normal pace and don't linger.

Most modern pacemakers and ICDs are well shielded against outside interference and so interference is very unlikely. However, the metal casing may trigger the security alarm. If a hand-held metal detector is used, it should not be placed directly over your device.

The Medicines and Healthcare Products Regulatory Agency (MHRA) can provide you with further advice and information on the safety aspects of airport security systems when you have a pacemaker or an ICD.

For further information on travel and insurance contact the **BHF Heart Helpline: 0300 330 3311** or www.bhf.org.uk

Patient Information

Driving

Unless you are told otherwise, you can drive your car 4 weeks after a heart attack, provided there are no complications. This advice will be clarified by your cardiac rehab nurse.

- It is not usually necessary to inform the DVLA, but you **must** tell your insurance company. For most people, this does not affect their premiums, but any claims may not be paid if you have not informed them.
- **Holders of PSV or HGV licences have specific restrictions.** Please ask your doctor or rehabilitation team. You will have to inform the DVLA.
- If your job involves driving, you **may** have to be passed medically fit to drive - please ask your doctor.

Work

Most people return to their usual job after a heart attack, and this can help you feel you are getting back to normal. Your GP will give you guidance about when to return, but most people normally take at least 6 weeks off work.

You can use this time to recover and to put plans in place for your future lifestyle. This is best done by attending your cardiac rehabilitation programme.

Coronary heart disease may delay or prevent some individuals from returning to their previous employment. For example, if you are a:

- Heavy Goods Vehicle (HGV) and Public Services Vehicle (PSV) licence holder
- Taxi driver
- Train driver
- Airline pilot

You will need to discuss this with your GP if you fall into one of these categories.

Some common questions

After I leave hospital, who is in charge of my health?

Just like before your heart attack, **you are**. Your GP will want to monitor your progress, so make an appointment to discuss your care early in your recovery. Your GP can give advice and make changes to your medicines if necessary.

You should tell your GP quickly if you notice any of these symptoms:

- You are becoming more breathless
- You are suffering more angina attacks
- Your angina attacks are more severe (the GTN does not work as well as it used to)

If you have started a new tablet called an ACE inhibitor, the doctor or nurse at your surgery may want to check your blood about 2 weeks after you leave hospital. If your cholesterol was high in hospital, this should be checked again after about 3 months.

Your practice may also run heart disease clinics where these things can be checked every year.

Will I have a follow up appointment after my heart event?

You will be sent an appointment to attend a follow up appointment. This follow up appointment may be with a consultant cardiologist, cardiac nurse specialist or with a cardiac rehabilitation specialist nurse.

What can I do to help myself after having a heart attack?

Following a heart attack, there are things that you can do to reduce the risk of further heart problems. Everyone is different and individual circumstances will vary. You should discuss with your cardiac rehab nurse what is **best for you**. This information aims to support any advice that you may receive.

Risk factors for coronary heart disease

What is a risk factor?

A risk factor is anything that increases or speeds up the development of heart disease. Some risk factors cannot be changed, but some can be altered by your own efforts or by medical treatment. It is important that you identify and control your risk factors for coronary heart disease.

Prevention is the key to reducing the number of deaths from coronary heart disease. By controlling your risk factors, you can reduce the risk of further complications, and slow the progression of your coronary heart disease.

What are the risk factors that cannot be changed?

Family History: the chance of developing heart disease is higher if your parents or siblings had coronary heart disease before the age of 40.

Gender: Men are more likely to have a heart attack or a stroke than women of childbearing years. It is believed that the female hormones have a protective effect against heart disease. In recent years, more women under the age of 40 have developed coronary heart disease and high blood pressure, probably as a result of changing lifestyles, including an increase in smoking among women.

Age: Studies have shown that the older we get, the more likely we are to develop coronary heart disease. This may be as a result of the ageing process, or long-term exposure to other risk factors.

Which risk factors can be changed?

Smoking: Smokers are at a much greater risk of having a heart attack than non-smokers. Smoking promotes heart disease by increasing the number of fatty deposits/plaques building up on the walls of the arteries, causing them to narrow and restricting the flow of blood through the arteries. When someone stops smoking, their risk of heart disease drops rapidly. 10 years after stopping smoking, the risk of death from coronary heart disease returns to the same level as for someone who had never smoked.

Patient Information

High blood pressure: High blood pressure is defined as greater than 140/85 for at least three consecutive readings. There is no 'average' blood pressure; it can vary according to your age, weight and medical history.

High blood pressure increases the pressure on the walls of the blood vessels and can damage them. This can be a factor in heart attacks, strokes, and kidney failure. If you have heart disease, the doctors aim to keep your blood pressure below 130/80.

Blood cholesterol levels: People who have high cholesterol levels are at greater risk of plaques forming in their arteries.

For people with coronary heart disease, a total cholesterol level of less than 4mmol is preferable, with LDL cholesterol of less than 2 mmols and HDL cholesterol of **more than** 1 mmols.

Your GP will re-measure your total cholesterol, HDL cholesterol and non-HDL cholesterol at 3 months from starting on treatment and will aim for a 40% reduction in non-HDL cholesterol.

If this is not achieved the following may be discussed with you:

- adherence and timing of your cholesterol lowering medication
- diet and lifestyle measures
- an increase in the dose of medication may be considered

Diabetes: Diabetes affects the risk for heart disease when there is poor control of blood sugar levels. This can damage the walls of the arteries permanently.

Obesity: It is very important to take steps to tackle obesity as it can lead to a number of serious and potentially life-threatening conditions, such as:

- Type 2 diabetes
- Coronary heart disease
- Some types of cancer, such as breast cancer and bowel cancer
- Stroke.

For further information: www.nhs.uk/conditions

Patient Information

Lack of physical activity: Inactivity may lead to obesity, and so increase your risk. Exercise itself has beneficial effects - when done regularly, it can reduce your blood pressure, and your blood cholesterol. It may also prevent plaques from forming on the artery walls.

Stress: Prolonged stress over time can contribute to increased smoking, alcohol use, overeating and high blood pressure. All of these increase the risk of heart disease.

Alcohol: UK government guidelines state that the alcohol limit for men and women is the same. Men and women should not regularly drink more than 14 units per week to keep health risks from alcohol low. If you do drink up to 14 units a week, it's best to spread these evenly across a few days and to have at least 2 drink-free days a week.



What is a unit?

One unit is 10ml or 8g of pure alcohol. Because alcoholic drinks come in different strengths and sizes, units are a way to tell how strong the drink is.



For further information: www.drinkaware.co.uk

Smoking

If you smoke, giving up smoking is the single most effective way to reduce your risk of having a further heart attack. The chemicals in cigarette smoke affect your arteries. If you stop smoking, your risk of a further heart attack is halved compared to the risk of one if you continue to smoke. Stopping smoking can make a drastic improvement to your lifestyle and health in ways you might not expect. Once you stop smoking, some of the benefits are immediate and some are longer-term.

If you find it hard to give up smoking, seek help from your doctor, practice nurse or pharmacist. They can give help and can advise on the use of nicotine replacement therapy (such as nicotine gum) or other treatments that can help you to stop smoking.

Patient Information

Stopping smoking is not easy. Below are some tips which may help you to quit smoking. There are details of further resources that may help.

- **Write a list of the reasons why you want to stop** and keep them with you. Look at them when tempted to light a cigarette.
- **Set a date for stopping** and stop completely. Some people prefer the idea of cutting down gradually. However, research has shown that if you smoke fewer cigarettes than usual, you are likely to smoke more of each cigarette and nicotine levels remain nearly the same. Therefore, it is usually best to stop once and for all from a set date.
- **Tell everyone that you are giving up smoking.** Friends and family often give support and may help you. Smoking by others in the household makes giving up harder. If appropriate, try to get other household members who smoke, or friends who smoke, to stop smoking at the same time. A team effort may be easier than going it alone.
- **Get rid of ashtrays, lighters, and all cigarettes.**
- **Be prepared for some withdrawal symptoms.** When you stop smoking, you are likely to get symptoms which may include feeling sick (nausea), headaches, anxiety, irritability, craving, and just feeling awful. These symptoms are caused by the lack of nicotine that your body has been used to. They tend to peak after 12-24 hours and then gradually ease over 2-4 weeks.
- **Anticipate a cough.** It is usual for a smoker's cough to become worse when you stop smoking as the airways become more clear. Many people say that this makes them feel worse for a while after stopping smoking and makes them tempted to restart smoking. Resist this temptation. The cough usually gradually eases.
- **Be aware of situations** in which you are most likely to want to smoke. In particular, drinking alcohol is often associated with failing in an attempt to stop smoking. You should consider not drinking much alcohol in the first few weeks after stopping smoking.

Try changing your routine for the first few weeks. For example, despite the UK ban on indoor smoking in pubs, outside the pub might still be a tempting place to drink alcohol and smoke. Also, if drinking tea and coffee are difficult times, try drinking mainly fruit juice and plenty of water instead.

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- **Take one day at a time.** Mark off each successful day on a calendar. Look at it when you feel tempted to smoke and tell yourself that you don't want to start all over again.
- **Be positive.** You can tell people that you don't smoke. You will smell better. After a few weeks, you should feel better, taste your food more and cough less. You will have more money. Perhaps put away the money, which you would have spent on cigarettes, for treats.
- **Food.** Some people worry about gaining weight when they give up smoking, as the appetite may improve. Be ready for an increase in appetite and try not to increase fatty or sugary foods as snacks. Try fruit and sugar-free gum instead.
- **Don't worry if you fail.** Think about the reasons why you felt it was more difficult at that particular time. This will make you stronger next time. On average, people who eventually stop smoking have made 3 or 4 previous attempts.
- **Stop smoking clinics.** You are up to 4 times more likely to quit with NHS help. A Stop Smoking Advisor will see you regularly for up to 12 weeks, and will organise for you to have a stop smoking product for the cost of prescription – these are free if you don't pay for prescriptions
- If you think you've tried every way to quit already, think again. The chances are that you haven't tried all the possible stop smoking products. There are new and better products becoming available regularly. Get in touch with your local stop smoking service or ask your GP, practice nurse or local pharmacist to find out what the options are – you may well find something that suits you so you can become smoke free for life
- **Various medicines** can increase your chance of quitting. These include nicotine replacement therapy (NRT) which comes as gums, sprays, patches, tablets, lozenges and inhalers. You can buy NRT without a prescription. Also, medicines called bupropion and varenicline can help. These are available on prescription. See separate leaflets called Nicotine Replacement Therapy, Bupropion (Zyban®) and Varenicline (Champix®).
- **E-Cigarettes:** An e-cigarette is an electronic device that delivers nicotine in a vapour. This allows you to inhale nicotine without most of the harmful effects of smoking, as the vapour contains no tar or carbon monoxide. Research has found that e-cigarettes can help you give up smoking, as with other approaches, they're most effective if used with support from an NHS stop smoking service.

Patient Information

Find your nearest NHS Stop Smoking Service

There's a free local NHS Stop Smoking Service near you – find your closest here.

NHS Smoking Helpline

Tel: 0300 123 1044 www.nhs.uk/smokefree

Healthy Lifestyles Coventry Stop Smoking Service

Tel: 0800 122 3780
hlscoventry.org

Rugby Cardiac Rehabilitation Stop Smoking Service

Tel: 01788 663463

Keeping active

Follow the advice in the leaflet and build up your activity gradually. Eventually you should aim to do something for at least half an hour most days of the week. Try to make activity part of living. Use the stairs and not the lift. Walk to places rather than drive.

The activity does not need to be strenuous. You should be a little out of breath, but still able to talk to someone, it should be something you enjoy. Your cardiac rehab team will give you further activity and exercise advice and information.

Healthy eating

A healthy diet is important for everyone. People who have had a heart attack are not put on a “special” diet. The aim of healthy eating is to protect the heart. This is not the same as aiming for weight loss. By eating healthily, you may or may not lose weight, but you will protect your heart even if your weight stays the same. The main aims are to:

- **Have plenty of fruit and vegetables:** eating plenty of fruit and vegetables helps in several ways. It can help prevent damage to the arteries and help to control cholesterol and blood pressure. It is also good for overall health. Aim for at least 5 portions a day.

A portion is about a handful, one large or two small pieces of fruit, a bowl of salad, a glass of fruit juice or 3 tablespoons of vegetables.

- **Reduce your general fat intake:** many people would benefit from reducing their general fat intake. Foods like sausages, burgers, meat pies, ghee and pastries contain saturated fat and it is best to limit these. Remember to trim visible fat from meat or drain the fat from mince.
- **Reduce your salt intake:** this can help prevent high blood pressure. Try pepper, herbs, spices or lemon instead of salt. The following foods are very high in salt so try to reduce them: salted nuts, crisps, tinned / packet soups, tinned or smoked meats, ready meals, and take-aways. Cooking at home can give you more control over your own salt intake.
- **Eat fish twice a week:** one portion should be a white fish such as cod, plaice and haddock. Another portion should be an oily fish, such as mackerel, herring, pilchards, salmon. More details are available from your nurse or dietitian.
- **Increase your fibre intake:** try to include more high fibre starchy foods such as high fibre cereals, brown rice, and wholemeal pasta/bread. Try to eat more pulses - peas, bean, lentils as well as unsalted nuts.

Stress

We all live under some stress - it gives us the challenges that make life interesting. It is when the stress in our lives feels overwhelming that it can have harmful physical and psychological effects. Managing stress in an effective way is an important skill to develop.

Think about the things that cause you stress:

- What things can you change or have an influence on?
- Accept those things we cannot change while focusing on those things we can do something about.

Reduce your stress reaction:

- Remind yourself of the “What can you do to help?” section and try to put some of these ideas into practice.

Lessen the demands:

- Find a balance between work, rest and play, and keep to it
- Learn how to say “no” when you are unable to do something
- Live life at your own pace
- Don’t try to be the perfect wife/husband, worker, or parent.

Improve your coping skills:

- Do regular exercise
- Get adequate sleep
- Follow a good diet
- Take holidays
- Find a hobby you enjoy.

Change your attitude:

- Try to think positively. When we think more positively, it has a positive effect on the way that we feel.

Heart information booklets

The British Heart Foundation publishes several booklets which can either be downloaded from their website: www.bhf.org.uk or your cardiac rehabilitation nurse will be able to arrange one for you.

The following booklets may be of interest to you:

- Angina
- Blood pressure
- Caring for someone with a heart problem
- Returning to work with a heart condition
- Heart Attack
- Medicines for the heart
- Physical activity and your heart
- Reducing your blood cholesterol
- Stop Smoking – how to quit for a healthy heart
- Cardiac Rehabilitation
- Coping with stress
- Tests
- Eating Well
- Insurance solutions for heart patients (travel, life & motor)

Your comments about the service

The rehabilitation team welcomes your suggestions, compliments, and complaints. These are used positively to help us to improve the service we offer.

Any complaint can be made directly to any of the rehabilitation staff listed. You can also complain to the complaints manager or more senior managers of the hospital trust or your primary care trust. You can find their names and addresses in the hospital or at your own surgery.

The data protection activities

As with all aspects of your contacts with the health service, the most important aspects of any discussions you have with your cardiac rehabilitation team will be written down. This information will be kept either on paper in locked offices or on computers which are protected by passwords. No information is sent over the internet but may be sent via secure NHS servers to your own hospital. The information will only be shared if it may help with your care. It may be passed to your consultant, general practitioner, practice nurse or other cardiac rehabilitation nurses. From time to time, it may be used to audit the cardiac rehabilitation programme. This is designed to judge the Cardiac Rehabilitation team, not you. You may request to see information held about you by writing to your hospital consultant. A small charge will be made for this.

Cardiac rehabilitation helpful organisations

Don't spend too long thinking of yourself as a patient - you've got the rest of your life ahead of you and it's time to get on and enjoy it.

NHS - 111

The British Heart Foundation

Heart Information line 0300 330 3311

Greater London House, 180 Hampstead Road, London, NW1 7AW

Tel: 020 7554 0000 www.bhf.org.uk/

Diabetes UK Tel: 0345 123 2399

info@diabetes.org.uk

www.diabetes.org.uk

Heart UK – The Cholesterol Charity

Helpline 0345 450 5988, Mon-Fri 10-3pm

www.heartuk.org.uk

Age UK

Free helpline: 0800 678 1602

www.ageuk.org.uk/

Pre-Payment Certificates (PPCS)

Tel: 0300 3301341

www.nhsbsa.nhs.uk

Patient Information

The Trust has access to interpreting and translation services. If you need this information in another language or format, please contact 024 7696 5666 and we will do our best to meet your needs.

The Trust operates a smoke free policy.

Did we get it right?

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

Have your say. Scan the QR code or visit:

www.uhcnw.nhs.uk/feedback



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