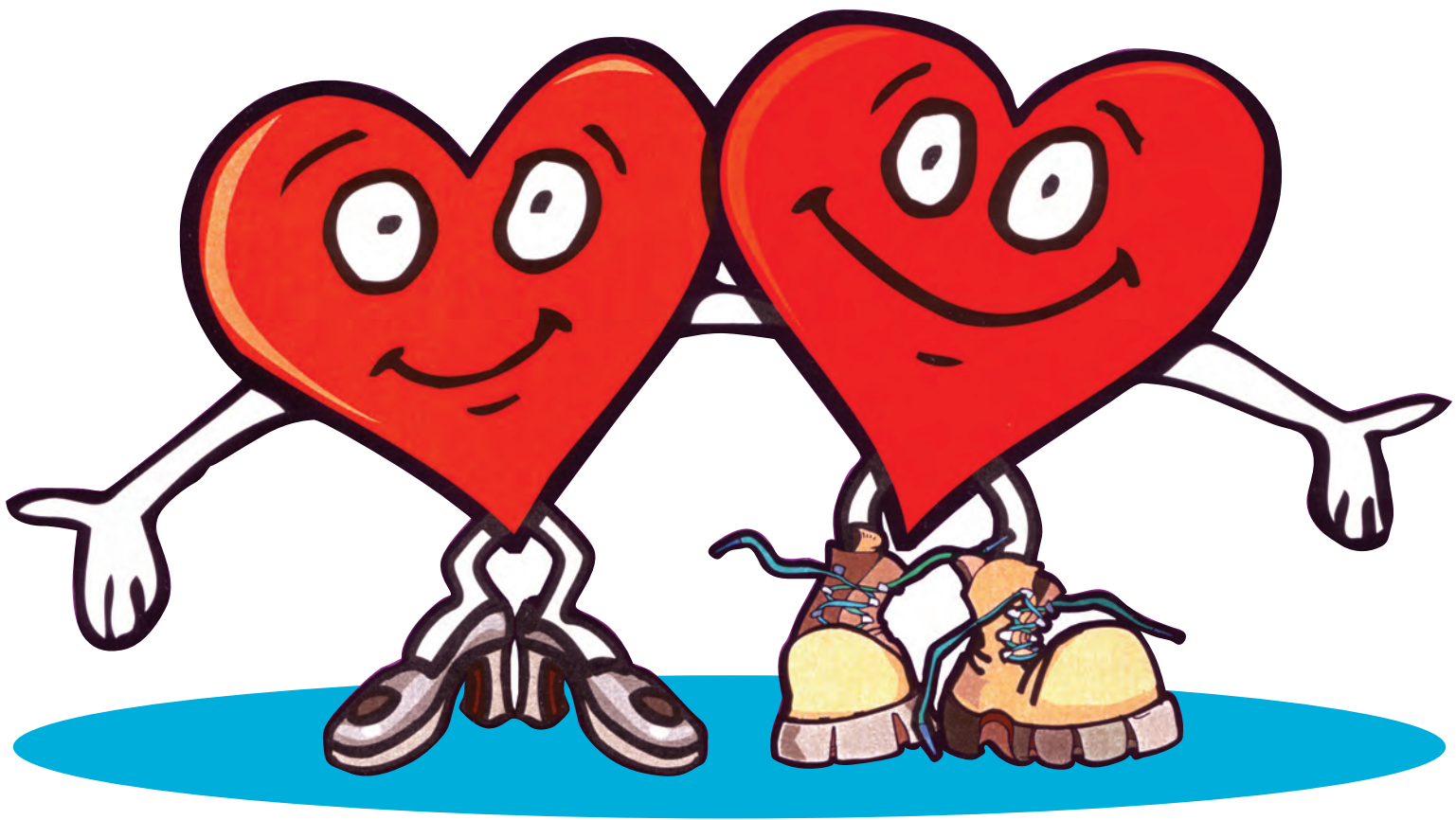


RUH

Information for Patients

After a Heart Attack



This booklet is a guide for patients who have had a heart attack and for their relatives.

It is meant to be quite general and not a substitute for the individual advice you will receive from all the team involved in your care.

Useful contacts:

Cardiac Rehabilitation Department

C/o Cardiac Ward

RUH 2nd floor central.

Royal United Hospital

Combe Park

Bath

BA1 3NG

Tel/Fax/Answer phone: 01225 825028

Your **Coronary Heart Disease Practice Nurse:**

DSS Benefits Enquiry Line: Freephone 0800 882200

NHS Direct: 0845 4647 www.nhsdirect.nhs.uk

British Heart Foundation: Heart information line: 0300 330 3311

Monday - Friday 9am-6pm

www.bhf.org.uk

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SECTION 1 : HEART ATTACKS

♥ What is a Heart Attack

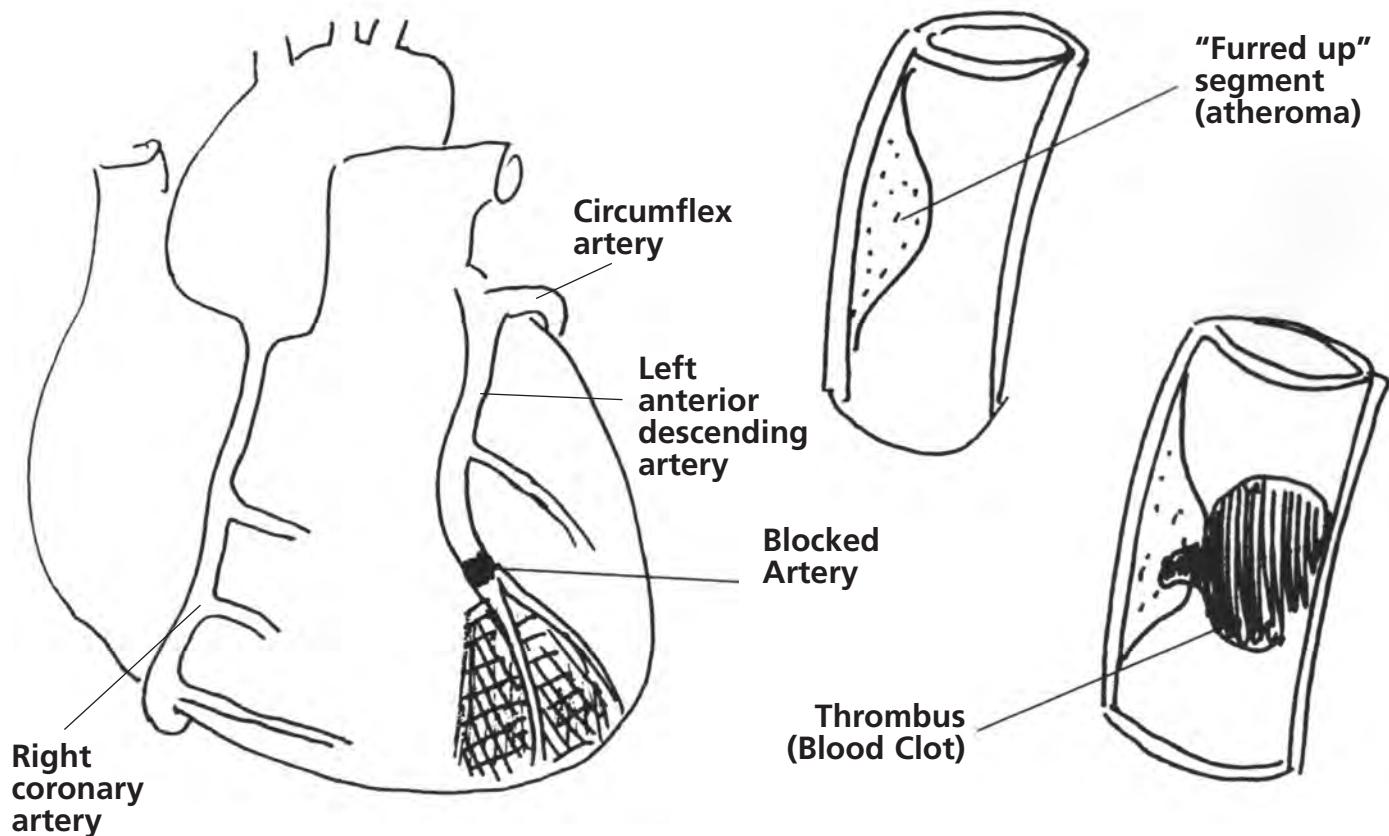
A heart attack occurs when one of the coronary arteries supplying the heart muscle becomes blocked.

The artery is usually blocked by a thrombus (a blood clot) on top of a narrowed or “furred up” segment, (often called a plaque).

A portion of heart muscle that the artery was supplying then becomes damaged and stops working normally. The damaged area is eventually replaced by scar tissue. It takes about 6 weeks for this process to happen.

Doctors and nurses use the term myocardial infarction, (or MI) for a heart attack because it describes what happens to the heart muscle (the **myocardium**) when its blood supply is cut off (a process called **infarction**).

Diagram of a heart attack and of a narrowed artery blocked by a blood clot.



♥ What causes a Heart Attack?

The coronary arteries can become “furred up” by a gradual build up of fatty material over many years. This process is known as **atherosclerosis**.

The walls of these diseased arteries (or plaques) may crack which then causes blood cells (called platelets) to be attracted to that area. A blood clot may form on top of this, which may block the artery.

There is no single cause for arteries to become narrowed but the more risk factors you modify the less likely you are to have further heart problems.

- SMOKING
- HIGH CHOLESTEROL
- DIABETES
- FAMILY HISTORY
- HIGH BLOOD PRESSURE
- LACK OF EXERCISE
- POOR DIET
- BEING OVERWEIGHT
- STRESS
- EXCESS ALCOHOL
- GETTING OLDER
- GENDER
- ETHNICITY

Think about
and tick the
risk factors
that apply
to you.

For advice on risk factors specific to you, see page 29.

There may also be other causes of heart attacks, such as spasm of the coronary arteries. Use of illegal drugs can cause this to happen, such as heroin, cocaine and ecstasy.



SECTION 2 : TREATMENT AND TESTS

If your doctor tells you that you have had a heart attack it is very important to treat this as quickly as possible to reduce the amount of damage to your heart.

You may be treated in one of two ways:

● THROMBOLYSIS

This is a drug treatment that thins the blood and dissolves the clot which is blocking the artery. In doing this blood flow is restored to the heart muscle beyond the blockage. This is given as an intravenous drip or injection and you will be closely monitored during its infusion.

If you are given Streptokinase you should not have another dose for a year.

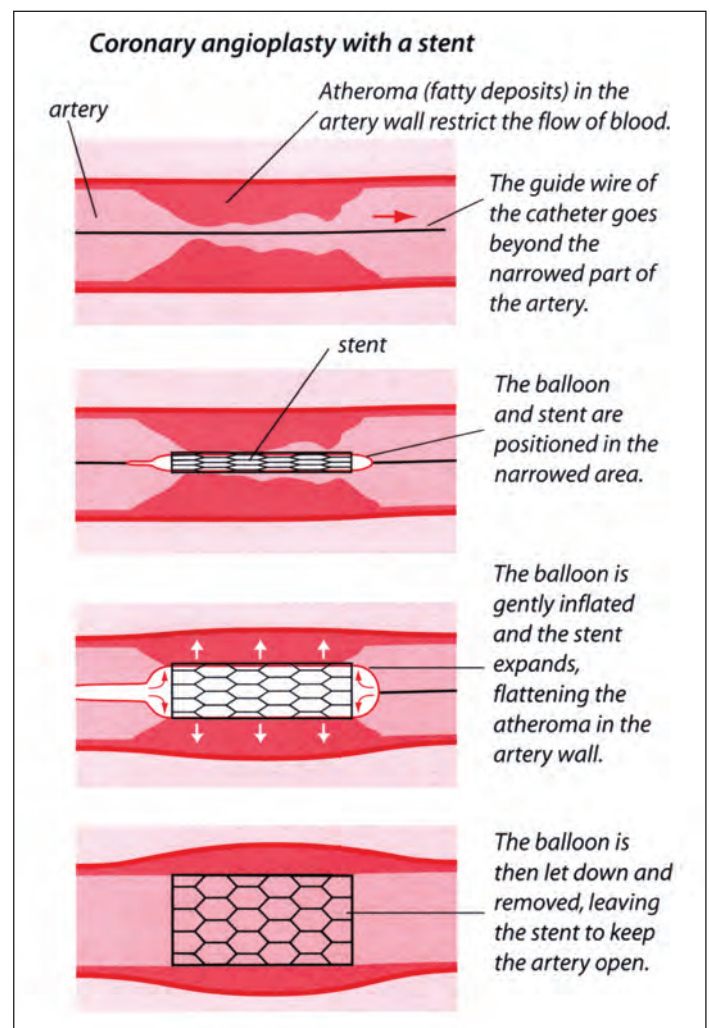
or

● PRIMARY CORONARY ANGIOPLASTY or PERCUTANEOUS CORONARY INTERVENTION (PCI)

This is a treatment to open the blocked coronary artery by stretching the atheromatous plaque with a balloon and then inserting a stent. The stent is a very fine tubular framework made of inert metal, designed to support the artery in its newly opened position.

A number of stents are available but the ideal choice for you will be made by your cardiologist.

For more information see Tests and Investigations.



Images courtesy of BHF

MEDICINES

All patients will be on certain medication which we know help your heart to heal and protect it for the future. Some of these have side effects, which we will tell you about. It is **essential** that you keep taking them unless directed otherwise by a doctor.

Commonly prescribed drugs are:

1) Anti Platelet Drugs

eg: Aspirin, Clopidogrel

These work by stopping the platelet cells in the blood sticking together. This helps to prevent abnormal blood clots which can then block narrowed blood vessels. This reduces the risk of further heart attacks by at least a quarter.

2) Betablockers

e.g: Atenolol, Metoprolol, Bisoprolol.

These are given to most patients because they reduce the chance of further cardiac events. They act by lowering the heart rate. This in turn reduces the amount of work the heart needs to do. They may also be used to reduce risk of abnormal heart rhythms.

3) ACE Inhibitors

e.g: Ramipril, Perindopril, Lisinopril

These improve the amount of exercise a patient can take and reduce breathlessness by improving the pumping action of the heart. They work by dilating blood vessels which in turn lowers the blood pressure and off load pressure from the heart. They also reduce the chance of further cardiac events.

4) Statins

e.g: Simvastatin, Atorvastatin, Pravastatin.

These drugs work to reduce the amount of cholesterol produced by your liver. Studies have shown that statins, taken over long periods can significantly reduce your risk of further cardiovascular events. If you have been started on these drugs, your cholesterol level will need to be checked in 2-3 months and then at regular intervals.

5) Omega 3 fish oils

Eg: Omacor

A high strength purified supplement which can be prescribed if you take insufficient omega 3 oil in your diet.

Some patients will be prescribed additional drugs to control angina, high blood pressure and high cholesterol. Others may need drugs to remove excess fluid, or to thin the blood further.

♥ TESTS AND INVESTIGATIONS

Angiography / Cardiac catheterisation

The majority of patients who have been admitted to hospital with a heart attack or unstable angina will have their coronary arteries assessed either during the initial admission or during a readmission.

A catheter (a fine hollow tube) is passed into your coronary arteries via an artery in the top of your leg or wrist. A dye is then injected into the arteries and X-rays are taken at different angles.

This allows the network of coronary arteries to be viewed and any narrowed sections to be identified.

You will be awake throughout the procedure so that you can tell the doctor if you have any chest pain. The test should not be painful as you will have had a local anaesthetic first but you may be aware of a hot flush or warm feeling when the dye is being injected. You may also feel pressure around the area where the catheter is inserted.

Your doctor will discuss the findings of the angiogram with you and the treatment which is recommended.

Sometimes treatment to open the arteries called **CORONARY ANGIOPLASTY** can be carried out at the same time as the investigation.

There are leaflets, for example by the British Heart Foundation, explaining these tests if you require additional information.

Exercise test / Treadmill test

This test involves a patient walking on a treadmill whilst attached to an ECG machine to assess the heart's response to exercise. Occasionally this test can be carried out on an exercise bike.

Echocardiogram (Echo)

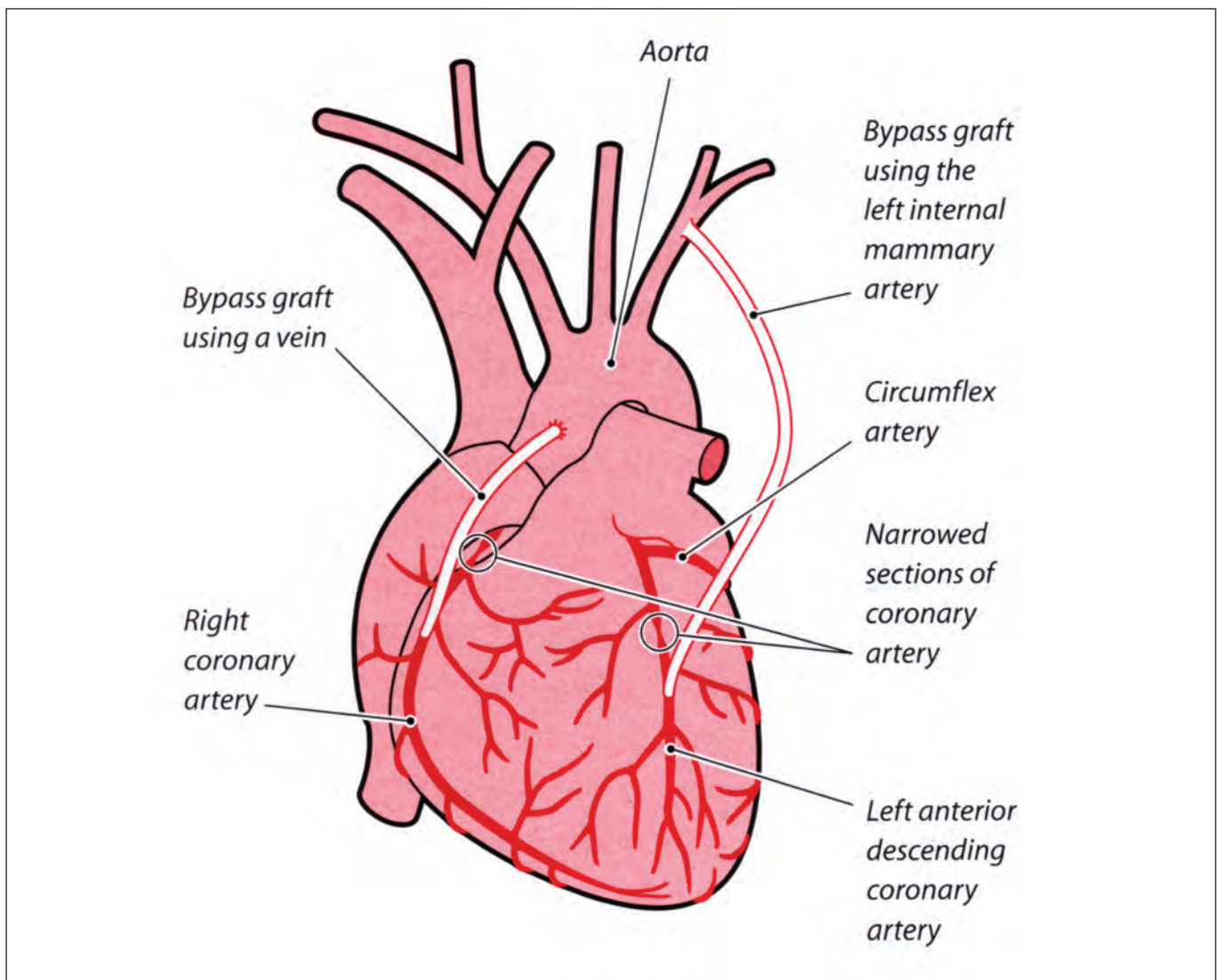
This is a non-invasive ultrasound scan. It is useful to assess the size and pumping action of the heart and the effectiveness of the heart valves.

♥ WHO HAS SURGERY?

You may be referred for **Coronary Artery Bypass Surgery** when one or more of the arteries are significantly narrowed. Sometimes the coronary arteries are too small to allow a stent to be inserted or the narrowed areas may be extensive or in a position which is difficult to reach by a catheter and therefore unsuitable for angioplasty. Your Cardiologist will discuss how the decision to refer you for bypass surgery has been reached.

The surgery will be performed at a regional Cardiothoracic Centre. You will be given individual advice when you are admitted for your operation.

The British Heart Foundation has produced a detailed booklet about this which you may find useful. There is also a DVD for your reference.



SECTION 3 : THE RECOVERY PHASE

♥ WHAT HAPPENS IN HOSPITAL?

Once you have received your initial treatment for your heart attack you may then spend some time on the coronary care unit (CCU).

During your admission you will be given drugs to control any pain, to try to reduce the size of your heart attack; and to reduce complications. Your heart rhythm will be monitored using a heart monitor.

You and your family will be given further information about the treatment you are receiving and you will have the opportunity to talk about what has happened.

When your doctors are satisfied with your progress, you will be transferred to a ward where the main focus will be preparing you for discharge.

Most patients will go home between the 3rd and the 7th day.

MOBILITY IN HOSPITAL AFTER A HEART ATTACK:

This will depend on your individual condition but in general once you have been pain free and the doctors are happy with your progress you can begin to start gently walking around on the flat. You should not leave the ward area you are in unless you have checked with your nurse.

By the time of your discharge you should be gently extending the distance you are walking and have had a shower.

You may start the exercises on page 10.

We hope to help you to answer the following questions:

- Why might it have happened to me?
- What specific drugs do I need?
- What dietary changes do I need to make?
- What about work, driving, sex, holidays and exercise when I leave hospital?
- What and when are my follow-up appointments?
- What is cardiac rehabilitation?

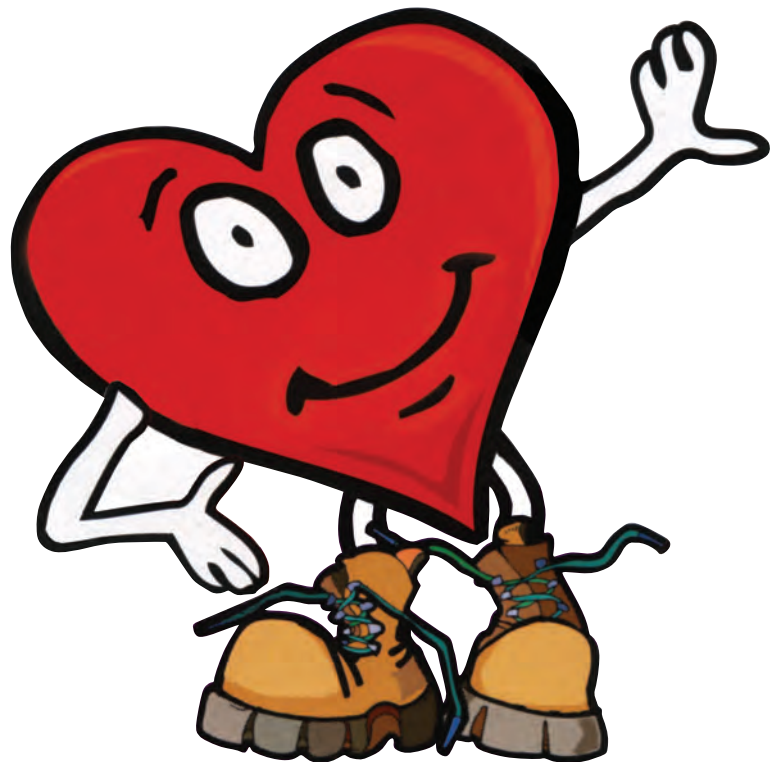
SECTION 3 : THE RECOVERY PHASE

♥ MOBILITY EXERCISES

The following exercises are useful to increase your circulation and warm up the joints without straining the heart. We recommend that you perform them twice a day in a slow and controlled way **STARTING ABOUT 1 WEEK AFTER YOUR HEART ATTACK**. Repeated 6 times, building up to 12 times.

- Alternately shrug your shoulders up towards your ears.
- Alternately circle each shoulder forwards then backwards
- Alternately bend sideways from the waist keeping the hips still.
- Alternately reach each arm upwards towards the ceiling.
- Point toe and heel on each foot.
- Circle each ankle clockwise and anti-clockwise.

You may need to modify these depending on your physical abilities.
You will also be given an individual walking programme (See page 11).



♥ HOME WALKING PROGRAMME

Because the damaged area of heart muscle takes about 4-6 weeks to scar, it is recommended that you observe the following guidelines to allow your heart to stabilise and prevent complications.

Increase your level of activity **GRADUALLY**. Aim to stay at level 1-3 on the 'How it Feels Scale' (see page 26)

- You must not push yourself too hard.
- Be prepared to stop and rest.
- Do not ignore symptoms such as chest tightness, undue breathlessness or excessive tiredness.
- Avoid walking for 2 hours after a large meal or when it is very cold or windy.
- Avoid steep inclines.
- It is important to warm up prior to any exercise. You may wish to use the mobility exercises to do this.



A member of the cardiac rehabilitation team or one of the nurses will see you before you leave the hospital and fill in the sections below.

WEEK 1 AT HOME

Walk for _____ minutes each day this week. The distance does not matter, walk at a pace you feel comfortable with and stick to the time limit.

If you are unable to manage this level of activity take short walks around your home 2-3 times a day. Climb stairs slowly and only when necessary. Wander into the garden for some fresh air. Introduce the walking programme when you feel stronger.

WEEK 2 Gradually increase your walk to _____ minutes a day.

WEEK 3 Gradually increase your walk to _____ minutes a day.

WEEK 4 Gradually increase your walk to _____ minutes a day.

WEEK 5 Gradually increase your walk to _____ minutes a day.

WEEK 6 Gradually increase your walk to _____ minutes a day.

HOME ACTIVITIES IN RECOVERY PERIOD

You may start doing light work in the house as soon as you feel able - for example, washing up and dusting. You can also do a bit of light gardening or cooking. Limit this initially to 15 minute spells.

In general you should avoid sudden bursts of activity or any activity that involves lifting, pulling or pushing. In particular, it is important that you **AVOID** the following activities for 6 weeks:

Washing the car

Digging the garden

Painting and decorating

Ironing

Carrying shopping bags

Washing windows

Any sport (such as golf, cycling or swimming)

Scrubbing floors

Mowing the lawn

Vacuuming

Brushing/sweeping

Lifting heavy pans

Carrying laundry baskets

Lifting children

It is also recommended that you avoid extremes of hot and cold, i.e. soaking in a very hot bath/ saunas; or walking when it is very cold or windy.

♥ CARDIAC REHABILITATION

Your cardiologist would strongly recommend that you attend a cardiac rehabilitation programme.

Long term exercise is definitely beneficial. The programme will begin after your recovery period at about 6 weeks.

Cardiac Rehabilitation classes will continue for 6-9 weeks and will involve the following elements:

- A progressive exercise programme designed to restore confidence and improve fitness, strength, co-ordination and flexibility.
- An education programme designed to support you in making lifestyle changes and increasing understanding of your condition and related topics.
- Relaxation and stress management training.



You are encouraged to attend this programme and to then continue to exercise afterwards. It is a great way to increase confidence and to receive ongoing support in all aspects of your recovery.

Evidence suggests that you are less likely to have a further cardiac related admission to hospital, and more likely to return to work if you take part in a rehab programme. Exercise is known to reduce symptoms of stable angina by improving the efficiency of the heart muscle.

At 6-8 weeks after the heart attack, if you are unable to attend this programme, it is recommended that you increase exercise in a graded way up to 6 periods of 30 minutes every week. It should be moderate exercise that makes you puff a bit and makes you warm such as brisk walking, cycling, golf, swimming or dancing. Please refer to page 26 for advice on how to progress with this.

WE RECOMMEND THAT YOU SEEK MEDICAL ADVICE BEFORE INCREASING YOUR LEVEL OF EXERCISE.

DRIVING

You will be unable to drive for a period of time after your heart attack, this will be at least 1 week.

The rehabilitation staff will discuss your individual position with you, the period involved varies depending on treatment and test results.

You need to let your insurance company know about your heart attack to make sure your insurance is still valid.

It is important to start driving locally and with someone to accompany you in case of mechanical breakdown. Also, if you experience any angina whilst driving it is important to stop and then resume when symptoms are controlled. (See page 24).

If you hold a PSV or HGV licence you must report your illness to the DVLA. You will need to undergo various tests in order to determine whether you can regain your licence after a period of time and this will be organised by your Cardiologist.

RETURNING TO WORK

Most patients can return to work 4-6 weeks after their heart attack.

This will be dependant on the nature of your heart attack and your occupation. You will be given the opportunity to discuss this with your rehabilitation nurse prior to discharge.

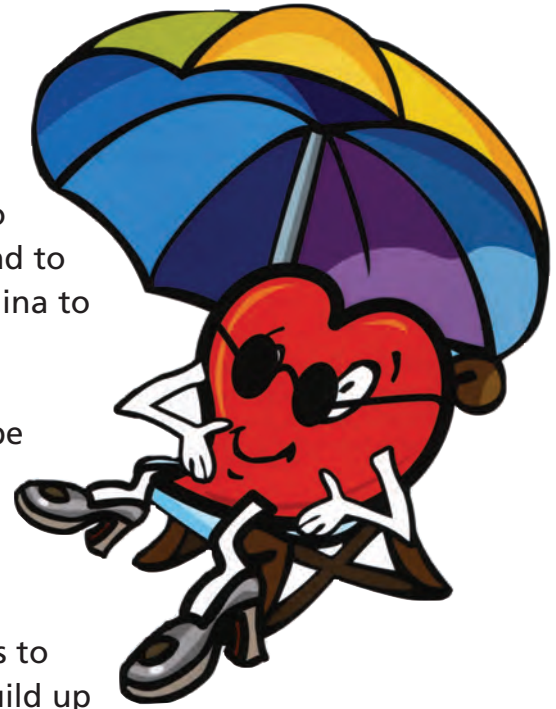
You may need to talk to your employers about starting your work gradually or even part-time. You may also need to negotiate time off to complete the cardiac rehabilitation programme.

It is unusual that patients cannot return to their previous occupation for medical reasons. Talk to your doctor if you are concerned about this. If you need advice on changing your job, this can be obtained from the Medical Social Worker or the Disablement Employment Adviser at the local Job Centre.

♥ HOLIDAYS

General tips:

- There are no specific guidelines regarding your ability to fly, however it is important that you feel well on the road to recovery and have built up enough confidence and stamina to deal with airports and flying.
- Ensure you take a good supply of tablets which should be stored in your hand luggage and any other paperwork relating to your admission i.e. copy of discharge summary if you have one.
- Consider holidays in the UK rather than long haul flights to begin with. It is best to have allowed enough time to build up your walking and general activities before venturing too far.
- Ensure you have adequate travel insurance. For details of insurance companies that offer cover for heart patients contact the British Heart Foundation or get details from the rehabilitation team.



♥ SEXUAL ACTIVITY

Having sex does not put any more strain on the heart than any other form of exercise. Research has shown that more energy can be used when arguing, driving, or watching exciting television than during sex. Engaging in extra-marital affairs however has been shown to be more risky. If you enjoyed a normal love life prior to your heart attack, you should be able to return to it again.

There are no firm rules about this, but in general it is usually safe for you and your partner to resume sex when you are comfortably walking about 10 minutes on the flat at a normal pace, or when you can climb two flights of stairs without getting angina or undue breathlessness. It may be possible for you to resume sex about two weeks after leaving hospital.

Some drugs that are prescribed after a heart attack can lessen the desire for sex and cause impotence. It is important not to stop taking them, but to discuss this with your doctor. Lack of desire can also be associated with feeling low or afraid or could be due to your

partner's anxiety. These feelings should lessen with time, but there is help available if you are not able to resume your usual sex life. Please discuss this with your G.P or cardiac rehabilitation nurse.

Some couples find it useful to start taking moderate exercise together like walking briskly to restore confidence in their ability to resume sexual activity.

Some tips to help:

- Make sure the environment is warm.
- Start slowly and take a more passive role if necessary. Starting with intimacy before full intercourse may allow you both to calm any fears you may have.
- Communicate with your partner. Fear of being close can be interpreted as rejection. Discuss any fears or concerns together.
- As with any activity, if you develop any symptoms of angina; stop, rest and take appropriate action. (See page 24).
- Avoid sex within two hours of a meal. The digestive system uses a large blood supply in order to digest food.
- Avoid sex after drinking excessive alcohol. This can increase your heart rate and can also cause a degree of impotence.

There is a DVD available produced by the BHF called 'Sex and the heart.' Please speak to one of the nurses if you would like to watch it.

N.B. VIAGRA/CIALIS (AND OTHER SIMILAR MEDICINES) ARE DANGEROUS WHEN USED WITH ANY FORM OF NITRATE SPRAY, TABLET OR PATCH. PLEASE DISCUSS ITS USE WITH YOUR GP.

YOUR MOODS / EMOTIONS

You will experience a wide range of emotions after a heart attack. Some common feelings are -

- Despair
- Denial
- Frustration
- Anger
- Tearfulness
- Lack of energy
- Anxiety
- Irritability

These are very normal reactions as you come to terms with what has happened. These feelings may begin in hospital, but may deepen a little at home when the reality of what has happened begins to sink in.

Most of these reactions will lessen with time and generally as you become physically stronger you will feel emotionally stronger. However, if you are feeling low or anxious it is important that you discuss this with your GP or cardiac nurse.

It is also common that partners and family members may experience feelings of fear, anger, or guilt. It may be helpful to talk about these feelings together.

A commonly expressed fear is "Will it happen again?"

Most patients make a very good recovery. After the first month or so, another major heart problem occurs in less than about 5% of patients each year. Taking your medication and introducing lifestyle changes are some of the positive steps you can take to reduce your risks of further problems.

In the weeks following the heart attack, you will have the time to think about your lifestyle. As you start to come to terms with the heart attack, you may decide that you want to take some positive steps to reduce the risks of further heart problems. Some of these ideas are discussed in the next section.

SECTION 4 : LIFESTYLE CHANGES

♥ SMOKING

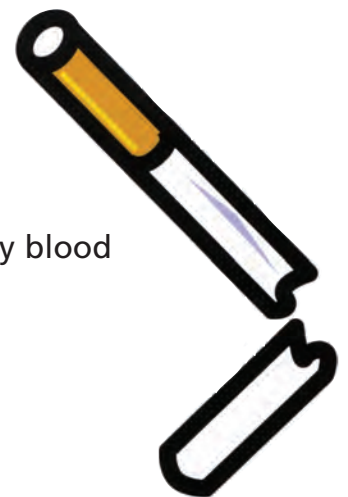
It is essential for you to try to stop smoking altogether. If you continue to smoke your risk of another heart attack is much greater - at least twice that of people who stop smoking. Changing to a pipe or cigars will not lower the risk. There is also a risk involved with smoking cannabis. We are aware it can be particularly difficult to break a smoking habit, but there is plenty of help available.

What do cigarettes do?

Cigarette smoke contains around 4000 chemicals, many of which are known to cause harm to humans. Carbon monoxide and nicotine are particularly harmful to the heart.

Cigarettes:

- Are one of the main causes of heart disease.
- Are highly addictive.
- Decrease oxygen levels in the body.
- Increase the uptake of fats in the arteries causing narrowed arteries.
- Can affect the electrical activity of the heart.
- Increase the heart rate and blood pressure.
- Damage the blood cells causing platelets to stick together so that tiny blood clots are carried around in the blood stream.
- Can make arteries tear, causing blood clots and blockages.
- Can cause cancer.
- Quicken the ageing process.



How can I quit?

Willpower is essential. We would recommend that you obtain specialist advice as this will increase your chances of being successful.

- Contact your GP surgery for information on local smoking cessation groups.
- There are plenty of advice booklets and leaflets available - ask while you are still in hospital.
- Receive NHS Stop Smoking Booklet
- NHS smoking helpline - 0800 022 4332 provides advice and details of local information.
- Quitline - 0800 002200 provide trained counsellors for advice, support and encouragement.
- Quitline in other languages. Bengali - 0800 002244, Gujarati - 0800 002255, Hindi - 0800 002266, Punjabi - 0800 002277, Urdu - 0800 002288, Turkish/Kurdish - 0800 002294.

♥ DIET AND CHOLESTEROL

Cholesterol is a waxy substance which is made in the body. The liver makes it partly from saturated fats in food. Cholesterol plays a vital role in how every cell works throughout the body. However too much cholesterol in the blood will increase your risk of getting further heart problems.

- Decrease your fat intake. Cut out fried foods and fatty meat products such as sausages, pies, pasties and burgers. Eat fewer cakes, biscuits, crisps, chocolate and nuts. Choose cooking methods where you don't need to add fats and oils to foods. Try boiling, grilling, steaming, baking, casseroles or micro-waving. Switch to semi-skimmed or skimmed milk. Reduce your cheese intake or try half fat cheese or cottage cheese. Check food labels: Less than 5g of fat in 100g (i.e. <5%) is low in fat; and greater than 20g in 100g (i.e 20%) is high in fat.
- Reduce your weight if necessary. You should aim to lose weight gradually. People who lose weight slowly are more successful in maintaining the loss. Talk to your cardiac nurse or a dietician if this is a particular problem for you. Aim for a body mass index of 20-25.
- Eat plenty of high fibre starchy foods. Foods such as oats, cereals, baked beans, and other pulses contain soluble fibre which has a slight cholesterol lowering effect.
- Increase your intake of fruit and vegetables. Fruit and vegetables contain anti-oxidants which may help to protect against heart disease. The World Health Organisation recommends that we eat at least five portions of fruit and vegetables a day.
- Eat oily fish at least twice a week such as pilchards, sardines, herring, mackerel, fresh tuna (not tinned) salmon, and trout.
Oily fish provide the richest source of a particular type of Omega 3 polyunsaturated fat that can help to lower blood triglyceride levels. It also helps prevent the blood from clotting and to regulate the heart rhythm. It helps to improve survival rates after a heart attack. If you are unable to eat the recommended amount of oily fish, Omega 3 oil capsules can be prescribed for you.

- Limit your alcohol intake.

The Department of Health recommend that men have no more than 21 units of alcohol a week and that women have no more than 14. Spread your units out over the week and try to keep a couple of days alcohol free. A unit is:

1 125ml glass wine
1 glass sherry

1 pub measure of spirits
1/2 pint standard beer,
lager, cider.



A diet sheet is included at the back of this booklet.

Please try to follow these guidelines and discuss them with the dietician or cardiac rehabilitation team.

♥ BLOOD PRESSURE

It is important that you have your blood pressure monitored regularly by your GP or practice nurse.

The current recommended blood pressure for non-diabetics is less than 140/85, (and less than 130/80 for diabetics).

If you have high blood pressure, (hypertension) you can help yourself by ensuring that you:

- Take the prescribed medication.
- Avoid excessive alcohol.
- Cut down on salt in your diet.
- Take regular moderate exercise.
- Try to lose excess weight.
- Stop smoking.
- Have regular blood pressure checks.
- Learn relaxation techniques.
- Eat five portions of fruit and vegetables a day.

♥ STRESS AND RELAXATION

Most people at some point in their lives will experience a degree of stress or tension. Health can only be achieved by maintaining a good balance between mind, body and environment. It is important to recognise the physical signs of tension and begin to think of ways in which you can reduce your stress. A useful way to do this is through relaxation. Relaxation can be learnt by anyone and it can be applied in everyday living.

Relaxation has a number of beneficial effects.

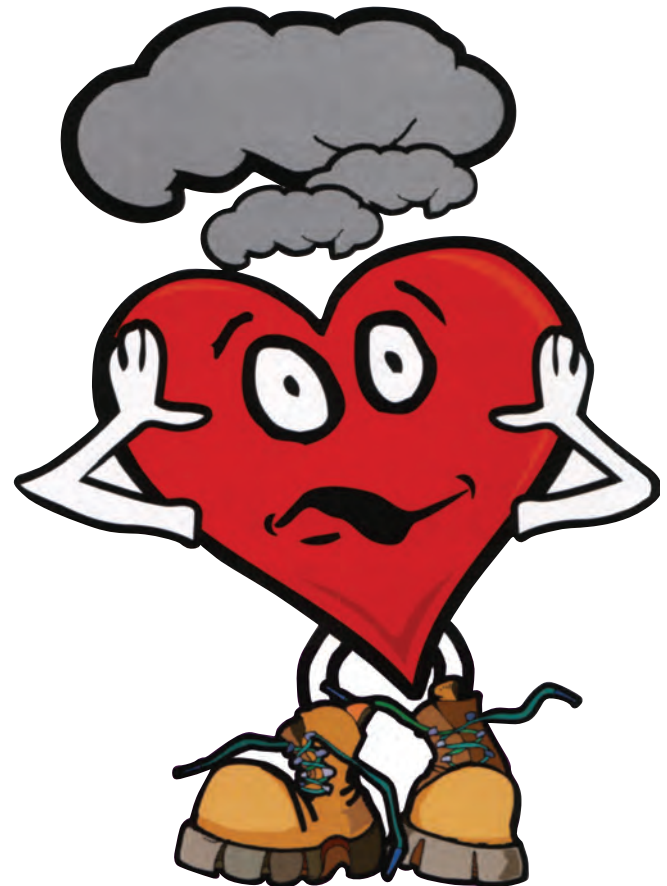
- Reduction in heart rate
- Reduction in blood pressure
- Reduction in breathing rate
- Reduction in muscle tension

It can also:

- Help to reduce adrenaline flow
- Help to reduce pain
- Help to promote sleep
- Help to reduce fatigue

Relaxation can be learnt, but it needs practice. A body that has become used to living under stress will not respond immediately and you will need to teach yourself to get used to a more stress-free lifestyle over a period of time.

Try this simple technique:



For a quick release of tension:

Take 2 or 3 deep breaths, with a slower breath out. Notice your tummy rising as you breathe in and falling as you breathe out.

Return to normal breathing

Repeat the 2 or 3 slower deep breaths

Carry on more calmly.

Or try:

A sigh

A drop of the shoulders

EXERCISE

Exercise is beneficial and can address your risk factors in many ways:

- People who are inactive are twice as likely to have a heart attack, compared to somebody who is regularly active.
- It keeps your muscles, including your heart muscle, in good condition.
- It helps with blood pressure and diabetes control.
- It helps improve your cholesterol levels.
- It reduces the risk of developing stroke, heart disease, osteoporosis and diabetes.
- It is essential for weight management.
- Exercise also gives us more energy, a feeling of wellbeing and relief from stress.

It is recommended that all of us perform moderate exercise for at least 30 minutes, 6 days a week. You may need to see this as a long term aim and build up gradually to the recommended targets.

After a heart attack you are advised to follow your walking programme (see page 11) for the first 6 weeks or until you have your medical check up with either your GP or hospital doctor. The walking during this time should not be brisk or make you 'out of puff.' It is then recommended that you participate in a cardiac rehabilitation programme, but if you are unable to attend, it is important to seek advice from your GP or practice nurse about the best way to progress onto more moderate exercise.

For a healthy heart, it is recommended that you participate in 'cardiovascular' or 'aerobic' exercise as this strengthens the heart and lungs. This includes: brisk walking, jogging, cycling, dancing, swimming, or anything that makes you feel puffed. Remember you should always have enough breath to speak!

It is important to warm up for at least 20 minutes prior to any exercise to prepare the body and the heart for work. A cool down and stretch afterwards for another 10 minutes is also important to prevent muscle stiffness and to bring the heart rate down gradually.

SECTION 5:

♥ WHAT IS ANGINA?

Angina is a name given to describe symptoms that occur when not enough blood and oxygen are getting to the heart muscle.

This normally occurs because of “furred up” coronary arteries.

Angina is typically a tightness, pain or heaviness in the chest which may spread to the **arms, throat, jaw, teeth, stomach or upper back**. In some people the angina may only be experienced in one of these sites. It may make the arms feel heavy or numb. It may also feel like indigestion. Other symptoms which may be experienced at the same time include belching, nausea, sweating, shortness of breath, dizziness or palpitations.

Angina is different to a heart attack:

ANGINA	HEART ATTACK
♥ Caused by narrowed coronary arteries.	♥ Caused by completely blocked coronary arteries.
♥ Causes no heart muscle damage.	♥ Causes damage to the heart muscle.
♥ Pain usually relieved by rest or GTN (spray or tablets) within minutes.	♥ Pain not relieved by GTN. Pain lasts longer than 15 minutes.
♥ Pain may be less severe.	♥ Pain may be more severe and can be associated with nausea, dizziness or sweating.
♥ Angina typically occurs during physical exertion, cold weather, periods of emotional stress or after a heavy meal.	♥ Heart attacks can occur at any time.

If you experience any of these symptoms, it is important to rest. This in itself may relieve mild symptoms within 5 minutes.

A nitrate spray or tablet (GTN) placed under the tongue acts within a couple of minutes to widen the arteries and allow blood to flow more easily to the heart muscle. This should relieve the symptoms. Follow these guidelines.

1. If your chest pain is sudden or severe

Sit down, Stay calm

Take GTN (if prescribed)

Wait 5 minutes

Dial 999 for an ambulance

2. If the pain has gone: rest. If you are still in pain

Repeat the GTN, wait 5 more minutes.

3. If the pain has gone: rest. If you are still in pain

Repeat the GTN, wait 5 more minutes.

4. If the pain has gone

Rest, get advice from your G.P

5. If you are still in pain after 15 minutes regardless of the intensity

Stay calm and rested

Dial 999 for an ambulance

If you are prescribed aspirin, chew 300mg if it is accessible.

DO NOT DELAY GETTING MEDICAL HELP.

IF THE SYMPTOMS LAST MORE THAN 15 MINUTES OR WORSEN AT ANY TIME, THIS MAY BE THE ONSET OF A HEART ATTACK.

Appendix i

♥ Relaxation

Find somewhere quiet where you will not be disturbed. Make sure you are warm and comfortable. Turn the light down.

- Loosen tight clothing
- Ease your shoulders down
- Rest your arms by your sides or across your body
- Be aware of the parts of your body that are touching the floor or the chair
- Slowly close your eyes
- Sigh to ease tension and let your body sink into the floor or the chair

Stage 1: BREATHING AWARENESS

Pay attention to the rhythm of your breathing, be aware of your tummy rising when you breathe in and falling when you breathe out.

Try to breathe more slowly, emphasise the breath out before breathing in again. Be aware of a slight pause after breathing out before you breathe in.

Stage 2: MUSCLE RELAXATION

In turn, concentrate on relaxing the groups of muscles listed below. You might need to tense the muscle a little first so that you can feel the difference between tension and relaxation.

- Relax your feet and your lower legs
- Relax your thighs
- Relax your tummy making sure that you are not pulling it in or pushing it out too far
- Relax your fingers and your forearms
- Relax the muscles in your back and chest
- Relax your upper arms and your shoulders
- Relax the muscles in your neck and the back of your head
- Relax your facial muscles - smooth your forehead, relax the muscles around your eyes and mouth, and relax your jaw so your teeth fall slightly apart
- Let the chair or the floor take your whole body weight

Repeat the breathing awareness above.

Be aware now of the feeling of total body relaxation.

Lie quietly for a short time.

Stage 3: RECOVERY

- Wiggle your fingers and your toes to bring back some tension to the muscles
- Stretch your arms and your legs
- Open your eyes
- If you are lying, bend your knees and roll over onto your side for at least a minute before slowly getting up

Appendix ii

♥ How to exercise safely

'The How it Feels Scale'

The scale is also known as 'The Scale of Perceived Exertion' and can be used as a guide for ensuring that you are exercising at the right intensity to gain maximum benefits.

1.	VERY, VERY LIGHT / NO PROBLEM
2.	VERY LIGHT / VERY EASY
3.	FAIRLY LIGHT / EASY
4.	MODERATE / BEGINNING TO FEEL PUFFED
5.	FAIRLY HARD / FEELING A BIT PUFFED
6.	HARD, FEELING PUFFED
7.	VERY HARD / TIRING
8.	VERY, VERY HARD / VERY TIRING
9.	EXHAUSTED / OUT OF BREATH / SHATTERED
10.	MAXIMUM / EXHAUSTED

No. 1 - relates to sitting in a chair doing nothing at all.

No. 10 - relates to the hardest exercise you have ever done.

In the initial phase of recovery (6 weeks) after your heart attack, you should stay within levels **1-3** on the scale and not participate in prolonged activities that make you feel puffed.

When you have been told that you can progress to more moderate exercise, ensure that you gradually warm up and then progress to moderate exercise remaining within levels **4 to 6** on the scale. If at any time you find that you are unable to get your breath or that the workload is too hard (i.e **7-10** on the scale); then ease back until you find that you are less puffed and back in the 4-6 zone on the scale.

♥ Eating Plan

	Go Ahead	Eat in Moderation	Avoid
Cereals, biscuits, cakes, crackers.	Bread and flour (preferably wholegrain). Reduced fat cream crackers, crispbreads, most breakfast cereals, oatmeal. Porridge, muesli, rice, pasta, pudding cereals, cornmeal, cornflour.	Homemade cakes and biscuits made with suitable fats. Commercial reduced fat biscuits and cakes.	Croissants, pastries, cakes and biscuits made with unsuitable fats. Granola type cereals containing oil and mueslis containing coconut, cheese biscuits, ordinary biscuits.
Fruit and Vegetables	All fresh, frozen, dried or tinned fruit in juice. All fresh, frozen dried or tinned vegetable. Boiled or jacket potatoes. Baked beans, peas, beans and lentils.	Avocado pears, olives, oven chips (once a week) Roast potatoes cooked in suitable oil (once a week).	Deep fried chips, crisps. Fried vegetables or vegetables with added fats.
Nuts	Chestnuts	Peanuts, almonds, walnuts, brazil nuts, cashew nuts and other nuts.	Coconut.
Fish	All fresh and frozen fish e.g. cod, plaice, coley, mackerel and salmon. Tinned fish in brine or tomato sauce.	Crab, lobster, prawns, shrimps, cockles, mussels, squid, whelks, winkles Fish fried in suitable oil	Fish fried, fish roes, taramasalata. Fish canned in oil.
Meat and meat substitutes	Chicken and turkey without skin, veal, rabbit, game, ostrich, venison, very lean beef or pork. Quorn, Tofu.	Lean lamb, lean back bacon, liver, kidney, heart, other offal. Duck without skin. Low fat pate Low fat sausages.	Luncheon meat, corned beef, salami, pate, streaky bacon, sausages, black pudding, pies, pasties, sausage rolls, faggots, haggis, goose.
Eggs	Up to four eggs a week. Unlimited egg whites.		Fried eggs.
Dairy Foods	Skimmed milk, up to 1/2 pint of semi-skimmed milk a day. Low fat yoghurt, cottage cheese, or fromage frais. Curd cheese or quark.	2oz ordinary cheese a week. or up to 4 ounces of half fat Cheddar/ Edam a week	Whole milk, evaporated and condensed milk, cream, full fat yoghurt. Hard or soft cheeses in large quantities e.g. Cheddar, Stilton, Brie. Coffee whiteners.

	Go Ahead	Eat in Moderation	Avoid
Fats	Use in small amounts: Margarines labelled high in poly or mono-unsaturates, low-fat spreads, corn oil, sunflower oil, soya oil, rapeseed oil, olive oil.		Butter, margarines not labelled high in poly or mono-unsaturates. Lard, dripping, suet, blended vegetable oils, hydrogenated vegetable oils.
Preserves, spread and sweets	Marmite, Bovril, low sugar jams, jellies and marmalades.	Lemon curd.	Chocolate spreads, chocolate, toffee, peanut butter, fudge and butterscotch.
Drinks	Tea, coffee, mineral water, low calorie squash and fizzy drinks, malted milk or hot chocolate drinks made with skimmed milk.	Alcohol	Drinks made with whole milk. Cream based liqueurs.
Herbs, spices, dressings miscellaneous	Pepper, herbs, spices, Worcester sauce, soy sauce, vinegar, lemon juice, sweeteners, mustard.	Low calorie dressings.	Ordinary salad cream and mayonnaise.

If you have other dietary considerations such as diabetes, high blood pressure, or coeliac disease please discuss this with a dietician or the rehabilitation team.

Give me 5 – portions of fruit and vegetables every day

What is a portion?

Examples of the amount of fruit and vegetables in a portion are given

Apple, orange or banana	1 fruit
Very large fruit e.g. melon, pineapple	1 large slice
Small fruits e.g. plums, kiwis, satsumas	2 fruits
Raspberries, strawberries, grapes	1 cupful
Fresh fruit salad, stewed, canned fruit	2-3 tablespoon
Dried fruit	1 tablespoon
Fruit Juice	1 glass (150ml)
Vegetables, raw, cooked, frozen or canned	2 tablespoon
Salad	1 dessert bowl

Potatoes count as a starchy food not as a vegetable.

♥ Risk factor action plan

Y/N	RISK FACTOR	GOAL	LIFESTYLE ADAPTION	INDIVIDUAL ACTIONS
	SMOKING	Stop smoking	Cut down if you can't stop. Try smoking cessation groups. Use the help of family and friends.	
	LACK OF EXERCISE	Build up to at least 30 mins 6x a week.	Introduce regular moderate intensity physical activity. (See page 22). Plan daily activities.	
	HIGH BLOOD PRESSURE	Aim for <140/85 or <135/80 if diabetic	Regular checks at GP. Medication. Dietary changes	
	DIABETES	Blood sugar levels within advised limits	Dietary changes. Medication if applicable. Regular checkups with your diabetes nurse at your surgery	
	HIGH CHOLESTEROL	Aim for <4.0mmol	Regular checks at the GP. Medication. Dietary changes.	See your practice nurse for a repeat check in 2 months.
	BEING OVERWEIGHT	Aim for body mass index of 20-25	Weight loss programme. Regular exercise.	
	STRESS	To identify and modify where possible	Recognise triggers. Reduce avoidable stress. Relaxation.	
	POOR DIETARY HABITS	To introduce healthy foods. To identify, and cut down on unhealthy foods.	Dietary changes. See pages 19, 20, 27, 28.	
	EXCESS ALCOHOL	Aim for 21 units or less/week men, 14 units or less/week women.	Assess drinking habits.	

Appendix v

Progress Diary

Week 1	
Week 2	
Week 3	
Week 4	

Images on Pages 5 and 8 courtesy of the British Heart Foundation

This booklet is also available to download on the RUH website. www.ruh.nhs.uk

**If you need this booklet in an alternative format such
as large print then please contact us.**

We hope the information contained in this booklet has been useful.
Please do not hesitate to raise any specific questions you may have with any
of the staff involved in your care. The guidelines are current practice at the time of publishing,
but may change in light of new research.

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Designed and Printed by **LGDavis** Design and Print Solutions 0121 430 9000