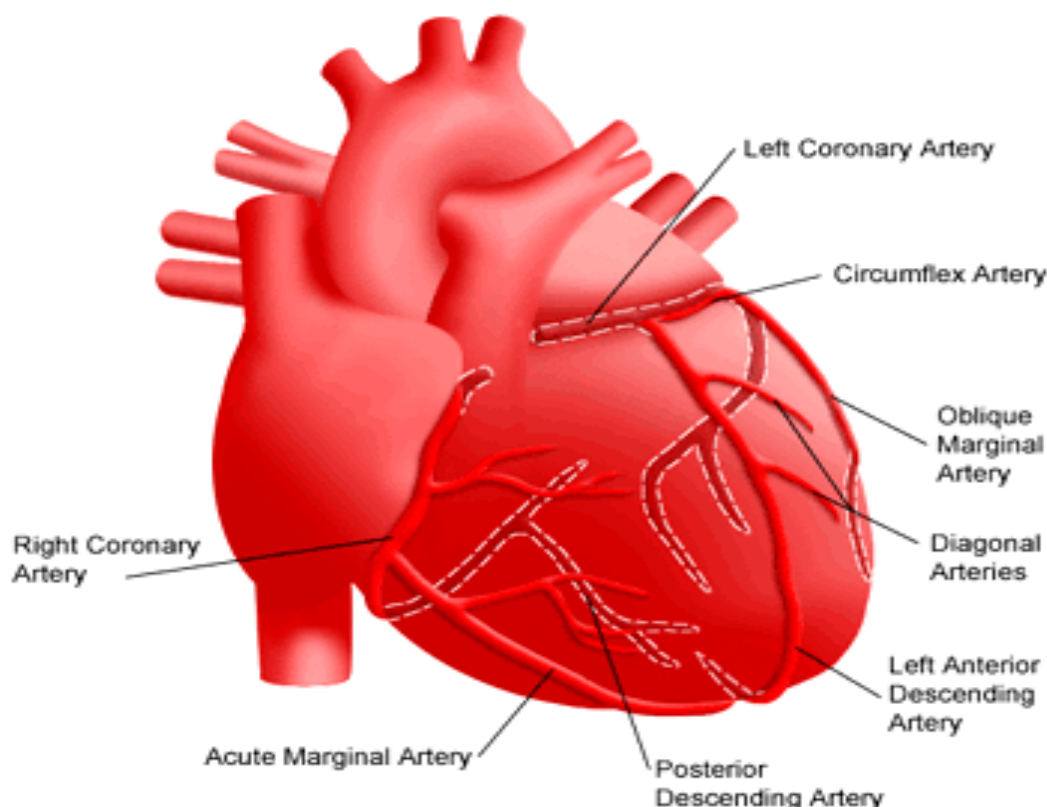


Recovering from a Heart Attack

This leaflet provides information to help you following your heart attack.

Coronary Arteries of the Heart



How does the heart work?

The heart is a muscular pump situated in the centre/left of the chest. It receives blood from the body and pumps it to the lungs where it is loaded with oxygen. The oxygen enriched blood then returns to the heart which is then pumped around the body to the muscles and organs. The muscle of the heart needs its own blood supply through what are known as coronary arteries, enabling it to beat for an average of 70 times a minute 24 hours a day.

What is cardiovascular disease?

A fatty deposit called atheroma can build up in the lining of the arteries over a number of years. This narrows the artery, gradually reducing the amount of blood that can get through to the heart muscle. This process is called atherosclerosis and is known as 'cardiovascular disease' and can cause angina, heart attacks and strokes

What is Angina?

Angina is the name of the pain that occurs when the heart muscle is short of blood and oxygen. It usually occurs during exercise or at times when you are feeling stressed or upset.

People can feel angina in different ways. Some have pain in the middle of their chest, some experience this pain as a tightness or heaviness. You may experience discomfort in your arms, neck or jaw. Sometimes this discomfort can be mistaken for heartburn or indigestion. Angina is a warning sign that you have developed cardiovascular disease and should be investigated further.

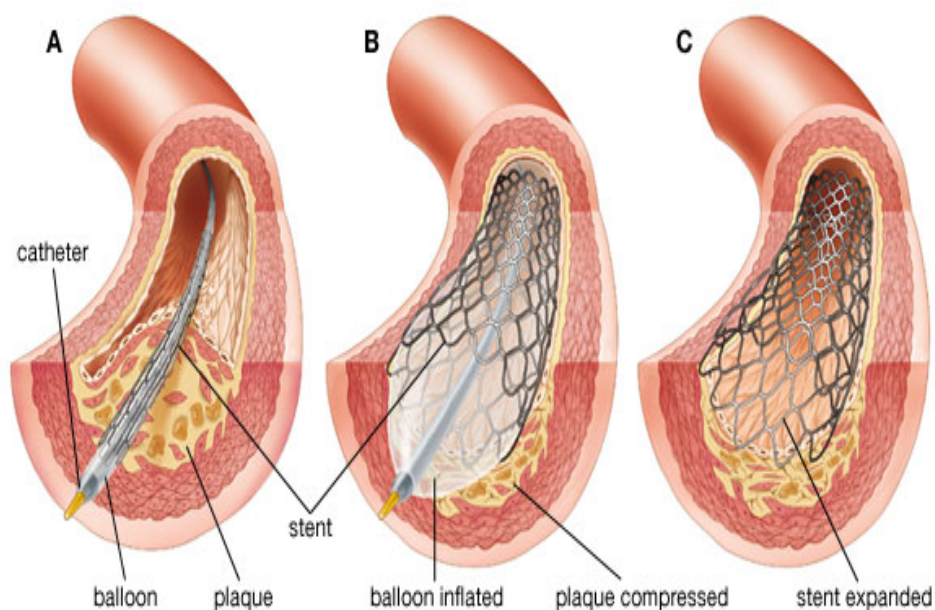
What is a heart attack?

A heart attack, sometimes called a myocardial infarction, (MI), happens when a coronary artery is completely blocked either by the atheroma or a blood clot (called a thrombus). When an area of the heart muscle is completely deprived of blood and oxygen, a portion of this area will become damaged. It is usually only a small area of heart muscle that is affected and the rest of the heart compensates by taking over the workload. Although a heart attack is a sudden event, it is often the result of a process that has been going on for a number of years. The sooner it is treated the less damage occurs.

It should be recognised as a warning that you have cardio-vascular disease and from this you take positive steps to reduce the risk of having more problems in the future. The fact that you have had one heart attack does not mean that you will have another one.

Treatment of a heart attack

- An electrocardiogram (ECG) is performed for diagnosis. This looks at the heart's electrical signals and helps determine the type of heart attack and treatment required.
- A blood test to measure an enzyme called Troponin can also help confirm diagnosis.
- Early treatment may consist of tablets, oxygen and GTN spray to stabilise you and treat pain. Then an angiogram (a type of X-ray) that will look at the arteries of your heart may be performed and often an angioplasty and stent insertion (PCI) will be undertaken to treat the narrowed/blocked artery (ies) in your heart. This may be done as soon as you arrive at the Coronary Care Unit (Primary PCI) or within a few days.



© 2007 Encyclopædia Britannica, Inc.

- You will be attached to a cardiac monitor to assess your heart rate and rhythm
- Oxygen may also be given.
- Other tests include chest x-ray and blood tests.
- One of the blood tests taken will measure the amount of glucose (sugar) in your blood. If the level is found to be too high you will be given insulin (whether you have diabetes or not). This is because the effects of the heart attack can release toxins called fatty acids and they affect how the body uses its own insulin. Insulin is needed to reduce these toxins and reduce the blood glucose level. It may be suggested that you go home on insulin injections to reduce the risk of a further heart damage.
- The hospital stay is generally between two and five days. Initially you will be encouraged to rest in bed, but then to gradually increase your activities as the day's progress. Healing of the damaged area of the heart muscle takes approximately six weeks and a scar will form.

The hospital staff involved in your care may include:

- Doctors
- Nursing staff
- Cardiac rehabilitation specialist nurses
- Cardiac Specialist nurses
- Pharmacists
- Dieticians
- Social workers
- Diabetic nurse specialists
- X-ray staff
- Technicians
- Ward clerks

You may also meet catering staff, porters, housekeeping and maintenance staff.

Going home after a heart attack

Having a heart attack is a frightening experience and you may feel anxious about going home but you will regain your confidence with time. You are often admitted, treated and discharged very quickly and it can take time to realise what has happened and start to come to terms with having had a heart attack and living with cardio-vascular disease.

It is normal to feel quite tired and emotional when you first get home and it is important to recognise these feelings and discuss any fears or worries with your family or your cardiac rehab nurse. These feelings should gradually go away but if they persist for longer than a few weeks you should seek further guidance from your GP or cardiac rehabilitation nurse.

The following weekly plan contains guidelines not rules. Use your common sense and try to do a little more each week as suggested in the programme. Do not force yourself to continue with activities if you feel tired. Try new activities gently. It is natural to be apprehensive but as long as you take your time and pay attention to how you are feeling you will not overdo it. Gradually increasing your activity levels like this allows the time needed for your heart muscle to heal.

Week 1

When you are first home, you should continue with the same routine as the last few days in hospital and then slowly increase your activity over the following week to include the following:

- Washing and dressing each day
- Sedentary interests: reading, listening to music, TV etc.
- Making tea, coffee, snacks
- Laying the table
- Completing up to one hour of non-stressful paperwork/emails
- Walking for five minutes once or twice each day
- It is alright to go up and down stairs but try to avoid unnecessary trips.

Week 2

- Light housework - dusting, washing up/loading dish washer, making beds (no changing)
- Light DIY jobs - changing bulbs, fixing screws, painting (no heavy lifting)
- Light gardening - weeding, trimming, watering with a hose (no digging or mowing)
- Keep to short sessions of these activities around 10 to 15 minutes at a time
- Preparing simple meals
- Continuing to have a rest after lunch
- Walking for ten minutes once or twice each day

Week 3

- Short shopping trips and carrying light shopping
- Small social outings: visiting friends, eating out, cinema
- Sports such as snooker, bowls, tai-chi, Pilates and darts
- 15 minute walk twice each day - you can include some gentle hills

Week 4 to 5

- Moderate housework-vacuuming, sweeping, laundry, ironing
- Similar moderate types of gardening or DIY jobs.
- Normal meal preparation
- Sports (if you usually do them): cycling, swimming, golf (start with short sessions at a driving range)
- 20-30 minute walk twice a day
- Avoid straining or lifting more than 10-15 lbs in weight
- Cardiac rehabilitation groups may start

Weeks 6 to 8

- Heavy housework - cleaning windows, scrubbing floors, decorating, washing the car
- Heavy Gardening - mowing, digging, moving heavy bags of compost etc
- 30-40 minute walk twice each day
- Unfortunately we do not store our fitness levels, so it is necessary to exercise for 30 minutes at least five times a week to maintain your heart health and fitness.

Driving

- Legally you may be able to drive your car one week after an **uncomplicated** heart attack but **only if** your heart function has not been affected (checked with an echocardiogram), you don't need any further treatment and your symptoms are stable. Your cardiologist or cardiac rehabilitation specialist will advise you if this is the case. You do not need to inform the DVLA. However you may be advised not to drive for up to four weeks. We advise you to inform your insurance company about your heart attack. This is to ensure that your cover is sufficient and that you do not have any problems with claims in the future.
- If you hold Group 2 licence (Bus / Lorry / Taxi) you **must** inform the DVLA. You will be required to undergo an exercise test in order to regain your licence. **This cannot be done earlier than 6 weeks after your heart attack or any subsequent stent insertion.** This will have to be discussed with your employer, GP and Cardiologist. The same applies to train drivers and pilots.
- If you get angina whilst driving, you must discuss this with your GP. **You must not drive if you are experiencing symptoms at the wheel.** You may resume driving once adequate symptom
- Control has been achieved.

Work

- Depending on the nature of your job, our aim is for you to return to work six weeks after your heart attack. It may take up to 10-12 weeks if your job involves a lot of heavy, manual work. You should discuss your return to work with your GP and employer.

Holidays and air travel

- A holiday can be helpful to you and your family's recovery. It is sensible to leave this until you feel you can enjoy the break, usually after six to eight weeks. You must discuss your suitability for travel with your GP.
- When booking your holiday, take out holiday insurance and discuss any special requirements with the travel agent or airline. If you are travelling to the European Union (EU) countries you should obtain an E111 card online from www.gov.uk/european-health-insurance-card
- It is not a good idea to carry heavy cases for long distances so do take advantage of any help that is offered at the airport or hotel.

Resuming your sex life

- You and your partner may be worried that sex will put the heart under a great deal of strain and cause some damage. These fears are understandable but the general guideline is that sexual activity needs no more effort than when climbing a flight of stairs. Most patients will feel happy to return to their sexual relationship after two to three weeks.

Preventing a further heart attack

We know that certain factors make coronary heart disease worse and heart attacks more likely. These are called risk factors. There are risk factors that you can do nothing about (non-modifiable) and those that you **can** do something about (modifiable). Improvements in health and the reduction of modifiable risk factors are part of managing your condition long term.

Non-modifiable

Family History

- Heart disease runs in families.
- If one parent has disease then the risk is 15% greater than if they had not.
- If both parents developed early heart disease then the risk increases to 50%.

Age

- Coronary heart disease risk increases as we become older.

Gender

- Men are more likely to suffer from heart disease earlier than premenopausal women.

Ethnic Origin

- There is a known higher risk in the Asian and South Asian populations.

Body Shape

- Apple shape (high waist/hip ratio)

Diabetes

Modifiable

Smoking

Smoking is the most significant preventable risk factor. The risk of heart disease in smokers is twice that of a non-smoker.

Smoking increases the thickness of the blood and roughens the artery lining. It increases blood pressure and speeds up the heart. It also increases cholesterol levels.

From the moment you stop smoking the risk of having a heart attack declines by 50% within the first year of stopping.

It is never too late to give up smoking!

Cholesterol

If cholesterol levels are too high it causes the arteries supplying the heart muscle to furr up and narrow (develop cardio-vascular disease). Cholesterol is manufactured by the liver and absorbed from dietary intake of saturated fats. Blood cholesterol can be reduced by medication, healthy diet and life-style. Guidelines for cholesterol levels for those with cardiovascular disease are lower than the general population (Total ≤ 4 mmol/L or less LDL ≤ 2 mmol/L or less). There is also research evidence that statins lower the risk of heart attacks and strokes even in those with apparently normal cholesterol levels. Your cardiologist and cardiac rehabilitation specialist will discuss your individual case and recommendations

High Blood Pressure

In 90% of patients with high blood pressure (BP) the cause is unknown. It is recommended that BP should ideally be below 140/85mmHg on average. If you have diabetes it is recommended that your BP should be below 130/80mmHg.

A high BP results in the heart having to use more energy in pumping blood around the body. It also damages the inside lining of the arteries. It is important to have your BP checked regularly by your GP or Practice Nurse.

Diabetes

Although diabetes itself is a non-modifiable risk factor, diabetes control can be modified. If good control is achieved this can reduce the risk of further problems. Aim for HbA1c levels of around 48 mmol/mol (6.5%) and ask for advice from your GP and your diabetes consultant or nurse specialist.

Stress

Stress is often hard to assess. However patients often attribute developing cardio-vascular disease or having a heart attack to stress. Stress increases the heart rate and blood pressure and the blood becomes more likely to clot. The most important factor is to recognise when you are stressed and take appropriate action such as using relaxation techniques, aromatherapy, listening to music and taking exercise which are all useful in managing stress. Managing stress levels is an important factor in your ongoing heart health and wellbeing.

Inactivity

Regular exercise is good for your heart and is part of the treatment of your cardio-vascular disease. Research has shown that patients who exercise regularly dramatically reduce their risk of further cardiac illness and serious complications.

Exercise stimulates small arteries in the heart to grow and take over the work of the blocked or narrowed arteries. Exercise improves all of the above risk factors and reduces symptoms. It increases confidence and morale which makes day to day life more enjoyable.

Increased weight (BMI over 30) and waist circumference over (80 cm/ 31.5 ins in women 94 cm / 37 ins in men)

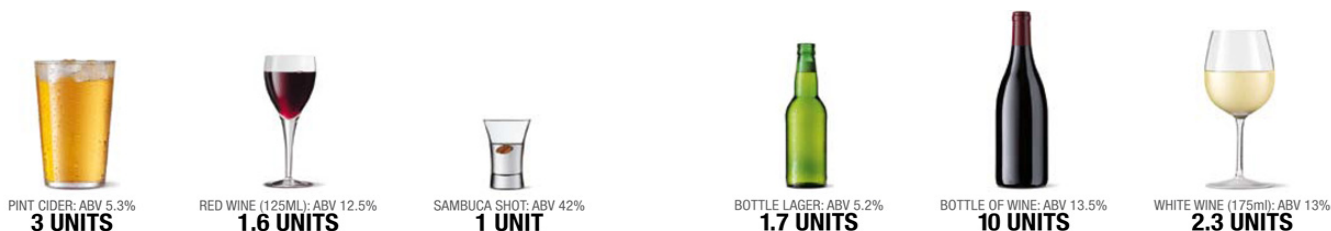
Your body shape and being overweight increases your risk of developing health problems such as raised blood pressure, high cholesterol and diabetes and therefore your overall risk of cardio-vascular disease. Losing weight is not always easy, so it is important to be motivated and set realistic goals. A reduction in weight / waist circumference can reduce blood pressure, reduce cholesterol levels, reduce the risk of developing diabetes and improve blood sugar control.

Alcohol Intake

Evidence suggests that any level of alcohol intake can increase the risk of ill health especially all cancers. Specifically for the heart drinking too much alcohol can:

- Increase your blood pressure
- Affect your cholesterol level by increasing triglycerides.
- Make you gain weight
- Increase blood sugar levels (diabetics)

Recommended levels are: 14 units per week with no more than 2 units in any one day with at least 2 days alcohol free. A guide to units follows:



Units. They all add up.



Cardiac Rehabilitation

You will be visited or contacted by a Cardiac Rehabilitation Specialist Nurse, whose role includes:

- Information giving.
- Support for you and your family/next of kin.
- Risk factor assessment.
- Supporting your individual lifestyle changes.
- Education.
- Outpatient exercise and health education programme.

Your cardiac rehabilitation nurse will follow you up by telephone contact once you are discharged home. You are also encouraged to contact the cardiac rehabilitation team with any questions or concern's you or your family may have in order to support your recovery and arrange your rehabilitation programme.

The cardiac rehabilitation programme is an ideal chance for you to maximise your exercise capacity, to increase confidence and to gain information about staying healthy and modifying your risk factors. It is also helpful to meet with other people who have been through a similar experience to you. Our aim is to cater for all and tailor programmes individually.

Your cardiac rehabilitation nurse is

The exercise programme involves attending an exercise class weekly for a period of time according to what is available for your area. Your cardiac rehabilitation nurse will discuss with you when you are ready for the exercise class.

Follow up

Most patients will be seen in outpatients by the cardiology team between four and 12 weeks after discharge. This is to monitor your progress, discuss your medications and to assess if any further tests need to be done. It is useful if your partner or a friend can come with you to the appointment as it can be difficult to remember exactly what the doctor has said. It may be useful to write a list of questions to ask the doctor.

People with diabetes or those found to have a high blood sugar level whilst in hospital will be followed up by the diabetes specialist nurse.

You will also be followed up by the cardiac rehabilitation specialist in the interim to monitor your recovery and address individual risk and life-style management factors. You will be offered a clinic appointment and or cardiac rehabilitation groups at around four weeks

Medications

On discharge from hospital you will be given a fourteen day supply of tablets. It is important that you see your GP to get a repeat prescription as soon as possible after discharge from hospital. You should not stop taking any of your tablets without your GP's agreement to do so. If you have any questions about your medications, contact your cardiac rehabilitation nurse, community pharmacist or local medicines information department.

Following angioplasty and stent implantation you will be given an additional drug called an anti-platelet such as Clopidogrel (Plavix), Ticagrelor (Brilique) or Prasugrel (Effient). The duration of this is usually for **one year** post stent, however your consultant cardiologist will advise you on the duration of this medication as it may vary from patient to patient. This is until the artery wall covers the stent with a smooth lining of cells (endothelium) to help prevent clots from forming inside the newly inserted stent. As well as an anti-platelet you will continue to take Aspirin (life-long). You should also be given an advice card to carry with you.

Important note: Some of your medications need to be increased to their maximum tolerated doses over the next few weeks in order to help your heart muscle heal and prevent further damage. You are encouraged to discuss and arrange this with your GP in the first two weeks following discharge.

Guidelines for the use of Glyceryl Trinitrate (GTN) spray

Since your heart attack you may be more aware of your heart beating and of discomfort in your chest and stomach. As your confidence increases, these feelings will cease. You will be discharged with a Glyceryl Trinitrate Spray (GTN) to use if you get any further chest pain.

This spray opens up the blood vessels in the body, including the coronary arteries, to allow more blood and oxygen to get to the heart muscle thereby relieving any chest pain or discomfort.

The spray should be carried with you at all times

The main side effects of the spray are headaches, flushing and dizziness. These are usually temporary and disappear after a few minutes.

Please do not use this spray if you have just taken Viagra.

What to do if you get chest pain

Following heart attacks and PCI some people may experience pain or discomfort in the chest. This is not unusual because bruising can occur during the procedure. Over a period of time this will lessen and disappear altogether.

If you do get chest pain and think it is angina, sit down and try to relax. If the pain does not go away in a couple of minutes, do the following:

- Sit down and stop what you are doing
- Take one to two puffs of GTN spray under your tongue or into your mouth
- Wait for five minutes (still resting)
- If you still have pain take another one to two puffs
- Wait for another five minutes
- If you still have pain take another one to two puffs

If you still have chest pain after fifteen minutes despite taking the GTN then dial 999 for an ambulance. The spray should be carried with you at all times.

Do not drive whilst experiencing chest pain and ensure the pain has gone before resuming your normal activities. If you are becoming more dependent on the spray on a daily basis, talk to your GP as you may need a change of medication or cardiology review.

Useful telephone numbers

Conquest

Conquest Hospital.....	0300 131 4500- East Sussex Healthcare
Cardiac Rehabilitation Nurses.....	0300 131 5303
Heart Function Nurse.....	0300 131 5081
James Ward.....	0300 131 5402
Coronary Care Unit.....	0300 131 5079/0300 131 5080
Baird Ward.....	0300 131 4450 Ext 770486
Cardiac Department.....	0300 131 5026
Pharmacy Medicines Information.....	0300 150 4500
Diabetes Specialist Nurse.....	0300 131 4500 Ext 773400

Eastbourne

Eastbourne DGH.....	0300 131 4500- East Sussex Healthcare
Cardiac Rehabilitation Nurses.....	0300 131 4450
Heart Function Nurse.....	0300 131 4500 Ext 735459
Coronary Care Unit.....	0300 131 4500 Ext 770544/772519
Berwick Ward.....	0300 131 4500 Ext 770543
Cardiac Department.....	0300 131 4500 Ext 773670
Pharmacy Medicines Information.....	0300 150 4500
District Diabetes Centre.....	0300 131 4500 Ext 773745
Heart Support Group.....	01323 722015 (Eastbourne)
.....	01323 449155 (Hailsham/Heathfield)
Diabetes UK.....	0345 123 2399
British Heart Foundation Helpline.....	0300 330 3311
NHS Smoking Helpline.....	0800 622 6968

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team – Tel: 0300 131 4731 (direct dial) or by email at: esh-tr.patientexperience@nhs.net

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 0300 131 4434 Email: esh-tr.AccessibleInformation@nhs.net

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

This leaflet was compiled using up to date relevant clinical guidelines and information by Cardiac Rehabilitation Specialist Nurses: Clare Baker

The following clinicians have been consulted and agreed this patient information:
Cardiologists: Dr Nik Patel and Dr David Walker

The clinical group that have agreed this patient information leaflet: Cardio-Vascular Medicine

Next review date: March 2024
Responsible clinician/author: Clare Baker Cardiac Rehabilitation Specialists

© East Sussex Healthcare NHS Trust – www.esht.nhs.uk