

Your journey through heart surgery

Information for patients
and their families



Cardio-Respiratory
Service





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Raising funds exclusively for the
Yorkshire Heart Centre
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and its units within the
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PLEASE READ ABOUT TAKE HEART AT REAR OF THIS BOOKLET

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8.30am - 4.30pm Monday - Friday

Please note this is not an emergency number.

If you require urgent medical attention please phone 999

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Introduction

This booklet has been written to provide you with information that will guide and assist your journey through heart surgery and help you with your recovery.

It is important for you to use this booklet for reference before and after your surgery. Please ask the ward nurses, cardiac rehabilitation nurses and doctors any questions that you may have. We suggest that you show this booklet to your family and friends so that they can help to support your recovery and ask any questions they may have.

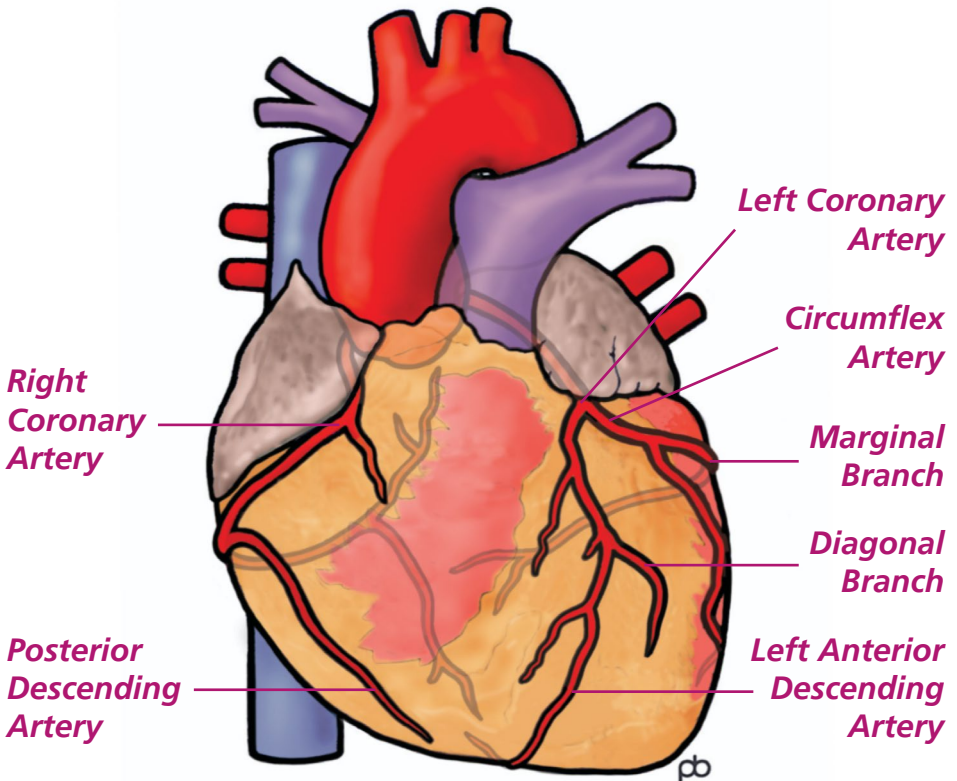
Currently, Leeds Community Cardiac Rehabilitation Team will take patients who have had coronary artery bypass surgery or valve repair or replacement into their service. The advice in this booklet is still relevant for patients who have had other types of cardiac surgery.

The Heart

The heart is a hollow muscular pump which pumps blood around the body.

It is about the size of your fist and is situated in the chest between the lungs, slightly to the left.

The large blood vessels that begin at the heart carry blood to the lungs and body and back again, whilst smaller blood vessels covering the surface of the heart (coronary arteries) supply the heart muscle with blood.

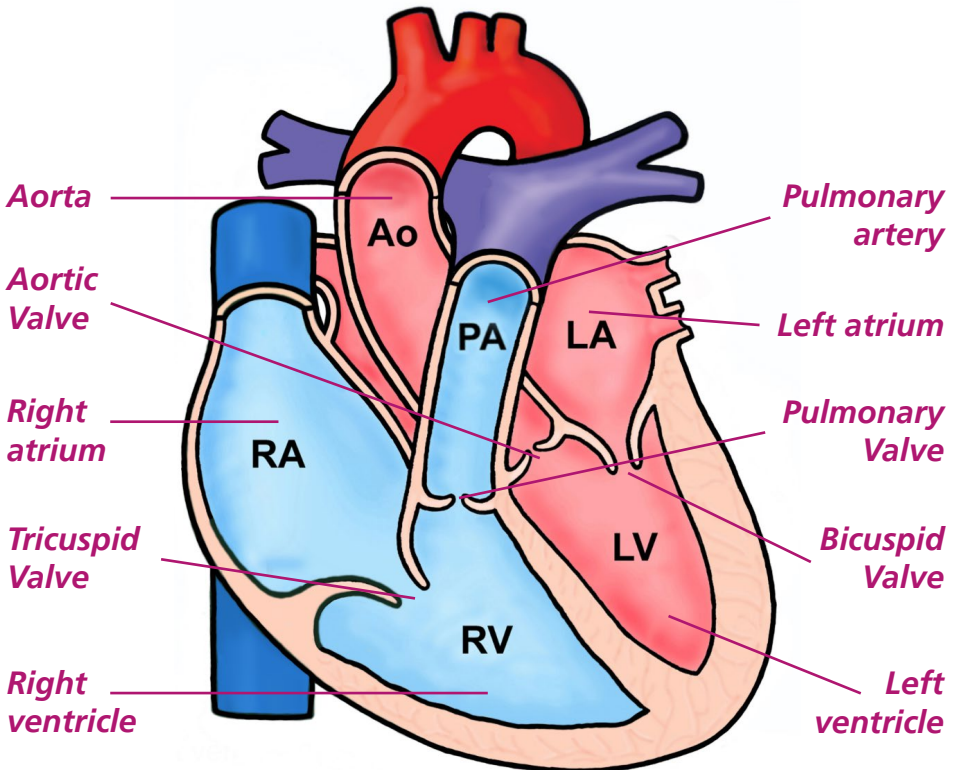


Inside the heart are four chambers. The upper chambers are the right and left atria and the lower chambers are the right and left ventricles.

The heart receives blood that is low in oxygen from the body, into the right atrium and then the right ventricle pumps it to the lungs.

The left atrium then receives blood rich in oxygen from the lungs and the left ventricle pumps it round the body (see diagram).

There are four valves which separate the chambers and prevent blood flowing back into each chamber of the heart when it is not pumping.



Looking after your heart

Risk factors for heart disease

There are a number of factors that can contribute to the development of heart disease. These factors are known as risk factors. They can be divided into being 'modifiable' or 'non-modifiable'.

Some risk factors cannot be changed. These are known as **non-modifiable**.

Non-modifiable risk factors

These include:

- **Family history** - CHD can run in families
- **Age** - The risk of developing heart disease increases with age
- **Gender** - Men over 45 on average are more at risk. Women are protected by the hormone oestrogen until after the menopause, then women become as vulnerable to heart disease as men
- **Ethnic origin** - People from the South Asian population are more at risk of developing heart disease

Modifiable risk factors

These will be discussed in detail in the following pages. If you would like further information about risk factors, speak to your Cardiac Rehabilitation Nurse or Doctor. The modifiable risk factors for CHD include:

- Smoking
- Being overweight
- High blood pressure
- Alcohol
- Cholesterol
- Lack of exercise
- Diet and lifestyle
- Uncontrolled diabetes

Fortunately, you can control many of the modifiable factors that contribute to the narrowing of the coronary arteries. Your Cardiac Rehabilitation Nurse can help you set realistic, achievable goals to reduce the risk factors that apply to you.

Smoking

Stopping smoking is the single most important thing you can do to improve your health.



How does smoking affect my health?

When you smoke, the chemicals released into your body make your blood sticky.

Smoking encourages fatty deposits to collect in the lining of the arteries of the heart. This narrows the arteries which can reduce blood flow to the heart. These fatty deposits can also rupture causing a tear in the lining of the artery causing the fatty deposits to leak out and block the artery, which may cause a heart attack.

Smoking tends to increase your blood cholesterol levels. It reduces the HDL (the good cholesterol), thereby increasing the LDL (bad cholesterol). See page 15.

When you smoke a cigarette, the burning process produces a gas called carbon monoxide. This gas is poisonous. In the body it sticks to the red protein of blood cells, making the blood less able to carry oxygen. This will starve the heart of vital oxygen and nutrients.

Nicotine, in cigarettes, stimulates the body to produce adrenaline. This makes the heart work harder and can raise blood pressure. The high nicotine levels in cigarettes are the addictive part of the cigarette.

From the minute you stop smoking there are health benefits. Below are some of the benefits outlined by the NHS:

- 20 mins -** Blood pressure and pulse return to normal.
- 1 hour -** Your circulation improves, your hands and feet feel warmer.
- 8 hours -** Nicotine and carbon monoxide levels fall and the oxygen in your blood begins to return to normal.
- 1 day -** Carbon monoxide is now completely removed from the body, the lungs work more efficiently.
- 2 days -** Nicotine is now removed from the body, your taste and smell improves.
- 3 days -** The lungs begin to clear mucus and smoking debris, you may develop a cough but your breathing will soon become easier.
- 2 weeks -** Withdrawal symptoms begin to ease, walking and daily tasks should become easier.
- 1 month -** Withdrawal symptoms have now stopped, your breathing and energy levels continue to improve.
- 6 months -** Risk of heart attack, cancer and other smoking related diseases begins to fall and you feel better about yourself!

What support is there to help you stop smoking?

- Whilst in hospital, you can ask any of the ward staff for advice or help. Your Inpatient stop smoking team will discuss stopping smoking with you and explain approaches to stopping as well as the support available to you.
- Support from healthcare professionals will start in hospital and can continue at home. When you make the decision to stop smoking, you will be given advice on preparing to stop and how to cope once you have stopped. You will also be advised on medication which may be appropriate to help you stop.

- The inpatient stop smoking team can help you put a plan together for how you will stop smoking before you go home. Once home, Leeds Stop Smoking Service can offer continued support. The inpatient stop smoking service can arrange a referral for you once you have been discharged from hospital. If you decide to stop smoking at any time after leaving hospital you can contact Leeds Stop Smoking Service to discuss support on 0800 169 4219. The service provides support sessions throughout Leeds, including one-to-one or group sessions.
- Your community pharmacy might also offer smoking cessation support, advice and medicines. Please ask your pharmacist for advice.

To find out more, ask the ward staff, your cardiac rehabilitation nurse, your pharmacist or phone contact One You Leeds on 0800 169 4219 or self refer through their website.

Nicotine replacement therapy (NRT)

Nicotine Replacement Therapy (NRT) replaces a small amount of the nicotine that you used to get from cigarettes. It is the addictive nature of nicotine that makes it hard for many people to quit. NRT provides you with some help with the addiction and allows you to deal with the habit side of smoking first. Remember you are four times more likely to quit for good using a combination of medication and specialist support.

Your cardiac rehab nurse or Stop Smoking advisor can advise you on which types of NRT would be most suitable for you and which products can be combined to achieve the best outcomes.

The use of medications to stop smoking

There are two medications that can also be considered to help you stop smoking; these should only be considered under advice from a specialist who can prescribe, such as the Stop Smoking advisor or your GP. Using medications such as these can double your chances of stopping smoking. However, they can have side effects and may not be recommended in certain health conditions.

The use of e-cigarettes to stop smoking

- Electronic Cigarettes or Vapourisers do not contain tobacco; they create vapour from liquid nicotine. E-cigarettes are not licenced for use as Nicotine Replacement Therapy (NRT) at present.
- Public Health England state that e-cigarettes are 95% less harmful than smoking.
- E-cigarettes are the most popular quit smoking aid and when combined with specialist stop smoking support can be the most effective way to quit smoking for good.

High blood pressure

Blood pressure is the force that circulating blood puts on the artery walls. When blood pressure is high, there is more pressure on the artery wall than usual. Some people have high blood pressure and do not know they have it.

This extra pressure damages the smooth lining of the arteries and makes it easier for cholesterol and fat to build up along the artery walls. As the arteries become clogged with these fatty layers (atherosclerosis), less blood gets through. This causes the heart to beat harder as it tries to pump blood through narrowed arteries. If untreated, high blood pressure may in time damage the heart, brain and kidneys. It is a leading cause of heart attacks and strokes, heart or kidney failure.

The exact cause of high blood pressure is not fully known for many people. High blood pressure can be treated and lowered with medication.

How do I control blood pressure?

- Get your blood pressure checked as often as your doctor suggests.
- Stop smoking.
- Take your medications regularly as prescribed.
- Reduce your salt intake and try to avoid processed, convenience and fast foods.
- Fruit and vegetables provide us with a good source of potassium which can help control your blood pressure. Aim for five portions a day.
- Reduce stress by learning ways to relax and by exercising.
- Lose weight if needed. The heart pumps harder to supply an overweight body with blood and oxygen.
- Cut down your alcohol intake. See page 77 for recommended limits.

Cholesterol

Cholesterol and triglycerides are fatty chemicals in the blood. The liver makes them from fats in foods. There are two main types of cholesterol; LDL 'bad cholesterol' which carries cholesterol from the liver to the rest of the body, and HDL 'good cholesterol' which returns excess cholesterol to the liver.

While foods with plant stanols and sterols are thought to reduce the absorption of cholesterol from the gut (British Nutritional Foundation), they do not provide sufficient reduction in cholesterol and should not replace the medicines prescribed to lower cholesterol. They can be taken alongside the cholesterol-lowering medicines that you were prescribed.

Plant stanols and sterols are usually added to particular spreads and yoghurts and they are also found naturally in nuts and seeds and some fruits and veg.

If you have high levels of cholesterol and triglycerides, your risk of CHD is greater. High levels of LDL cholesterol stick to the walls of your arteries and make plaque. This plaque blocks the arteries, interfering with the blood flow which can make a heart attack more likely.

Many people with high blood cholesterol will only need advice about diet, a healthy lifestyle and possibly future blood cholesterol monitoring. The nutrition section later in this book provides information about diet. For others, particularly those who have an inherited type of high blood cholesterol or other risk factors for CHD, different blood tests and simple medical investigations may be needed. If this applies to you, effective medications such as statins are available. The treatment for high cholesterol is now as routine as that of other common conditions. Treating raised blood cholesterol is a positive way you can do something to avoid future heart problems.

The aim of your cholesterol lowering medications is to reduce the bad cholesterol (LDL) to less than 1.8 mmol/L. If LDL is not measured then we aim for more than 40% reduction in non-HDL cholesterol (which is your total cholesterol excluding good cholesterol).

It is recommended that once starting cholesterol-lowering medications, you have your cholesterol checked after three months and then at least yearly, unless advised otherwise. You can arrange this with your local GP practice.

NB: For dietary and nutritional advice see later in this booklet.



Diabetes

What is diabetes?

Diabetes is when either the body does not produce enough insulin, or the insulin that is made does not work properly. This means glucose (sugar) cannot get into your cells. Glucose stays in your blood, causing the level of glucose to be too high. Diabetes can develop later in life, usually after the age of 40.

This type of diabetes (Type 2) is strongly linked with being inactive, over-weight and where there is a family history of diabetes. In certain populations it occurs more often. This is particularly true of people of South Asian and African-Caribbean origin living in this country.

You can greatly reduce the risk of developing Type 2 diabetes by taking regular exercise and controlling your weight.

What effect does diabetes have on the heart?

Diabetes appears to affect the heart in different ways:

- High glucose levels in the blood affect the walls of the arteries, making them more likely to develop atheroma.
- Diabetes can affect the heart muscle itself, making it a less efficient pump.
- It increases the damage done by smoking, high blood pressure and high cholesterol.
- People with Type 2 diabetes often have high triglyceride levels and low levels of HDL cholesterol (the protective type of cholesterol).
- It can affect the nerves to the heart, so symptoms are not felt in the usual way (some patients with diabetes do not feel any pain with a heart attack). This can lead to difficulty and delay in diagnosis of a heart attack if you have diabetes.

What can I do about it?

Diabetes cannot be cured, but it can be managed and controlled. There are two main aims of diabetes treatment. One is to resolve the symptoms of diabetes and the other is to prevent the complications which diabetes can cause.

Diabetes can be controlled by one or more of the following: diet, physical activity, tablets and insulin.

If you have diabetes, you are more than twice as likely to have a heart attack or stroke as someone without diabetes. Your risk of a heart attack is the same as someone who has already had a heart attack.

People with diabetes have a higher chance of also developing high blood pressure, circulation problems, nerve damage, damage to the kidneys and the eyes. The risk is particularly high if you are also overweight, smoke and are not physically active.

You can greatly reduce your risk of developing any of these complications by controlling your blood glucose, blood pressure, eating a healthy diet and taking regular exercise. It is important to attend your regular check ups, where you will have blood glucose, blood pressure, kidney function, eyes and feet checked.

You will have had a routine blood test for glucose whilst in hospital.

Further information on diabetes is available on request.

The operation

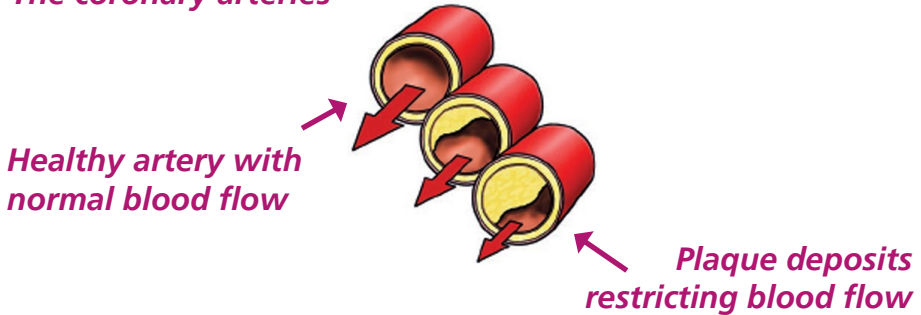
Details of your specific operation can be written on the notes page near the back of this booklet. If you are not sure of your operation ask your nurse to fill in the details.

Coronary artery bypass graft

Why do I need surgery?

This type of surgery is required to improve the blood supply to the heart muscle. The coronary arteries can become narrowed due to build up of fatty deposits (coronary heart disease). Therefore not enough blood can get through them to supply the heart muscle with oxygen and nutrients. The operation can relieve angina and reduces the risk of permanent damage to the heart muscle.

The coronary arteries



What is a coronary artery bypass graft?

A coronary artery bypass graft improves the blood supply to the heart muscle by bypassing blocked or narrowed coronary arteries. Blood vessels are taken from your arms, legs or chest wall and used to redirect blood from the aorta (see diagram on page 7) to the areas of heart muscle which are not receiving enough blood. The number of bypass grafts used depends upon the number of narrowed or blocked coronary arteries you have.

What happens during the operation?

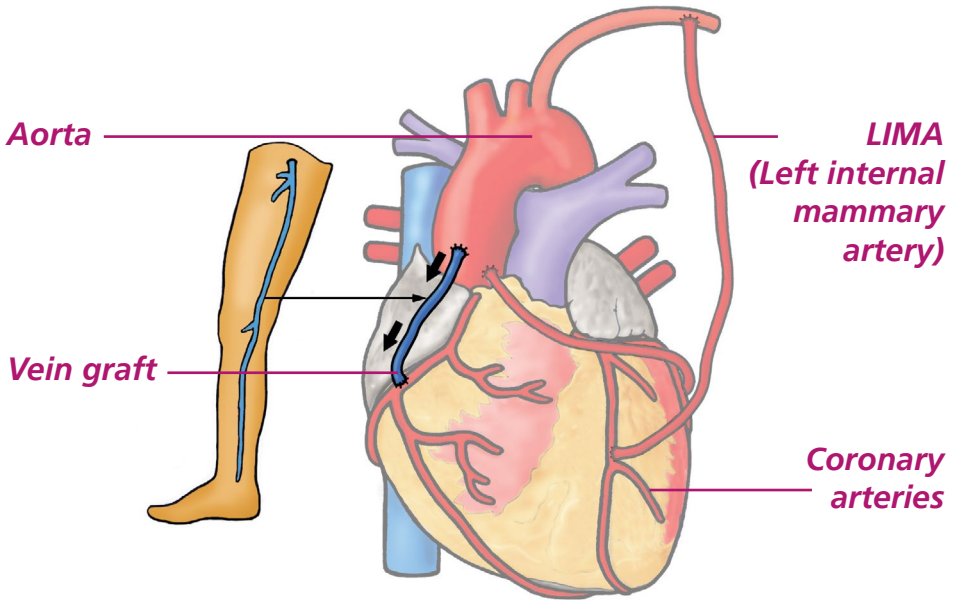
The majority of heart operations leave you with a scar down the front of your chest. This is because your breast bone (sternum) will be cut so that the surgeon can get to your heart. If you have a different scar your doctor can explain why they used this particular method. Once your chest is opened, it is necessary to stop the heart from beating. The doctors do this using a piece of equipment called a cardiopulmonary bypass machine. This machine takes over the work of the heart and lungs, supplying blood and oxygen and pumping it around the body. This means that the surgical team can then safely perform your operation.

Once the operation is completed the cardiopulmonary bypass machine is turned down and your own heart starts beating by itself. Once the surgeons are happy with your heart's condition, the cardiopulmonary bypass machine is removed. The final stage of the operation is to close your chest.

How is my chest held together?

Your breast bone is held together with stainless steel wire and the muscle and skin are stitched. Your chest is held together firmly and will not split apart when you are deep breathing or coughing even though it might feel like that at first! It does take about three months for the breast bone to be fully healed. The steel wires do not usually need to be removed (they would only need removing if they cause any problems in the future, this is rare). They do not set off the metal detectors at airports.

Coronary artery bypass graft



Which blood vessels are used?

A blood vessel from the chest wall is called the left internal mammary artery. It is known as the LIMA. The LIMA normally supplies blood to your chest wall, but can be redirected and used to bypass a blocked or narrowed coronary artery. NB: It is useful for you to know if your surgeon used this artery because you may experience certain typical aches and pains (see section on aches and pains). Other blood vessels which may be used are either leg veins, arm veins, arteries or all three.

Valve surgery

Why do I need valve surgery?

As previously mentioned, your heart has four valves: these are the tricuspid, pulmonary, aortic and mitral. These valves regulate the blood flow through the heart. If any of the heart valves leak or become narrowed, the blood flow alters and interferes with the heart's normal function. This can lead to symptoms such as breathlessness, tiredness and swollen ankles. When this happens surgery may be required.

What happens during the operation?

The surgical team open your chest as described for coronary artery bypass grafting and if possible they repair the damaged valve. If they are not able to repair the valve, then it will be removed and replaced with an artificial valve.

Artificial valves

There are two types of artificial valves available: biological or mechanical. As each person is different the surgeon will help you to decide which will be the best for you.

The valves are designed to work like normal valves. However, people who have mechanical valves in place often say they can hear a ticking sound. This is quite normal and often fades in time.

How can I look after my new valve?

You can help by taking good care of your teeth, brushing them twice a day and having regular check-ups at the dentist.

Dental procedures and dental abscesses increase the risk of bacteria entering the bloodstream and infecting your new valve.

You may need to take antibiotics before some dental treatment or minor operations. Always tell the dentist about your artificial heart valve before you proceed.

I have heard that I may have to take warfarin. What is it?

Warfarin is a medicine which helps to prevent the blood from forming clots on your new valve.

For how long will I have to take warfarin?

If you have a mechanical valve, you will need to continue taking warfarin for the rest of your life. The surgeon may also ask you to take warfarin or alternative anticoagulation medication if your heart is beating in an irregular rhythm known as atrial fibrillation (AF). You may need to continue to take the warfarin for a limited time even if your heart returns to normal rhythm.

Will I need regular blood tests?

If you are on warfarin, to make sure that you are receiving the right dose, it is necessary to take regular blood samples, both in hospital and once you have gone home. It is very important that you are taking the correct amount of warfarin each day, as too little warfarin will not protect your valve from potential blood clots.

The good news is that the testing can be arranged at a hospital closer to home or sometimes by your g.P. And once the correct dose has been found for you, the testing becomes less frequent.

Can I drink alcohol when taking warfarin?

Alcohol can affect the way Warfarin works so check with the staff on the ward for further information.

Other important things to remember:

Too much warfarin can cause bleeding, so look out for these signs:

- unexplained bruising
- nose bleeds
- bleeding gums when brushing teeth
- dark or black stools
- blood in the urine

If any of these occur see your G.P. at once. **Never** alter your warfarin dose without asking your doctor first.

If you are taking warfarin consult your doctor if:

- You suspect you are pregnant or have plans to become pregnant.
- You need to take anything that contains aspirin e.g. flu remedies. Try to avoid these and use paracetamol instead. (If in doubt, ask your local chemist).

L16 Cardiac Surgery Ward

Ward 16 is the ward where you will be admitted to before your heart surgery. It is on F floor in Jubilee Wing at the Leeds General Infirmary (LGI). It is a mixed sex ward, however male and female toilets and bathroom facilities are available and the bays are single sex. The only bay that could be mixed sex is the higher observation bay where you may go following the intensive care and high dependency unit.

Some things to think about before admission:

- Have you got someone to do your shopping when you go home?
- Is your fridge/freezer stocked up?
- Will your pets be looked after? (you won't be able to walk your dog on a lead for 12 weeks after surgery)
- Can someone help with housework and gardening?
- Can someone bring you in and take you home from hospital?

Admission

On your day of admission the ward will phone you between 11:00 and 12:00 to let you know whether there is a bed available for you. Please arrive on the ward by 3pm unless the ward staff give you a different time. When you arrive you may be asked to wait in the day room until a bed becomes available.

Medications

It is very important that you bring all your medications into hospital with you so that they can continue to be used during your admission.

Property

You will be encouraged to wear your own clothes during your hospital stay. You will need enough clothing for approximately one week. We advise that these are comfortable and loose fitting including some front fastening clothes. Healthcare staff will need to review your wounds daily so please wear clothes which allow the team easy access to your chest and any leg wounds. Storage is limited on the ward; please bring only a few personal items. The ward can provide you with towels.

Things to bring into hospital

- toiletries
- pyjamas
- slippers
- a few loose items of clothing including some front fastening
- your medications
- your decolonisation wash
- a 'hand luggage' sized bag - belongings will be kept in a locked store cupboard on L16 when you go for surgery
- a book
- a small amount of money to buy a newspaper, etc.
- You can bring your mobile phone or other device if you wish
- This book - 'Your Journey Through Heart Surgery'

On the morning of your surgery you will be asked to pack up your pyjamas, toiletry bag, teeth, hearing aids, glasses and medications including the chlorhexadine wash. You will be given a bag to put these in and a member of intensive care staff will collect them.

Valuables

You are advised to leave valuables at home. A safe on the ward is available for patient's valuables. However, sums of cash over £20.00 cannot be kept on the ward; they will have to be sent to the finance department for safe keeping.

Smoking

The Leeds Teaching Hospitals Trust has a no smoking policy throughout all hospitals, buildings and grounds. There is nowhere to smoke at the Leeds General Infirmary.

Visiting

Visitors are welcome between 12 noon - 8pm. Two visitors at a time are allowed to visit at the bed area. Children under 12 are not advised to visit (as per Leeds Teaching Hospitals Trust guidelines). If children wish to visit, please speak with the nurse in charge of the ward.

Restaurant and snack facilities are available on B and C Floors. We politely request that visitors do not bring food and drink onto the ward for their own consumption.

There are no toilet facilities on the ward for visitors. The nearest ones are situated on B Floor in the reception area.

Telephone numbers

Ward L16: 0113 392 7416

Your relatives are welcome to ring the nursing team on the ward and the Intensive care unit for an update on your progress, but we would encourage you to nominate the same person throughout your stay and they can pass on these details to your extended family and friends where possible.

Bedside telephones are available and are provided free by Take Heart for patients to make calls. Mobile telephones may be used on silent mode **by patients only**.

Cancellation

Unfortunately operations may sometimes be cancelled for a variety of reasons. If your operation is cancelled we would let you know at the time the reason for this. Your operation will be rescheduled as soon as possible but you may be sent home to wait for another date.

Discharge

On the day of discharge you may be asked to vacate your bed and sit in the dayroom to allow a new patient to be admitted or someone to return from ICU. This allows other patients to have their surgery.

Intensive Care

You will go to the operating theatre on the day of your surgery. When your surgery is completed, you will be moved to the Cardiac Intensive Care Unit. Here the nursing team and doctors will monitor your recovery closely. They will also provide the care you need in the immediate post-operative period.

When we are sure that your recovery has progressed well, we will transfer you back to your cardiac ward after 12-72 hours for you to continue your recovery. If your recovery is slower than we might have expected, you will stay a bit longer until we are sure that you are ready to go to the ward.

Sedation

When you arrive in intensive care you will still be asleep. We will continue to keep you asleep (by using a short acting sedative into one of your drips) until your condition has stabilised and your body temperature following surgery has returned to normal. When you are warm and your condition is stable your nurse and doctor will make the decision to wake you up. The length of time you are asleep will be dictated by your condition. Waking will only happen when it is safe to do so.

Ventilator

While you are asleep, a ventilator is used to help you breathe. The ventilator works by pushing a mixture of air and oxygen into your lungs through a breathing tube in your mouth. As you wake you will become more aware of the tube in your mouth. It may be uncomfortable but it is important that you do not pull it out. Whilst the tube is in your



mouth you won't be able to drink or speak but your nurse will use mouth swabs and water to keep your mouth comfortable. Your nurse will use simple questions requiring a nod or head shake to communicate with you.

The nursing staff will assess when you are awake enough to remove the breathing tube and take you off the ventilator. You will then be able to breathe independently. Your nurse will encourage you to deep breathe and cough once you are breathing by yourself.

You will still need extra oxygen and will be asked to wear an oxygen mask. You will then be able to talk and start to eat and drink, but only when it is safe to do so.

Medical devices and pumps

Different devices and pumps are used to do a range of jobs in the intensive care and high dependency unit.

Some monitor your condition; others are used for drug administration. There will be a ventilator to your left which is used to help you breathe whilst you are sedated. The machines have alarms fitted to them. When you wake up you will hear alarms sounding around the intensive care unit. The alarms are nothing to worry about. The nurse at each bedside uses them as signals providing them with information.



Drips

Cardiac surgery requires a number of drips to be put in, some in your arms and some in the side of your neck. Most of these are sited when you are asleep in the anaesthetic room. Some are used to give medications and fluids during and after surgery. Others are used to measure your blood pressure or for blood samples. Most of them will be removed before you return to the cardiac ward. They are important for your care, so it is helpful to try not to dislodge them as you move yourself around the bed. Your nurse will advise you about this.

Chest drains

Your surgeon will put two or three chest drains in during your surgery to drain away any fluid which can collect there. The drains can be uncomfortable. We will provide pain killers to minimise the discomfort. These drains are typically removed the morning after surgery, though sometimes they stay in slightly longer. Your nurse will explain what they are going to do and the part that you need to play in it when we take the drains out.



Pain

While you are still asleep, the medical team will give you pain relief. When you are awake we will ask you whether you have any pain by using a pain score of 0 to 3, 0 being no pain, 3 being severe pain. Your nurse will administer you pain relief depending on this score. This may be a tablet or sometimes the pain relief will be given through a drip. Please let the nurse know if the pain relief they are providing is enough for your needs. This is important as part of your recovery is that you feel comfortable enough to take deep breaths, cough and to be able to move yourself around the bed and sit in a chair.

Catheter

It is important for us to measure your urine output following cardiac surgery. The amount of urine your kidneys produce is an indicator of how well your heart is working. For this reason, a catheter is inserted into your bladder in the operating theatre and connected to a measuring device. The catheter will usually be removed prior to being transferred back onto the cardiac ward.

Location

Intensive Care is situated on C floor of Jubilee Wing in the Leeds General Infirmary. Ask your family to phone before visiting. The phone numbers are on the following page.

Visitors

We restrict visiting to particular times of the day. Visiting times are 1pm - 3pm and 5pm - 7pm. We ask that only close family visit, and no more than two visitors at a time. This is so that we can give you the care that you need, and so you have time to rest.

Please ask the staff if you would like children under 12 to visit. It is advisable to wait until you are back on L16 for children to visit.

There is an intercom at the door to get in. The ward clerk or nurse who answers will want to know who is visiting. Your nurse or the ward clerk will come and greet your visitor prior to their first visit to ICU. They may be asked to wait a short while if you are receiving care when they arrive. Please tell your relatives to let the nurses know if it is their first visit so they can explain what has been happening so far.

Relatives are welcome to telephone at any time to ask how their family member has been. We ask, if possible, that one family member is nominated to make enquiries on behalf of your family. This allows the nurse caring for you to spend as much time looking after you as possible.

Telephone numbers for Ward L04 Intensive care unit are:

0113 392 7404 and 0113 392 7405

Staff

Your recovery is assisted by a large number of people. This includes nurses, nursing assistants, surgeons, anaesthetists, physiotherapists, pharmacists, radiographers, ward housekeepers, laboratory staff and others.

While you are in Intensive Care, there will always be one nurse at your bedside who will provide you with the nursing care that you need. They will also coordinate and plan the care provided by the rest of the team. As you recover you will receive high dependency care which means your nurse will care for you and another patient. You will remain on L04 whilst this happens.

When you are well enough you will return to the surgical ward L16. You may spend a short period of time on L16's high observation area (HOBS) or you may return to the main ward. The consultant anaesthetist on ICU/HDU will make the decision as to where you will go. You will be looked after by a nurse and the healthcare team. You may continue to have daily bloods and regular observations to monitor your progress. The nursing team will help to support your recovery and start to prepare you for your discharge home.

Physical activity after surgery

On your first day following your surgery, you can expect the nursing staff to help you to get out of bed, stand up and transfer into a chair. On your second day the nursing staff will encourage you to stand up regularly during the day and walk on the spot. The staff on ICU and L16 will help you to set daily goals to help you through your recovery.

When you are on the ward it is important for you to get up and about as much as you can. You should aim to walk the full length of the ward by the time you go home. Some people may feel able to walk further than this, for example downstairs to the shop or to the roof garden. Make sure you check with the ward staff before you leave the ward. Those who are unable to walk independently will receive assistance from the nursing and Physiotherapy staff. If required you may be seen by a physiotherapist on the ward to help you achieve your goals. Don't worry if you don't see the physiotherapist on the ward, this means they are happy with your progress on returning from ICU. Feel free to ask members of the team any questions you may have before you go home.

Use these daily goals to track your progress on the ward after you have stepped down from ICU

These are tasks that most people can achieve by these points in their recovery. Try to choose one or two you would like to aim for so you have a target.

Day 1 on the ward after step down:

1. Change out of hospital gown and into your own pyjamas/ clothes.
2. Sit out in the chair for most of the day.
3. Complete chair exercises - see pictures.
4. Walk to and from the bathroom with assistance from the nursing or physiotherapy team.
5. Aim to keep up your fluids and start to eat regular meals.

Day 2:

1. Get a shower with or without assistance
2. Get dressed out of pyjamas into your own comfy clothes.
3. Start to walk up and down the ward 3-4 times a day. You can do this with the nursing or physiotherapy team if needed. Make sure you check out the walking challenge on the ward.
4. Continue to complete chair exercises and ward circuit exercises with or without assistance from the physiotherapy team.

Day 3-4:

By day 3 on the ward you should be starting to think about going home and making any plans to help this go smoothly.

1. Get a shower without assistance.
2. Aim to walk up and down the ward 6-7 times.
3. Maybe take your visitors to the roof garden or down to the coffee shop.

Day 5-7:

If you are medically fit and have achieved the above goals then you should be aiming to be discharged home. To prepare for this make sure your family and/or friends are aware and can arrange transport. Discharge is likely to be after 2.00pm.

Turn to page 77 for advice on how to continue to increase your physical activity and to progress when you return home.

You may have been seen by a physiotherapist and discussed other personalised goals to work towards. Please see table below for these.

Goal	Date Completed

What are the benefits of exercise after surgery?

- Helps your lungs re-expand and improves oxygen levels
- Improves your ability to cough and reduces the risk of chest infections
- Tones and strengthens muscles and keeps joints flexible
- Increases circulation to the heart and other major organs
- Helps to reduce cholesterol and blood pressure
- Reduces the risk of blood clots and strokes
- Improves wound healing
- Increases independence when walking
- Helps with weight loss
- Improves mood and helps you to sleep better
- You will be able to do more with less effort as your fitness improves

What sort of physical activity can I do?

Walking will have formed an important part of your hospital recovery and is the best way to progress your rehabilitation on the ward and when you go home. You can also try the exercises described later in this booklet.

How much exercise is too much?

Everybody recovers differently after surgery, but the **'How it Feels'** Scale on the next page is a good guide. Try to exercise within the green zone.

Another good indicator is the **'Walk-Talk Test'** to ensure that you do not overdo it. This simply means that you should be able to talk and be active at the same time.

The 'How it Fees' Scale

Use this scale to guide how much you should exert yourself during exercise.

Aim to work in the 'Green Zone'

0 - nothing at all

1 - Very weak
(piece of cake)

2 - Weak (light)

Amber - You need to work a little harder

3 - Moderate (no sweat)

4 - Somewhat strong
(sweaty)

Green - you are exercising at the correct level

5 - Strong (heavy)

Amber - You are working quite hard, try the 'Walk-Talk-Test'. Slow down if you are struggling

6 - Very strong

7 - Hurting

8 -

9 -

10 - Extremely strong

Red - you are working too hard, take a break or slow down

Adapted from Borg 1970

Remember that extremely hard or maximal exertion is something you should not be asked to do in any circumstance. If you feel this is the case you must stop and take time to recover.

I feel really tired at the end of the day, is this normal?

Yes it is normal to feel tired after surgery and some tasks that you found easy before may feel difficult. It is important to pace yourself; you may find it helpful to break down an activity into more manageable chunks. This gives you more time to recover.

How long should it take to get back to normal?

There is no specific time frame, but it can take two to three months before you feel back to your normal self. The Cardiac Rehabilitation Nurses will be able to give you more individual advice once you have gone home.

Advice when having a bath or shower?

The nursing staff will assist you until you feel stronger and more confident with a wash and a shower. Try not to use very hot water because this can affect your circulation and make you feel dizzy.

It would be better to use a shower rather than a bath as it is important not to pull yourself up and out of the bath before your breast bone is fully healed. If you don't have a shower then it would be advisable to have a wash by the sink initially until you feel stronger and your wounds have healed fully.

Surgical wounds

All patients who have had cardiac surgery will have a breast bone wound. Patients who have had a coronary artery bypass graft may have wounds on one or two legs which will initially be covered with a surgical dressing.

Many things effect the rate at which your wounds heal. These include:

- your physique
- the foods you eat
- other medical conditions such as diabetes
- your age
- smoking

When will my stitches be removed?

Different surgeons use different methods to close the skin. You may have:

- stitches (sutures)
- clips
- dissolvable stitches
- beads

You will be advised before leaving the hospital if and when these should be removed.

Some common questions asked about wound healing:

Some fluid is leaking from the wound. Is this normal?

If any clear or blood stained fluid starts to leak from your wound, please tell your Cardiac Rehabilitation Nurse who will advise you on how to deal with it. If the discharge becomes yellow or pus-like, you should see your GP as it may be infected.

***I have noticed pieces of skin coming off my wound.
Is this normal?***

Yes, you may notice that small lengths of skin appear to come away. This is part of the wound healing process and is entirely normal. Remember that the deep stitches in your heart and chest wall are firm and secure and are not affected by the changes you see around the skin.

Can my wound get infected and how would I know?

If your wounds or the surrounding skin becomes red, painful, swollen or warm, you should contact your Cardiac Rehabilitation Nurse or GP as soon as possible. If your wound starts to leak yellow or pus-like fluid, you should also contact your GP straight away. There may not be a need for any treatment or you may just need a course of antibiotics to help fight the infection.

People with diabetes

Having diabetes can affect how long it takes for wounds to heal. It is therefore very important that you monitor your diabetes carefully when you leave hospital. You should contact your GP if your blood sugars are persistently higher than 10mmols/litre or urine testing continues to show glucose in the urine. If you notice any signs of wound infection (as described above) you should contact your Cardiac Rehabilitation Nurse or GP straight away.

Why do my legs swell?

For those who have had the vein removed from their leg (saphenous vein), some swelling of the leg is expected. This is quite normal and may occur for up to 12 months following surgery.

You will need to wear elastic stockings for up to six weeks following your operation. This is to encourage blood flow and to reduce your risk of developing a venous thromboembolism which is the development of blood clots in the veins of the legs. These are often referred to as 'Deep vein thrombosis' (DVT). The nursing staff will encourage you to mobilise as early as possible. This may include asking you to regularly perform the leg exercises when you are in bed or sat in chair.

It is also helpful to keep your legs elevated when sitting, to help fluid return and reduce swelling. However, if the swelling gets more noticeable, or you experience any swelling in the leg that has not been operated on, please seek advice from your hospital doctor, G.P or tell your Cardiac Rehabilitation Nurse.

Whilst you are in hospital you will be given a daily injection of a low dose heparin. This medicine thins the blood and reduces the risk of blood clots forming whilst you are less mobile.

Do all my stitches dissolve?

Sometimes stitches that would normally dissolve under the skin may not. This is very common at the top and bottom of the wound. If left in place they may delay healing or increase the risk of infection. See your G.P. or practice nurse to have them removed.

Tips for effective wound healing

- Keep your wound clean by taking regular showers. This will prevent a build up of bacteria. Do not use soap or perfumed products directly on the wounds.
- Pat your wounds dry with a clean towel after bathing/showering using a different part of the towel for your chest and leg wounds.

- Ensure you eat a well-balanced diet. Protein which is found in low fat dairy products or lean meat and pulses will help wound healing.
- Wound healing takes place during rest and sleep, so do try to ensure that you get enough rest
- Protect your wound from damage i.e. knocking the wound
- Try not to poke at the wound, as this may cause infection
- Do not use any dressings, creams, talcs etc. on the wound unless advised to do so by your doctor or nurse
- Try not to expose your wound to sunlight without protection. The wound is prone to sun burn, so keep it covered or apply a total sun block (make sure the skin is not broken before applying sun block).

How long will it take for my breast bone to heal?

Following the operation your breast bone is held together firmly by wires. These stay in place for the rest of your life. The bone is fully healed after about twelve weeks and even after the bone edges have healed, the wires will remain in place.

Normally these wires do not cause any problems, but seek advice from your G.P. if:

- you can feel the wires under the skin and they are uncomfortable
- you think infection is present because your breast bone is more painful, itchy or you have a temperature and feel generally unwell
- you think your breast bone is not fixed firmly enough together and it moves about unequally.

Aches and pains

After your operation it is normal to experience aches and pains. Everyone is different and the aches and pains you experience may be different from those experienced by someone else.

To help you become active again as quickly as possible, it is important that you take enough pain relief. We recommend that you take all pain relief medication as prescribed. If this is not adequate, please speak to your Cardiac Rehabilitation Nurse or GP.

Common questions asked about aches and pains:

Why am I getting pain in my shoulders?

It is common to feel discomfort or numbness and other sensations around your neck, shoulders, back and breast area. This is due to your chest being held open during the operation. These aches will fade as your breast bone heals. It is important that you keep moving your arms and do the exercises that are explained later in this booklet. This should prevent long lasting stiffness and other shoulder problems.

Part of my chest feels tingly and numb, why is this?

There may be some areas of lost sensation in the skin around the wound. This is normal and causes no harm. Usually normal sensation will return after a few weeks or sometimes months.

If the surgeon used the left internal mammary artery (LIMA) to make a graft (if you are not sure about this you should ask), you may experience discomfort similar to 'chest pain', tingling or numbness. Women may find it more comfortable to wear

a supportive bra (i.e. a sports bra) even at night. Make sure that you are measured properly and get the correct size as this will improve support. Do not worry if any of these sensations happen, they will fade in time. Your G.P. may be able to prescribe anti-inflammatory painkillers if this really becomes a problem.

Why is my leg wound more painful than my chest?

It is common to experience some discomfort from your leg wound, but it is important to keep active. You could also try the exercises that are described later in this booklet.

For how long should I take my painkillers?

When your aches and pains start to become less uncomfortable you can start to take less painkilling tablets. You may find that you experience more pain and discomfort at night so stop those last. You should notice that your aches and pains get less and less as each week passes and you may find that some days are better than others. The main thing is to try to keep yourself moving.

Your pain will gradually reduce as time goes on. If you feel you need different pain killing tablets, you should discuss this with your G.P. Remember, everyone recovers at different speeds and some aches and pains can go on for up to a year.

Some people find that they get more discomfort when they first get home compared to when they were in hospital. This is because the tendency is to do more for yourself than you did in hospital, so do not worry. This is perfectly normal.

Other effects of the operation

After your operation you may notice several changes in your senses and moods. These effects will usually resolve or improve within three to six months, if not sooner.

Some commonly asked questions:

Some days I feel fed up and depressed, other days I feel tearful and emotional and sometimes I feel irritable and angry. I didn't used to be like this, is it normal?

It is quite usual to feel low, fed up or emotional after your surgery and this is thought to be part of the normal recovery process. Some people complain of feeling vague and vacant. These feelings are often short-lived but some people may experience them several times during their recovery. They may take the forms of tears, anger frustration and irritability. Your Cardiac Rehabilitation Nurse or G.P. can provide further support and information if you are concerned about this aspect of your recovery.

I am having difficulty concentrating on things e.g. reading a book, and sometimes my vision becomes blurred. Why?

You may find that you can't concentrate as well as you normally could and your vision is slightly blurred. This is thought to be due to being on the heart bypass machine during your operation. The visual disturbances should resolve within a few weeks but if you are experiencing other symptoms or are worried, see your G.P. Your ability to concentrate may take longer to improve.

Why have I got a sore throat?

During your operation, a machine (ventilator) breathes for you. The breathing tube can sometimes make your throat a bit sore but this should get better soon afterwards.

When I am eating and drinking things don't taste the same as they usually do. Why?

You may find that your taste and smell sensations are different. Things may all taste and smell the same. Or you may find that they taste different from usual. This may also contribute to the loss of appetite you may be experiencing. Again this is thought to be due to being on the heart and lung bypass machine during your operation. In time your sense of taste and smell should return to normal.

My fingers sometimes feel numb and tingle, especially my little fingers. Is this normal?

This can happen because the nerves that run down the arms can be 'stretched' when the surgeon opens your chest during your operation. These sensations should resolve in time. Performing regular exercise will help (please see section on exercise).

I have difficulty sleeping and I have vivid dreams and nightmares. Why?

There are a number of reasons why some people might struggle with sleep or have vivid dreams, particularly after surgery. Sometimes there are specific reasons for this, such as pain and discomfort. This can prevent sleep so make sure that you take your prescribed painkillers if you are uncomfortable and try to find a comfortable position in bed. Taking a daytime nap may be useful if you find you are very tired. Some people find it difficult to sleep on their side; again this is common and will improve in time.

Sleep disruption can also be a result of your stay in hospital, particularly after surgery if you have spent time on Intensive Care, where the usual things that cue us into sleep (such as when we eat, light/dark levels, noise etc.) are different from our norm.

Once again it is difficult to say why some people struggle with sleep and may have vivid dreams but it is quite common. The dreams and nightmares will fade in time and eventually your sleep pattern will return to what's normal for you. However, if the nightmares and dreams should persist, please discuss this with the Cardiac Rehabilitation Nurse.

Medicines you may need after your surgery

Some of the common medicines that you may need to take following your surgery are listed below, but if you are taking any others, ask the doctor, pharmacist or Cardiac Rehabilitation Nurse to explain them to you.

Diuretics

How do diuretics work?

Diuretics are more commonly known as 'water tablets'. They help to remove excess fluid from the body by making you pass more urine.

Cardiac surgery itself, as well as the fluids you are given during your bypass operation, can alter the distribution of fluid in your body.

You may need a diuretic for a short time following your surgery, until all the excess fluid is removed. This is usually when your weight has returned to your pre-operative weight. The time taken for this to happen varies. The diuretic may be stopped before you are discharged from hospital. If not, it will be reviewed by your GP or by your cardiac surgeon at your follow up appointment. You should continue to take your diuretic until a healthcare professional tells you it is OK to stop.

Common diuretics used after cardiac surgery:

- Furosemide
- Co-amilofruse (furosemide and amiloride)
- Bumetanide

Unwanted effects

It is normal to pass more urine whilst you are taking a diuretic. If you have been asked to take a diuretic more than once a day, make sure you take the last dose no later than the afternoon to avoid having to go to pass urine during the night.

Diuretics can sometimes cause your body to lose substances called electrolytes, especially potassium. They can also have an effect on your kidney function. For these reasons you may find that you need to have regular blood tests.

Amiodarone

How does amiodarone work?

Amiodarone is an 'anti-arrhythmic' medicine, which regulates the pace and rhythm of the heart beat.

Approximately one third of patients undergoing cardiac surgery may develop an irregular heart beat called atrial fibrillation. If you have never had atrial fibrillation before, you may be treated with amiodarone to regulate your heart rate.

Amiodarone is usually continued when you are discharged from hospital and will be reviewed by your cardiac surgeon in your follow up appointment at 6-8 weeks. Often it can be stopped; however, in a small number of cases it may be beneficial to continue this medicine longer term.

Unwanted effects

In rare cases, amiodarone can have effects on the lungs, thyroid and liver. You will have a chest x-ray and blood tests to check your liver and thyroid function before you start taking amiodarone and these may be repeated periodically if you keep taking amiodarone long term.

Amiodarone stays in your body and keeps working for a long time, even after stopping it. If you experience any of the following symptoms, even if you have stopped taking amiodarone, tell your doctor straight away:

- shortness of breath
- stomach pain, dark urine or yellowing of the skin or eyes
- feeling hot and active, or cold and slow
- problems with your vision.

It is important to protect your skin from sunlight, even on a bright but cloudy day, by covering up or wearing high factor sunscreen. You should also avoid using sunbeds.

Amiodarone can interact with other medicines. All the medicines you are taking in hospital will be checked by the healthcare professionals taking care of you. Please ask your nurse, doctor or pharmacist if you are unsure about any new medications you are prescribed.

You should avoid eating grapefruit whilst taking amiodarone as it can increase the level of amiodarone in your blood and cause side effects.

Anticoagulants

How do anticoagulants work?

Anticoagulants are more commonly known as 'blood thinners'. They help to make your blood less sticky, to reduce the risk of blood clots and strokes.

If you develop an irregular heart beat which lasts for longer than 48 hours you may be asked to take an anticoagulant.

Common anticoagulants include:

- Warfarin
- Apixaban
- Dabigatran
- Edoxaban
- Rivaroxaban

Your doctor or pharmacist will discuss the different options available with you and help you decide which one is right for you.

Your anticoagulant is usually continued when you are discharged from hospital and will be reviewed by your cardiac surgeon at your 6-8 week follow-up appointment.

Antiplatelets

Aspirin, Clopidogrel, Prasugrel, Ticagrelor

How do aspirin and other antiplatelets work?

Whenever a blood vessel wall is damaged, platelets collect around the area of the damage and clump together to form a clot. If the clot becomes too large it can block the blood vessel and prevent blood from reaching the heart muscle. This is what happens when you have a heart attack. Aspirin and other

antiplatelets help stop platelets sticking together, which prevents clots forming. Therefore taking aspirin or other antiplatelets will help to prevent your new grafts from blocking.

When aspirin and a second antiplatelet (clopidogrel, prasugrel or ticagrelor) are prescribed together, usually the second antiplatelet is taken for **no more than one year** and aspirin is continued alone thereafter, in most cases for life.

If you are unable to take aspirin, your doctor may suggest that you take clopidogrel instead of aspirin. In situations like these clopidogrel is taken long term.

Unwanted effects

Aspirin, clopidogrel and, to a lesser extent, ticagrelor can cause indigestion and heartburn. To try and prevent this, you should always take them with food or just after a meal. If you do get indigestion with aspirin, you may find that the coated form of aspirin is better. If you have had a stomach or duodenal ulcer in the past, you should tell your doctor before you start taking aspirin or other antiplatelets. In some people, aspirin can bring on an asthma attack. Please tell your doctor if you suffer from asthma.

Some people may experience shortness of breath from ticagrelor which is usually a harmless side effect. If your shortness of breath gets worse or lasts a long time, discuss it with your healthcare professional who will work with you to decide if ticagrelor, your condition, or other factors are causing the breathlessness.

Please report any signs of fever, excessive bruising or bleeding to your nurse, doctor or pharmacist.

For the full information about the side effects of aspirin and other antiplatelets read the information leaflet that you get with your tablets. If you have any questions speak to your doctor, nurse, or pharmacist.

Proton pump inhibitors

Lansoprazole, Omeprazole, Esomeprazole, Rabeprazole, Pantoprazole

How do proton pump inhibitors work?

Your body produces a natural mucous barrier to protect the lining of your stomach from 'stomach acid'. Antiplatelet medications can alter this natural barrier and make the lining of your stomach and gut more susceptible to damage. Proton pump inhibitors reduce the amount of acid produced in the stomach, which protects the lining of your stomach and gut from irritation and ulceration.

If you are taking 'dual antiplatelets' (aspirin plus a second antiplatelet) or a single antiplatelet with an anticoagulant, you may be prescribed a proton pump inhibitor. It is important to keep taking a proton pump inhibitor to protect your stomach for the duration of your dual antiplatelet treatment. You may be able to stop taking your proton pump inhibitor after 12 months and this should be discussed with your GP.

Proton pump inhibitors should be taken at least 30 minutes before food and other medicines.

Unwanted effects

The most common side effects are on the gastro-intestinal system and include constipation, diarrhoea, bloating, flatulence, feeling sick and tummy pain.

For the full information about the side effects of proton pump inhibitors read the information leaflet you get with your tablets. If you have any questions ask your doctor, nurse or pharmacist.

Beta-blockers

Atenolol, Bisoprolol, Metoprolol, Carvedilol

How do beta-blockers work?

Beta-blockers block the actions of hormones such as adrenaline that make the heart beat faster and stronger. They prevent the heart from beating as quickly and forcefully when you exercise or feel under stress. This reduces the work that the heart has to do.

Unwanted effects

Beta-blockers can narrow the air passages. For this reason beta-blockers may not be prescribed for some people with asthma. If you have asthma, your condition will be assessed by your cardiac surgeon or doctor before prescribing a beta blocker. They may also narrow small blood vessels which can cause cold hands and feet.

Minor side effects are common and include tiredness and cold hands and feet. Other less frequent effects include nausea, diarrhoea, skin rashes, impotence or other sexual disorders, nightmares and pins and needles in the fingers. Some of these side effects may get better when your body gets used to beta-blockers. However, if any of the side effects persist or become troublesome please discuss this with your doctor.

Beta-blockers are usually started at lower doses and the dose is gradually increased (up titrated) to the maximum tolerated or target doses.

In some cases your healthcare professional might decide to stop Beta-blockers 12 months after your operation. Beta-blockers should not be stopped suddenly. You must see your doctor if you think you need to come off your beta-blocker.

For the full information about the side effects of beta-blockers read the information leaflet that you get with your tablets. If you have any questions speak to your doctor, nurse, or pharmacist.

Cholesterol (lipid)-lowering drugs ('statins')

Atorvastatin, Fluvastatin, Pravastatin, Rosuvastatin, Simvastatin

How do statins work?

Cholesterol is produced in the liver with the help of an enzyme. Statins block the effect of this enzyme and reduce the production of cholesterol. Statins reduce the levels of bad cholesterol (LDL's) and increase the levels of good cholesterol (HDL's).

Why will I benefit from taking statins?

It is recommended that people who have coronary artery disease take lipid-lowering drugs to reduce their blood cholesterol level. Even if your cholesterol is not high, reducing it will lessen the chance of you having a heart attack.

What time of day should I take statins?

Most statins should be taken at night because most cholesterol is produced by the liver at night. However, atorvastatin and rosuvastatin can be taken at any time in the day as they are long acting.

Unwanted effects

Statins can cause stomach pain, wind, constipation or diarrhoea. If this happens to you, tell your doctor because reducing the dose may make this better. A rare but serious

side effect of statins is inflammation of the muscles (myositis). You must tell your doctor if you have any unexpected muscle pain, tenderness or weakness.

Drinking grapefruit juice or eating grapefruit should be avoided if you are taking a statin drug called simvastatin. This is because it can increase the levels of simvastatin in your blood and potentially causing side effects. However, if you are taking another statin, such as atorvastatin, then grapefruit juice (or the grapefruit) can be taken in small quantities. If you have any concerns regarding statins and grapefruit then you should talk to your doctor, nurse or pharmacist.

For the full information about the side effects of statins read the information leaflet that you get with your tablets. If you have any questions speak to your doctor, nurse, or pharmacist.

What about other cholesterol-lowering drugs?

If you do not tolerate statins or they are not reducing your cholesterol sufficiently you might be offered one or more of the following drugs:

1. Ezetimibe, which works by reducing the absorption of cholesterol from the intestine.
2. PCSK9 inhibitors, which work by increasing the removal of bad cholesterol from the blood. These are injectable medicines that are administered twice a month and supplied by the hospital.

Please ask your doctor, nurse or pharmacist to provide more information about these medicines where needed.

What about monitoring my cholesterol?

It is recommended that after starting or altering cholesterol-lowering medications, you have your cholesterol checked after three months and then at least yearly, unless advised otherwise. You can arrange this with your GP surgery.

Ace inhibitors

Captopril, Enalapril, Lisinopril, Perindopril, Ramipril

If you are already taking an ACE inhibitor, it may be stopped before your surgery. Your cardiac surgeon will tell you if and when he/she wants you to do this. After your surgery your doctor or surgeon will decide when it is the right time to restart your ACE inhibitor. It may be restarted before you are discharged from hospital. If not, it will be reviewed by your GP or by your cardiac surgeon at your 6-8 week follow up appointment.

How do ace inhibitors work?

ACE stands for 'angiotensin converting enzyme'. ACE is a substance in the body which makes angiotensin 2. Angiotensin 2 is a chemical normally produced in the body which makes blood vessels narrower. ACE inhibitors stop ACE from making as much angiotensin 2. This leads to the widening of the blood vessels and reduction in blood pressure, this reduces the work load on the heart muscle.

Why will I benefit from taking an ace inhibitor?

They help to reduce damage to the heart muscle which can cause heart failure.

Unwanted effects

Most people take ACE inhibitors without any problem. However some people get a persistent, dry, irritating cough. This is not serious but if you find it unbearable, speak to your doctor. He or she may prescribe an alternative treatment for you.

ACE inhibitors sometimes affect how the kidneys work and lower blood pressure. When your doctor starts the treatment, they will take care to start you on a low dose and will regularly check your blood pressure. They will check your kidneys are working well, at least once, by taking a blood test. If your blood pressure and kidneys are working well, your doctor may increase the dose.

If you cannot tolerate an ACE inhibitor your doctor may suggest that you take an alternative class of drugs called “Angiotensin II receptor antagonists” such as valsartan (Diovan®), losartan (Cozaar®), or candesartan (Amias®). This is a newer class of drug which is similar to ACE inhibitors and some patients tolerate them better.

For the full information about the side effects of ACE inhibitors read the information leaflet that you get with your tablets. If you have any questions speak to your doctor, nurse, or pharmacist.

GTN spray

Before your surgery you may have been using a GTN spray to relieve angina symptoms. Following your surgery, provided all of the narrowings in your coronary arteries have been treated, you are unlikely to experience angina symptoms. For this reason, in most cases GTN spray is stopped after surgery.

It is possible that some people who have had heart surgery may develop angina again in the future. If you experience chest pain or any other angina symptoms in the future, these should be assessed by your doctor. In some cases, people may need to start using a GTN spray again.

Commonly asked questions:

What if I forget to take a dose?

If it is a once a day dose, take it as soon as you remember. If you do not remember until the next day, just wait until your next dose is due.

If it is a twice or three times a day dose, take it as soon as you remember. If it is nearly time for your next dose when you remember, just wait until your next dose is due.

Is it alright to drink alcohol while I am on these tablets?

Unless your doctor has told you otherwise, yes. Alcohol will not interfere with these tablets. Remember to stay within the recommended weekly amounts (see page 76).

You may be on other tablets that are affected by alcohol. If you have any concerns, ask your doctor, nurse, or pharmacist.

How long will I be on these tablets?

You will be taking these tablets for the rest of your life unless there is a reason to stop taking them. You will need to make sure that these tablets are on your repeat prescription from your GP.

Will I be entitled to free prescriptions after my surgery?

No, not unless you have another reason to get free prescriptions, for instance if you are over 60 years old or get income support.

You may be able to save money if you buy a prepaid certificate for three or 12 months. Ask your pharmacist for details.

I've been prescribed soluble aspirin. Do I have to dissolve them first?

No. If you prefer, you can swallow the tablets without dissolving them in water first. As with all tablets, swallow them with a drink of water.

Are these tablets safe to take with my other tablets?

If you also take other medication, ask your doctor or pharmacist to check that they are safe to take together.

If I am on holiday and forgot to pack my medicines, what should I do?

It is possible to buy some of these medicines from a pharmacy shop. Ask the pharmacist for advice. It is a good idea to carry a list of your medicines in your wallet or purse or carry your updated Personal Health Record with you.

If you have any further questions or concerns about your medicines, contact your doctor, nurse, or pharmacist.

Nutrition

Do I need to keep to a special diet?

After your operation it is important to eat as varied a diet as possible. Eating normal amounts of a wide range of foods will help your wounds to heal. It will also help you to get your strength and energy back. If your appetite is poor, choose foods which you find tempting.

In hospital, you may find that your appetite is very poor initially. This may be because you feel sick, are in pain or are constipated. If this is the case, please tell the doctors and nurses, as they may be able to give you something to help. If you still cannot manage more than half your meals within a few days of your operation, a dietitian is available for help and advice. You may also be offered information to use when you get home.

What happens once I go home?

Try to eat meals that are of a normal size. If you cannot manage that or you find you are missing meals, try eating small snacks e.g. biscuits and cheese, a sandwich, yogurt etc. between meals.

Diet: getting the balance right

Overall dietary balance is important. No single food contains all the essential nutrients the body needs to be healthy and function efficiently. A balanced diet should include a variety of foods. The picture overleaf represents each of the five food groups and gives a guide to the proportions of food we need to achieve a balanced diet.

Eatwell Guide

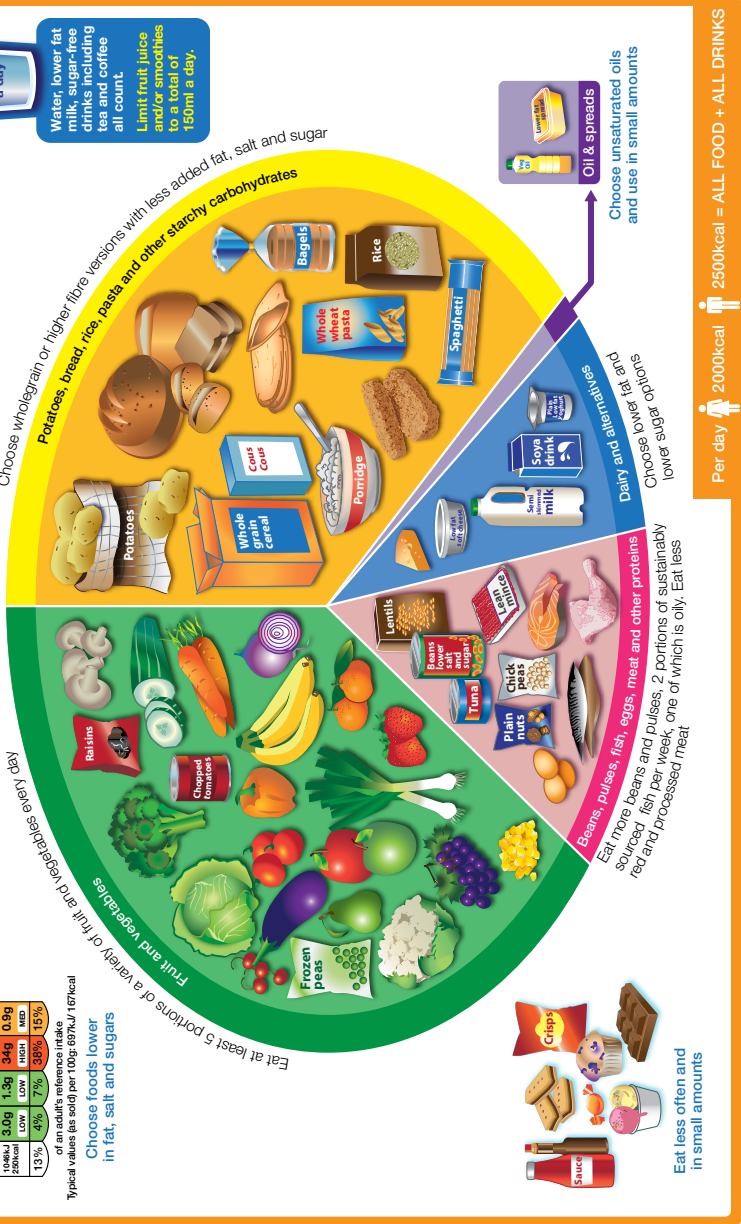
Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

Check the label on packaged foods

Energy	Fat	Saturated fat	Salt
100kcal	3.0g	1.3g	34g
250kcal	LOW	LOW	HIGH
	13%	4%	7%
			38%
			15%

Each serving (1 slice) contains
of an adult's reference intake

Choose foods lower in fat, salt and sugars



Sources: Public Health England in association with the Welsh Government, Food Standards Scotland and the Food Standards Agency in Northern Ireland

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Potatoes, bread, pasta, rice and other starchy carbohydrates

Ideally these foods should make up just over a third of the food we eat. Starchy foods are bulky, low in fat and the wholegrain versions are higher in fibre, so it can be a good idea to choose brown rice, wholewheat pasta, wholemeal bread for example. Choosing wholegrain or wholemeal varieties is beneficial as they contain more fibre, vitamins and minerals. This group also includes rice, pasta and noodles

Fruit and vegetables

Aim to eat five portions of fruit and vegetables each day. Choose a variety, fresh, frozen, tinned, dried and juiced all count. These foods provide us with important antioxidant vitamins and minerals such as potassium and folic acid. They are also an excellent source of soluble fibre. Fruit and vegetables are low in fat and calories, so they make the ideal snack!

Dairy and alternatives

Where possible try to choose low fat varieties. These foods provide us with a good source of protein, calcium and some fat soluble vitamins. This group includes milk, cheese, fromage frais, yoghurt, cream, butter and calcium fortified dairy alternatives.

Beans, pulses, fish, eggs, meat and other proteins

This group provides us with a good source of protein, iron, B vitamins, zinc and magnesium. Try and choose lean cuts and low fat alternatives where possible. You can include your oily fish in this group, which is an excellent source of omega 3 fatty acids. This group includes eggs, nuts, textured vegetable protein, beans, lentils and tofu.

Fish

If you eat fish, eat a variety, including oily and white (such as cod or haddock) and have 2-3 servings per week.

Oily fish are rich in omega 3 oils. These can help to make your blood less sticky, reduce the risk of blood clots and help the blood to flow around the body more easily.

If you don't eat fish, you may need to take in omega oils in other ways, which may be nuts and seeds, but could be other ways (see cardioprotective diets).

The most common oily fish are mackerel, pilchards, sardines, kippers and salmon. These can be fresh, frozen or tinned. A portion is around 140g (4.9oz). Fresh and canned tuna do not count as oily fish.

Ideas to get you started:

- Sardines/pilchards on toast
- Tinned salmon sandwiches
- Salmon steak with potatoes and vegetables

The healthiest choices of tinned oily fish are those in tomato sauce or spring water rather than those in brine. You should aim for one portion of oily fish a week and one or more portions of another type of fish.

Nuts and seeds

Flaxseed and walnuts are another source of omega 3 oils. Try to include 4-5 servings of unsalted nuts, seeds, beans or lentils per week particularly if you do not eat fish.

Fruit and vegetables

These are an important part of keeping healthy. Aim for at least five portions a day. This should be a variety of fruits and vegetables. Fruit and vegetables contain antioxidant vitamins, minerals and fibre that can help to keep your heart healthy. It is recommended to have more vegetables than fruit.

A portion is:

- One third of an aubergine or half a pepper
- 2 x broccoli spears
- 3 tablespoons of vegetables (these can be either fresh, frozen or tinned) like carrots, peas, sweetcorn, cabbage, beans.

OR

- A small bowl of salad

OR

- 1 x apple, banana or nectarine
- 1 x handful of grapes, strawberries or cherries
- 1 x slice pineapple, pawpaw, mango or melon
- 2 x plums, satsumas or kiwis
- 3 x dried apricots, prunes or figs
- 5-6 x passion fruits or lychees
- 1 small glass of fruit juice (150mls) - this only counts once a day!

Fresh, frozen, tinned and dried fruit all count towards your 5 a day. (Potatoes are starchy and therefore do not count towards 5 a day).

Five easy ways to 5 a day

Breakfast:

- One glass of fresh fruit juice/vegetable juice
- One bowl of cereal with dried fruit

Lunch:

- Salad in a sandwich
- Add salad or vegetables to a hot meal
- Piece of fruit as dessert

Evening meal:

- Serve two types of vegetables with your main meal
- Tinned fruit in fruit juice and low fat yoghurt
- Stewed fruit

Snacks:

- Try raw vegetable sticks like celery, carrots and cherry tomatoes, fresh fruit or dried fruit.

Cardioprotective diets

Cardioprotective diets generally follow the Eatwell Guide principles and are linked with a healthier heart. One example would be a Mediterranean style of eating. This is one well known whole dietary approach that may suit you.

Be mindful that other dietary approaches may work better for you, but the most important thing is to think of your diet as a whole. Continue with any cardiac beneficial, whole dietary approaches that suit you.

If you want to try, you can make your diet more Mediterranean by following this guide:

- Have you tried **Using olive oil or rapeseed oil**? These oils are higher in monounsaturated fat. Using unsaturated fats instead of saturated fats in cooking and preparing food is advisable.
- Aim for **at least five portions of fruit and vegetables a day**. Eating a wide variety of fruit and vegetables every day helps ensure adequate intake of many vitamins, minerals, phytochemicals and fibre. Studies have shown that eating plenty of these foods is protective for cardiovascular disease (CVD) and cancer.
- Where to start with plant based eating... **Eat at least three servings (of 150g) of legumes (beans and pulses) each week**. These foods are high in soluble fibre and other useful nutrients. Regular consumption is advisable for those with raised cholesterol.
- **Try to minimise red meat and other meat products**. Choose lean or white meats instead. When cooking grill or roast without fat, casserole or stir fry. Choose to eat chicken or turkey routinely instead of pork, beef or lamb. 'White meat' choices are lower in saturated fat. Remove the skin and consider your cooking method.
- **Eat at least three servings of fish (100-150g) or seafood (200g) each week**. Eat more oily and white fish. Oily fish is an excellent source of essential omega-3 fats. White fish is very low in saturated fat.
- **Aim to eat less butter, margarine or cream** - avoid having this every day. These foods are high in saturated fat which can increase your blood cholesterol level. Try plant-based or reduced-fat alternatives.

- **Avoid sugar sweetened fizzy beverages.** Excessive consumption of sugar-sweetened beverages can worsen many risk factors for CVD so keep consumption to less than once a day.
- **Eat less than three servings of commercial sweets/pastries each week** and eat less processed food. These foods are usually high in saturated fat, salt or sugar and often contain trans fats. Replacing these with healthy snacks such as fruit or unsalted nuts is beneficial.
- **Add nuts and seeds to stir fries and salads.** Nuts are recommended as part of the cardioprotective diet. Almonds, cashews, chestnuts and walnuts are all good sources of protein and vitamins, as are seeds (e.g. pumpkin, sunflower, sesame). Try to avoid salted nuts, as salt can raise blood pressure. As with all high-fat foods, consuming too much can contribute to obesity.
- **Get cooking! Flavour pasta, vegetable or rice dishes with garlic, tomato, leek or onion** and try to introduce to meals at least twice a week. Using a tomato and garlic or onion or leek-based sauce regularly is a key feature of the Mediterranean diet.

Fat

A cardio protective style of eating is not necessarily low in fat, but the type of fat is important. There are two groups of fats: saturated and unsaturated. Healthy fats are better than very low fat. The cardio protective diet is more beneficial than a very low fat diet in prevention of CVD. If you need to reduce your weight, then you need to eat less fat of any kind and this should be a small proportion of your overall diet. Replacing saturated with unsaturated fat is better than replacing it with carbohydrates or protein.

Unsaturated Fat

Unsaturated fats in small amounts are thought to be better for us as they help to lower your LDL (bad chol; total cholesterol and helps to lower your LDL ('bad' cholesterol).

There are two types: Monounsaturated and Polyunsaturated.

Examples of foods

Monounsaturated Fat:

Avocados, olives, olive oil, rapeseed oil. Almonds, cashews, hazelnuts, peanuts, pistachios, spreads made from these nuts.

Polyunsaturated Fat:

Oily fish, corn oil, sesame oil, soya oil, and spreads made from those oils. Flaxseed, pine nuts, sesame seeds, sunflower seeds, and walnuts.

Saturated Fat

Saturated fats usually come from animal products. These fats tend to be solid at room temperature. Although we need a small amount of these fats in our diet, larger amounts can be harmful because they can raise your LDL or 'bad' cholesterol, so try to reduce the amount you eat. They need to be a very small percentage (less than 10%) of your diet. Try to reduce the amount you eat or substitute with polyunsaturated fats.

Examples of foods

Processed meats like sausages, ham, burgers. Fatty meat. Hard cheeses including cheddar. Whole milk and cream, butter, lard, dripping, ghee, suet, palm oil and coconut oil, pies, cakes, biscuits, pastries, fried foods.

Trans Fat

Trans fats are thought to behave in a similar way to saturated fats and are therefore harmful when taken in excess quantities. Try to avoid these when possible.

Examples of foods

May be in some fried foods, takeaways, processed snacks like biscuits, cakes or pastries. Hard margarines

Ideas to help

- Use a monounsaturated spread instead of butter. Try olive oil based spreads, e.g. Utterly Butterly, St Ivel Gold, Bertolli or other olive oil type spreads
- Oven bake or grill instead of frying
- If frying then try to use olive, rapeseed or linseed oil instead
- Buy leaner cuts of meats and remove the visible fat from meat before cooking
- Skim excess fat off stews and casseroles
- Remove skin from chicken and turkey
- Choose low fat dairy products such as low fat cheese and low fat milk.

Salt

Most of us consume more salt than we need. High salt intakes can contribute to high blood pressure and fluid retention. Gradually reduce the amount of salt you add to foods – in cooking and at the table to allow you to adapt to the change in taste. Use other means of seasoning such as pepper, herbs, spices and lemon juice to flavour foods. Pre-prepared foods, sauces and soups can contain lots of salt – check the labels and try lower salt varieties, or prepare foods yourself without adding salt if possible.

Foods high in sugars

These foods should be eaten in small quantities. They provide excess calories and can contribute to weight gain. It is important to limit the amount of 'free sugars' in the diet. Too much free sugar can raise your triglycerides (fatty chemicals in the blood). Free sugar includes sugar added to food and

drinks (either at home or during manufacturing) and sugar naturally found in foods like honey, agave syrup or fruit juice. Adults can have up to 30g of 'free sugars' a day. The sugar found naturally in whole fruits and vegetable is not free sugar and does not need to be included in this amount. There is advice on how to cut down on sugar on the NHS live well website. This group includes biscuits, cakes, ice cream, sweets, chocolate and fizzy or sweetened drinks.

How do I understand food labels?

Nutrition labels can help you choose between products and keep a check on the amount of foods you are eating that are high in fat, saturated fat, sugar and salt.

Packaging often shows foods in 'traffic light' colours, so that you can see at a glance if they are high (red), medium (amber) or low (green) in fats, sugar or salt. For a healthier choice, try to choose products that have more greens and ambers than reds.

per 30g cereal:



Typical values per 100g: Energy 1530kJ/360kcal

If you have a smart phone you can download the food4life food scanner App. You can scan product bar codes to check levels of sugar, saturated fat, salt and calorie content of the item. This will allow you to make an informed choice about your purchase (or product at home).

Being overweight

If you are overweight, then aiming to reduce your weight by 10% is beneficial. For example, if you are 18 stone, aim for 16 stone or if you are 14 stone aim for 13 stone. This will reduce the strain on your heart and will help lower your blood pressure. If you follow the dietary advice to reduce fat intake, your weight should come down.

Waist size is an indicator for heart disease risk. 37 inches for a man and 31.5 inches for a woman is the top end of waist measurement that is considered healthy (BNF). Look at the following chart to see where your weight falls.

You can reduce your energy intake by changing the snacks you eat (e.g. crisps, cakes, biscuits) to the fruits and vegetables suggested. Do not forget that all alcoholic drinks contain calories.

Be careful when choosing low fat foods as some can still be high in calories due to the amount of sugar in the food, e.g. fruit juices, reduced-calorie biscuits and low fat yoghurts. You may notice that you tend to eat more when you are feeling worried, low in mood or bored. If this happens to you, try and find an activity or hobby that will take your mind off food or have a glass of water or no added sugar squash instead. Keeping a diary of what you eat and drink can also help you to find ways in which you can reduce the amount of energy you eat. The support of your friends and family is also important to help you to keep motivated.

Weight and height chart

Weight lbs	100	105	110	115	120	125	130	135	140	145	150	155	160	165	170	175	180	185	190	195	200	205	210	215
	Kgs	45.5	47.7	50.0	52.3	54.5	56.8	59.1	61.4	63.6	65.9	68.2	70.5	72.7	75.0	77.3	79.5	81.8	84.1	86.4	88.6	90.9	93.2	95.5
Height in/cm	Underweight			Healthy			Overweight			Obese			Extremely Obese											
5'00" - 152.4	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42
5'01" - 154.9	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	36	37	38	39	40
5'02" - 157.4	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39		
5'03" - 160.0	17	18	19	20	21	22	23	24	24	25	26	27	28	29	30	31	32	32	33	34	35	36	37	38
5'04" - 162.5	17	18	18	19	20	21	22	23	24	24	25	26	27	28	29	30	31	31	32	33	34	35	36	37
5'05" - 165.1	16	17	18	19	20	20	21	22	23	24	25	25	26	27	28	29	30	30	31	32	33	34	35	35
5'06" - 167.6	16	17	17	18	19	20	21	21	22	23	24	25	25	26	27	28	29	29	30	31	32	33	34	34
5'07" - 170.1	15	16	17	18	18	19	20	21	22	22	23	24	25	25	26	27	28	29	29	30	31	32	33	33
5'08" - 172.7	15	16	16	17	18	19	19	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	32	32
5'09" - 175.2	14	15	16	17	17	18	19	20	20	21	22	22	23	24	25	25	26	27	28	28	29	30	31	31
5'10" - 177.8	14	15	15	16	17	18	18	19	20	20	21	22	22	23	24	25	25	26	27	28	28	29	30	30
5'11" - 180.3	14	14	15	16	16	17	18	18	19	20	21	21	22	23	23	24	25	25	26	27	28	29	30	30
6'00" - 182.8	13	14	14	15	16	17	17	18	19	19	20	21	21	22	23	23	24	25	25	26	27	28	29	29
6'01" - 185.4	13	13	14	15	15	16	17	17	18	19	19	20	21	21	22	23	24	25	25	26	27	28	29	29
6'02" - 187.9	12	13	14	14	15	16	16	17	18	18	19	19	20	21	21	22	23	24	25	25	26	27	28	28
6'03" - 190.5	12	13	13	14	15	15	16	16	17	18	18	19	20	20	21	21	22	23	24	25	25	26	27	27
6'04" - 193.0	12	12	13	14	14	15	15	16	17	18	18	19	20	20	21	21	22	23	24	25	25	26	27	27

Alcohol

Can I still drink alcohol?

Drinking more than the recommended amount of alcohol can have a harmful effect on your heart and general health. It can cause abnormal heart rhythms, high blood pressure, damage to your heart muscle and other diseases such as stroke, liver problems and some cancers.

Alcohol is also high in calories so it can lead to weight gain (see drinkaware.co.uk to check calorific value of alcoholic drinks). It also lowers your inhibitions which might mean you find it harder to stick to your healthy eating plans when you have been drinking. If you are trying to lose weight, cut down on alcohol.

If you drink alcohol it is important to keep within the guidelines:

- **Men and women** should not regularly drink more than **14 units a week**
- Spread your drinking over three days or more if you drink as much as 14 units a week.

These guidelines apply whether you drink every day, once a week or only occasionally.

One unit of alcohol:



One single measure of spirits



One single measure of aperitifs



One small glass of sherry



One small glass of wine



Half pint of ordinary strength beer, lager or cider

Most people don't drink alcohol every day – but if you do, try having some days off – aim for at least two alcohol free days a week. Just make sure you don't increase the amount you drink on the other days.

Drinking large amounts of alcohol in one go, particularly on a regular basis, can cause damage to your heart muscle so avoid heavy or 'binge' drinking.

Your GP can help to support you in reducing your alcohol consumption if you decide you would like to do this. If you are a dependent drinker, please seek medical advice before you stop drinking suddenly. You can find more information at www.drinkaware.co.uk

Check the strength of what you are drinking, as this will affect the units, particularly if you are drinking stronger ales or lagers.

Consider the measures you pour when you are drinking at home, as these tend to be more generous than standard pub measures.

If you require further information or support with reducing your alcohol intake, please seek advice from your cardiac nurse or GP.

What to expect after your discharge from hospital

On discharge from hospital you should have:

- Your Journey Through Heart Surgery
- Community cardiac rehabilitation nurse contact numbers
- Discharge letter (provided by nursing staff. A copy of this will also be sent to your GP). Your GP will be informed of your diagnosis, treatment, medication changes and any further tests or treatments required. You do not need to contact your GP unless you have any concerns.
- 28 days supply of your medications (your GP will update your repeat prescription on receiving a copy of your discharge letter, ready for when you next need to get a repeat prescription).

Within 7 days:

- A community cardiac rehabilitation nurse will contact you by telephone. They will discuss how you have been feeling since your discharge home and explain how community cardiac services can support you in your recovery. You can use this as an opportunity to ask questions or voice any concerns you may have had.
- During this phone call, the nurse will arrange an appointment with you.

Within 4 weeks:

- You will have a clinic or home visit with your community cardiac rehabilitation nurse.
- You may have your blood pressure and heart rate checked and medications will be discussed. Your cardiac rehabilitation nurse will discuss wound care, pain control and recovery advice.



Within 4 weeks

- Reassurance, advice and support can be offered as well as discussion around making positive lifestyle changes.
- Your cardiac nurse may also discuss our six week education and exercise programme run in some local leisure centres around Leeds which will be available to you where appropriate.



Within 6-8 weeks

- You may have started your cardiac rehabilitation programme at the local leisure centre and be well underway to recovery.
 - If you have not attended the cardiac rehabilitation programme, your cardiac rehabilitation nurse is likely to have been keeping regular contact with you and you may now be reaching a point where you no longer need our services.
 - You can also expect to have a follow up appointment with your Consultant Cardiac Surgeon at the hospital around this time.
- If you are not contacted by the community cardiac rehabilitation nurses within seven working days of being discharged from hospital or if you have any concerns once home, please make contact with the numbers you have been provided with by the hospital team for your area.
 - If you need help for minor accidents or unexpected health problems outside these working hours or over bank holidays, please call 111 (for urgent medical help that's not an emergency).
 - If you feel very unwell or are experiencing chest pains which are not resolving please do not hesitate to call 999 and get emergency help.

Discharge from hospital

When you are discharged home from hospital, we recommend that you have some food shopping organised and some plans in place to help you with your heavier tasks in the household and garden.

Physical activity on discharge from hospital

This section will provide advice for you and your partner or carer about the importance of physical activity. It will also give guidance about how much activity and what type is recommended during the first few weeks at home after discharge from hospital.

What are the benefits of physical activity?

Being physically active:

- Reduces the risk of stroke, coronary heart disease, diabetes, osteoporosis and some cancers
- Improves the circulation to the heart and the other major organs
- Helps keep blood pressure within normal limits (lowers raised blood pressure)
- Helps improve your blood cholesterol levels
- Tones and strengthens muscles and keeps joints flexible
- Helps to prolong independence as we get older
- Enables us to do more with less effort as fitness improves
- Helps us to maintain or to reach a healthy weight
- Helps in the prevention and management of depression and anxiety

- Improves psychological well-being (increases self-esteem)
- Helps to prevent blood clotting
- Helps us to sleep better and gives us more energy
- Helps us to relax.

What sort of physical activity can I do?

Walking will have formed an important part of your hospital recovery and needs to continue as part of your rehabilitation when you return home. Your first walk at home should be a similar distance to that walked in hospital. It is important to gradually increase the time spent walking and then the speed.

How much should I do?

In the first six weeks of your recovery, you should be aiming to increase your walking to 30 minutes continuously. We recommend you use the 'Walk-Talk Test' to ensure that you do not over do it. This simply means that you should be able to talk and be active at the same time. Everyone has a different level of fitness and it is important that you exercise at your own pace.

You could try making a list of all the physical activity you do in your day, gradually working your way up to 30 minutes and increasing it by a little more each day.

Everyday activity

This section is designed to help you return to everyday life after you come home from hospital. It is a guide only and you must remember that everybody recovers at different rates and has different levels of fitness. As with everything, you should start gently and build up gradually.

How much you feel able to, or want to do will depend on your usual daily routine. You may find it useful to break down a task into more manageable chunks - giving yourself more time to rest. If you experience pain or discomfort, stop doing the task.

Individual advice and guidance on work and leisure activities can be sought from the cardiac rehabilitation team. **If you have been seen by the physiotherapist whilst in hospital you should have been shown the following exercises.** These are examples that you could try at home instead of going for a walk. Remember to start off slowly, gradually increasing your pace.

Aim to begin with 30 seconds for exercises 1 to 4, and five 'sit to stands' (exercise 5). If you feel able, aim to do these twice a day.

When you can manage the exercises comfortably, gradually increase the time, e.g. from 30 to 40 seconds and five to seven sits to stands.

1. Walk on the spot

Swing your arms, step your feet.



2. Toe Taps

Alternate stepping forwards, tapping your left and right toes.



3. Step ups

Hold onto a rail for support. Step up onto the step. Step back down. Repeat. Try holding on to the back of the chair or to the wall if you need a little more support with exercises 1-3.



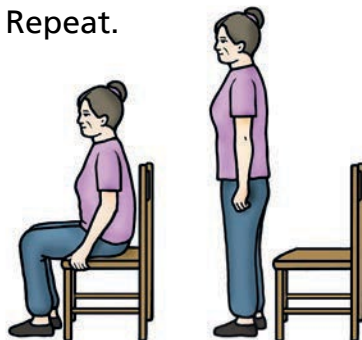
4. Shoulder circling

Put your hands on your shoulders. Circle both arms forwards and then backwards.



5. Sit to stand

Sitting on a dining/ kitchen chair. Feet on the floor, shoulder width apart. Stand up. Sit down slowly. Repeat.



Exercises too boring?

- Try walking on the spot whilst watching TV or making a phone call
- Put some of your favourite music on, or listen to the radio whilst carrying them out
- Try a step counter so you can see how much you are doing
- If the weather's bad, could you take a trip to an indoor shopping centre to do some walking?

The following provides some general guidelines for you

For the first few days at home, keep to the same routine as in hospital. Get dressed, potter around the house, climb stairs slowly and rest when you need to. For the first six weeks do not lift anything heavier than a half full kettle (with approximately half a litre of water in).

Avoid

- Carrying shopping, lifting, pushing, pulling heavier objects, heavier housework, cleaning and gardening for the first twelve weeks
- Walking the dog on a lead for the first twelve weeks

This is to allow time for the wound and sternum to heal.

Friends and relatives may wish to visit at this time, which may be enjoyable but also very tiring. Ask them to stay for short periods and limit the number of visitors.

Follow the stages on the next page, starting at stage one and when you feel ready move onto the next stage.

First stage at home

- Take things slowly
- Stay around your home and garden. Potter around the house and walk in the garden, weather permitting
- Climb stairs slowly - and rest if you need to
- Return to gentle activities like sewing, reading and puzzles
- Listen to music, watch TV
- Make a light snack, do washing up.

Stage Two

- You may try walking outdoors. Walk everyday if possible. Avoid going out if you feel tired or unwell, or if it is very cold or windy. Take a mobile phone if you have one. Start with five minutes once or twice daily and increase the time you spend walking by approximately five minutes at a time. Stop if you experience chest pains/discomfort
- Light housework i.e. dusting, washing up, setting the table, preparing simple meals, tending indoor plants
- Continue to rest for short periods if you need to
- Enjoy visitors, but not for too long and not too many
- It is fine to go shopping with somebody as long as you are not lifting anything or pushing a trolley.

Stage Three

- Walking - continue walking daily. By the end of this week you may be able to walk up to approximately half a mile
- Begin light social activities - visit friends, go out for a meal
- Continue to rest when necessary

- Shopping - but avoid carrying heavy bags
- Increase household tasks - ironing (with ironing board set up), light hand washing or machine washing - but gently
- Make beds - but don't strip and change bedding yet
- Making light meals.

Stage Four

- Daily walking - continue to build up gradually. By the end of the week you may be walking up to a mile per day
- Housework (as in Stage 3)
- Access public transport
- Social activities - cinema, social events.

Stage Five

You should be managing most of your normal daily activities at this stage.

- Daily walking - between one and two miles and gradually increasing the time you spend walking
- Housework - still avoid any heavy lifting
- Washing/polishing car with regular breaks
- Light gardening.

Avoid:

- Continue to avoid lifting anything heavy (remember this includes your children or grandchildren)
- Activities which require lifting your arms above your head for long periods e.g. decorating ceilings, leaning out to high cupboards, leaning above shoulder height.

Stage Six

You may be back to your usual level of activity.

- Brisk daily walks of up to two miles (40-60 minutes) as you feel comfortable
- Shopping - may start to lift slightly heavier weights if you need to
- Housework - remember nothing too heavy
- Light gardening

At around six weeks after discharge you will have a starting date for a cardiac rehabilitation exercise and health education programme. Your community cardiac rehabilitation nurse will discuss this with you.

Physical activity diary

You may find it useful to record your activities on a diary sheet. This will also be useful for the cardiac rehabilitation staff when you attend the exercise and education programme.

Diary sheet example

<i>Day</i>	<i>Activity</i>	<i>Time</i>	<i>Comments/how it felt</i>
Sat	Shopping	25 mins	Easy
Sun	Walk	20 mins	Bit puffed up the hill but could still talk
Mon	Gardening - pruning	15 mins am 10 mins pm	No problems

Diary

<i>Day</i>	<i>Activity</i>	<i>Time</i>	<i>Comments/how it felt</i>
Sat			
Sun			
Mon			
Tue			
Wed			
Thurs			
Fri			

For your safety please avoid the following:

- Exercising during periods of illness, if you feel unwell, or have a temperature
- Drinking alcohol and being physically active
- Engaging in physical activities for at least an hour after eating
- Having a very hot or a very cold bath or shower after activities
- Being active in extremes of temperature, (e.g. in very cold weather, wrap up warmly and walk at a slower pace. This is because the heart has to work harder in these conditions)
- Sudden excessive physical activity.

Remember it is important to:

- Always warm up and cool down
- Wear comfortable clothing and footwear with low heels
- Reduce intensity of any physical activity following illness or a break
- Gradually build up your activity levels
- Increase your fluid intake on hot days
- Make physical activity part of your daily routine
- Find a long term physical activity you enjoy
- Mention any concerns you have about sexual activities to your cardiac nurse or doctor.

During physical activity it is normal to:

- Feel yourself breathing harder than normal
- Feel warmer during and after the exercise
- Feel your heart beating slightly faster.

You should still be able to talk whilst exercising and feel that you could keep going at this level for some time. The key is to exercise without over exertion.

- If you feel well and pain-free following your exercises, do not be tempted to continue as prolonged exercising will not speed up your recovery
- Do not exercise (or continue to exercise) if you are experiencing any of the following: chest, arm or jaw pain, nausea, excessive breathlessness, palpitations, excessive sweating, muscle cramps, feeling faint or dizzy
- Should you experience difficulties with any aspects of the home exercise programme do not hesitate to contact your cardiac rehabilitation team as alternative exercise programmes and physical activities can be discussed.

If you were not very active before your hospital stay or you suffer from a condition which restricts your level of activity, e.g. arthritis, you may need to progress at a slower pace.

What is the cardiac rehabilitation exercise and health education programme?

Programmes are run in community leisure centres with your cardiac rehabilitation nurse. You can attend from about six weeks onwards after discharge from hospital. You will usually have an outpatient appointment with your Consultant prior to starting the programme.

What does it involve?

It involves a supervised exercise session twice a week for six weeks depending on the programme. The exercise sessions take about an hour, followed by a talk and a chance to ask any questions. You will spend approximately two and a half hours at the programme each time.

The talks may include:

- How the heart works
- Healthy eating
- Physical activity
- Managing stress
- Medication

You will be invited for an introductory visit to meet the cardiac rehabilitation staff and for the Physiotherapist/exercise professional to design an individual exercise programme for you.

When can I return to my sports and hobbies?

Everyone is different and therefore has different recovery rates, so please ask your doctor or a member of the cardiac rehabilitation team. Participating in the exercise and health education programmes will also give you the opportunity to seek advice from the team about this issue.

Hobbies

Remember as with any activity, start gently and build up gradually. If you experience any pain or discomfort whilst exercising or have any questions, consult your cardiac rehabilitation nurse.

Walking

You may start walking as soon as you get home from hospital. Start by walking indoors and distances that you could manage in hospital. Gradually increase the distance and progress to outdoors, as you feel comfortable.

Gardening

After a month you can start light gardening, such as weeding, but avoid prolonged bending. No digging or heavy work until you have full wound and sternum healing at about 12 weeks.

Swimming

You may return to swimming after 12 weeks providing there are no wound and/or sternum healing problems. Swimming is a good all round exercise, especially for those who are overweight or have joint problems.

Cycling

This is a good exercise for increasing leg strength and overall stamina. After 12 weeks you may start cycling on paths and quiet roads, progressing as you feel confident. If you have an exercise bike you may start this after eight weeks.

Fishing

Use shorter, lighter rods if possible to begin with. If you intend to row a boat then you must wait at least 12 weeks.

Golf

Start with putting and progress to pitching, no driving until 12 weeks - to allow for full bone healing. Begin with 9 holes and progress to 18, as you feel comfortable.

Do not attempt rugby or any contact sports without discussing this with your Consultant or seeking advice from your Cardiac Rehabilitation Nurse.

Exercise is for life!

Any extra physical activity you can add into your life above 30 minutes a day can significantly benefit your health.

Why not try..?

- Walking to work
- Parking your car further away from the shops
- Getting off the bus one or two stops earlier
- Using the stairs instead of the lift or escalators
- Using the television remote control less

If you alter your lifestyle in this way and then exercise regularly, you will notice how much more you can do with less effort. You will enjoy all the benefits of exercise and may meet new people.

It is very important whilst choosing an exercise to find one you enjoy, so you are more likely to continue with it.

The exercise and health education programme will be able to encourage and help you with your future exercise levels, so until then try including more activity into your daily routine.

Questions about sex

Following discharge from hospital you are advised to gradually increase your daily exercise as you gain strength and confidence, pacing yourself as you feel most comfortable. This applies to all your daily activities including sexual intercourse. You can have sex as soon as you feel ready.

Many people have concerns about having sex after heart surgery. Some commonly asked questions are:

I don't feel like sex as I still feel tired and not very energetic, is this common?

Sex is a physical activity and like any activity following your surgery, you have to increase the intensity and duration gradually until you become fitter. Generally if you can walk up and downstairs without undue breathlessness, chest pains or palpitations then you can resume sexual activity and gradually build up your stamina.

My breast bone is still healing and sore and I can't do anything strenuous for at least six weeks.

How can I have sex without causing pain or damage?

Until your breast bone is healed and your chest is comfortable you must avoid putting pressure on it. Avoid positions which involve you leaning on your elbows, arms or chest or your partner leaning on your chest. For example, if you have had surgery, you could try lying on your back with your partner taking the more active role on top. Some people find lying side by side more comfortable or try exploring new positions and sensations that do not put pressure on the chest.

Remember these are only suggestions; you must do what feels comfortable for you.

If I have an orgasm will it harm my bypass grafts, valves or put strain on my heart?

No it won't. Sexual activity will not put 'strain' on the heart anymore than walking up two flights of stairs. When orgasm occurs, the heart rate (or pulse) and blood pressure do increase, but only briefly and this will not cause any damage.

I don't feel like having sex. Is this normal?

It is very common for people who have had heart problems and then surgery to experience a temporary loss of their sex drive. This is normal and will, given time, return. Many people and their partners also feel anxious and frightened about having sex after heart surgery. If after reading this booklet you are still feeling worried, contact your cardiac rehabilitation nurse for further advice and support.

I have difficulty maintaining an erection and sometimes experience pain in my penis. Why?

This may be due to short-term effects of surgery or catheterisation (the tube that drained your urine). It should resolve in time. If it persists, speak to your G.P. Also some drugs such as beta-blockers can result in lack of desire or erection problems. Again if you think this is a problem, ask your G.P.

On a positive note, resuming sexual activity with your other usual activities, once home, can make you feel like things are getting back to normal again and may help to improve relationships which could have become strained due to your illness, anxiety and waiting for surgery.

Breathlessness

Is it common to become breathless when walking or doing tasks?

It is quite normal to breathe a bit harder than normal when you are physically active. If you get breathless when physically active, pacing your activities or resting usually helps. Sometimes people find they get very worried about breathing a bit harder than usual. This worry can lead to the body becoming tenser which may make relaxed breathing more difficult. Recognising when breathing harder is normal and learning how to relax can both be of help if you think this applies to you.

How do I know when I should ask for help?

Everyone gets a bit breathless at times if they have to do something they're not used to and find it a bit of a challenge. However, if you find that you are experiencing any of the following, please seek help:

- The breathlessness comes on suddenly
- Is different from normal
- Does not go with rest
- Comes on when you are not active
- Or, if you find that you are gradually getting more breathless over a few days.

Your emotional recovery

Many people find waiting to come into hospital for heart surgery stressful. You might feel relieved that the operation is over. Or, you may be reading this having come into hospital suddenly because you became unwell and needed the surgery quickly. Not having much time to prepare yourself can be a challenge as you start to recover.

People sometimes think that stress and worries can lead to a person having heart problems. However, there is little scientific evidence to support this. It is true that people who are under high levels of stress are likely to smoke or drink more, both of which add to risk. The stress itself is not thought to be problematic.

The following are a few questions that other people who have had heart surgery have asked and which you might find helpful as you recover.

I feel really emotional and become upset really easily. Is this normal?

It is quite normal to feel very anxious or nervous after a heart operation. This is because of everything that you have been through and feeling more emotional is your mind's way of processing what has happened. This can mean that you become tearful easily and may feel a bit down. Or you might notice that you get angry or irritated with things you had been able to cope with before. It is important to remember that there is no right or wrong way to feel. You might find that talking things over with family or friends can help. Or you might prefer to speak to a health care professional such as your cardiac rehabilitation nurse.

My family won't let me do anything. Do you have any advice on how I cope with this?

It is common for partners and family members to try to over-protect people who have had heart surgery. It is natural to feel worried and want to help. However, it is easy to become over-protective and try to wrap someone in cotton wool. Early on, this can be helpful as you may feel tired and will be limited in how much you can physically do. As you get stronger, you might feel frustrated that you're not being allowed to do things you are wanting to get back to; this is a normal emotional reaction. You may also find that you become frustrated by the efforts of those around you to help. Rather than respond when you are feeling frustrated, it is often more helpful to find a time when you are feeling relaxed to explain how you have been feeling. It can also be helpful to say things like "I understand that you are trying to help, but I need to do some things myself so I can gradually build up my confidence and strength". If things do not change, your cardiac rehabilitation nurse can give you and your family further support and advice.

I'm really struggling to sleep since I had my operation. Is there anything that will help?

It is common to struggle with sleep after a heart operation. You may also feel more tired than usual. Sometimes it takes a little while to get into a comfortable sleeping position because of the scar and it may take a while to get used to this. Being in hospital can also disturb your sleep pattern and any worries you might have can also make it harder to get off to sleep at night. The good news is that there are lots of things that can help to improve your sleep:

- **Sleep environment** - it sounds obvious, but if your bed is uncomfortable you may find that your sleep is disturbed. To feel more comfortable, some people find that they need extra pillows at night. If your room is too hot or too cold, or not light or dark enough, this can also disturb your sleep. It is worth seeing if there is anything that will make your bed and your bedroom a more comfortable environment.
- **Physical activity** - being physically active is one of the most important things that you can do to improve your sleep pattern. Taking a gentle walk each day as part of a regular routine can help you get a good night's sleep.
- **Bedtime routines** - it is common for people who have sleep problems to link going to bed with worrying about sleep or lying awake. Use the hour or so before bedtime to unwind and relax. This might mean having a warm bath, reading, practising relaxation or listening to music (try to make sure it is restful though). Next, do the things that you would normally do when bedtime is approaching, such as bathroom routines and so on. Although it may be tempting to go to bed early if you have been struggling with sleep, this does not tend to be helpful. It is better to go to bed when you feel sleepy, rather than going to bed early, then lying there worrying about whether or not you will sleep.
- **Reduce daytime naps** - in the early stages of your recovery, it may be helpful to have a rest during the day if you feel particularly tired. As you recover, try to slowly reduce the time you spend napping during the day.
- **Food and drink** - eating a heavy or spicy meal before bedtime can interfere with your sleep, so it may be better to eat earlier on in the evening. Caffeine is a stimulant which can keep you awake even if you take it two or three hours before you

go to bed. It is found in coffee, tea, chocolate and in some pain killers and cold remedies - check the ingredients on any medicines you buy from the chemist. It may be worth cutting down the amount of caffeine you have during the day.

Nicotine (found in cigarettes and tobacco) can also prevent you from sleeping well. If you smoke, if possible try not to smoke within several hours of bedtime.

Alcohol can also cause disturbed sleep, although some people find a small amount (about one unit, e.g. a single measure of spirits, half-pint of beer or a small glass of wine) can help them to relax and feel drowsy enough to sleep. However, it is generally better to avoid alcohol if you have sleep problems. Large amounts in particular can cause you to wake within a few hours and then struggle to get back to sleep.

Why do I keep feeling sensations in my chest and my heart beating since the operation?

Most people feel the odd ache or twinge in their bodies, but often don't pay them much attention. After any kind of heart problem it is common to become more aware of your heartbeat (palpitations) or to feel twinges in your chest. If you speak to other people who have had heart surgery, they often say the same thing. Over time, the awareness of these sensations slowly reduces, but it is worth remembering that this is perfectly normal.

I've been struggling to concentrate on things since my operation. Why is this?

It is normal for people to get problems with concentration after their heart operation. This can mean that activities like watching TV or reading becomes slightly less enjoyable

for a while. Some people also find that their co-ordination isn't as good as it was. For example, using a knife and fork can become more of a challenge. Both problems usually sort themselves out after about a month or so. However, please let your cardiac rehabilitation nurse know if you are worried or if they do not start to improve.

Pacing yourself

As part of your recovery it is important to get back to doing things that you enjoyed before. The rate at which different people are able to do this will vary, and you should follow the advice of your cardiac rehabilitation nurse, doctor, physiotherapist or fitness instructor, as to how much you should be doing and how soon you should be doing it.

For some people, the worry caused by having heart problems stops them from activities they previously enjoyed, even after they have been told that they can do them. If you find yourself doing this, here is some advice you might find useful.

- Set yourself a target. For example, some people want to get back to doing the gardening or jobs around the house. Break the target down into smaller chunks. For example, you may decide that weeding a whole flowerbed would be too much. Think about how much you might be able to do without becoming tired. If this is five minutes of dead-heading flowers, have a go. Be prepared to stop if it gets too much. Set yourself a target and increase as able, and breaking down into smaller tasks. If you found it easy, think about doing a bit more next time, e.g. 10 minutes. However, make sure you do not do more than you had planned to do one day as rushing into things can make you feel more tired.

- Do activities with other people, you may be worried about going out alone straight away. Try going somewhere nearby with someone else the first time. When you feel okay about doing this, go some of the way on your own and then gradually do more to build up your confidence.

How about the future?

For some people, recovering from a heart operation can be the start of some positive changes. Many people become a lot fitter and may decide to take up new activities such as swimming or walking, which they had not thought of before. Others realise the importance that some things - and some people - have to them and are determined to make time for themselves to do things they enjoy. Worrying will not bring on heart problems, but people often realise that they would like to be less stressed and do something about it. Many people get a real sense of achievement from doing something positive to feel healthier.

How can the cardiac rehabilitation team help me?

After your surgery, it is important that you feel supported in getting back your confidence. There may be a lot of information to remember when you first come out of hospital. Your Cardiac Rehabilitation Nurse can help you with any questions you may have about your recovery.

If you have been invited to attend an exercise and health education programme, you will receive further support and advice from the members of the team as well as meeting other people who are also recovering and making positive changes to their lifestyles.

Driving, holidays and work

When can I drive again?

There are regulations about driving which are issued by the driving vehicle licence authority (DVLA). They generally depend on what type of operation you have had, so if you are not sure, find out and write the name of the operation in the front of this booklet. These regulations are:

Coronary artery bypass grafting and valve repair or replacement.

1. You do not need to tell the DVLA about your operation, but you do need to let your insurance company know.
2. The DVLA advise that you do not drive for four weeks following your surgery. However, the surgeons here at the Leeds General Infirmary **strongly advise that you wait for at least six weeks**. This is to ensure that the breast bone can take all the tugging from the steering wheel etc. without worsening any chest discomfort. You may also experience a lack of concentration for some time after your surgery, which could be dangerous when driving.

Remember these are only guidelines - some people feel that they are not up to the stresses and concentration necessary for driving in today's traffic until much later than this six week period, whilst other people do not have any problems. It is up to you to make sure that you are safe to drive again, in whatever conditions you might meet.

N.B. You are still required to wear a seat belt.

Pacemaker operation

You must inform the DVLA of your operation. They will want to make enquiries about your health with your G.P. This is to ensure that regular checks can be made to ensure that your health does not affect your ability to drive.

These regulations apply to ordinary drivers licences only. If you hold a HGV or PSV licence, you must inform the DVLA immediately and your licence will be temporarily withdrawn. You will be able to re-apply for your licence, so please ask your doctor or cardiac rehabilitation nurse for further advice.

Car insurance

As mentioned before, it is very important that you let your insurance company know about your operation or you may find that your policy is not valid. In most cases you should state that you have had a 'corrective procedure'. This means that the operation has "corrected" your condition.

Some people find that their insurance companies accept this, whilst other companies ask for a medical certificate before they will agree to give you insurance cover and other companies will load your policy by up to 20%.

The attitude of motor insurance companies really does vary so if you have problems ask your cardiac rehabilitation nurse, who may be able to offer some advice. If in doubt, shop around for your car insurance.

Can I go on holiday on a plane?

You should not travel abroad until after you have attended your six week outpatient appointment. We recommend that before you make plans to travel abroad, you discuss it with your cardiac rehabilitation nurse.

Remember the flight on the aeroplane is often the least physical part of your journey. The hassle of finding a parking place, queuing at the check-in desk and waiting around can be very tiring, so it's worth bearing these things in mind before you book your holiday.

Holiday insurance can sometimes be a problem and some airline companies may ask for a medical certificate to say that you are medically fit to fly.



N.B. most travel insurance policies ask you to declare any medical condition that you have been treated for in the past 12 months, so if in doubt ask before you travel.

When can I go back to work?

This very much depends on the job that you do. The best plan would be to discuss this with the surgeon either before you are discharged or at your outpatient appointment. Your cardiac rehabilitation nurse may also be able to advise you. If your job is a desk job you may feel able to return to work after 8-12 weeks. However, if you have a more physical job you may have to wait longer. The ward team can provide you with a sick note.

Cardiac rehabilitation nurses

You should have been given the contact number of your Community Cardiac Rehabilitation Team either before your surgery or prior to your discharge home.

The community cardiac rehabilitation nurses are a team of specialist nurses with broad nursing experience and specialist skills. They will contact you by telephone within a week of discharge from hospital. During this phone call they will arrange an appointment for you within the next few weeks. If you have not heard from them after a week, please contact them - see next page for contact numbers. They will follow-up with you with visits in clinic and over the telephone.

The community cardiac specialist team work closely with the cardiac rehabilitation team at the Leeds General Infirmary, your GP and other services, as well as your family, carers and friends to maintain and improve your quality of life. The team can advise on:

- medication issues
- the safest way to resume physical activity, offer reassurance, advice and support to help you make positive lifestyle changes
- the exercise and education programme and on-going support.

Community cardiac rehabilitation teams contact numbers

Airedale Cardiac Rehabilitation Team

Tel: **01535 294 557**

Bradford Cardiac Rehabilitation Team,

Bradford Hospital Trust:

Tel: **01274 364 565**

Bradford community based Cardiac Rehabilitation Nurse:

Bradford city - Tel: **01274 383 718**

Bradford south & west - Tel: **01274 322 131**

Calderdale Cardiac Rehabilitation Team

Tel: **01422 224 260**

Huddersfield Cardiac Rehabilitation Team.

Areas included: Cleckheaton, Batley, Liversidge, Mirfield, Heckmondwike, Huddersfield

Tel: **0300 304 5555**

Harrogate Cardiac Rehabilitation Team

Tel: **01423 553 355**

Mid Yorks Cardiac Rehabilitation Service

Normanton office - Tel: **01924 543460**

Dewsbury office - Tel: **01924 816129**

Leeds Community Cardiac Team

Tel: **0113 843 4200**

Pontefract / Wakefield Cardiac Rehabilitation Team

Tel: **01924 327 923**

York Cardiac Rehabilitation Team

Tel: **01904 724 697**

Glossary of terms

Angina

Angina is pain or discomfort in your chest, which is usually caused by CHD. Some people feel the pain in their arm, neck, stomach or jaw.

Angiogram

An X-ray picture of the arteries that shows up any narrowing in your coronary arteries.

Angioplasty

A treatment to widen the narrowed arteries and therefore improve blood supply, to the heart.

Atheroma

Fatty deposits inside the arteries.

Coronary Heart Disease (CHD)

When the artery walls are narrowed by a gradual build-up of fatty deposits.

Cholesterol

A fatty chemical in the blood which includes LDL (Low Density Lipoprotein), the 'bad' cholesterol and HDL (High Density Lipoprotein), the 'good' cholesterol.

Electrocardiogram (ECG)

A test that records the rhythms and electrical activity of the heart.

Heart attack (Myocardial Infarction)

When blood supply to the heart muscle is blocked by a blood clot. The symptoms usually last for more than 30 minutes and may last for many hours.

Heart failure

A condition where the heart muscle is weakened, therefore not pumping blood around the body as well as it could. This can lead to symptoms of breathlessness, swelling of the feet and ankles.

Pacemaker

A small electrical device that is surgically implanted to regulate an abnormal heart rhythm.

Stable Angina

Angina that comes on with a particular amount of exercise or stress.

Stent

A small wire mesh tube inserted into a coronary artery during angioplasty to keep the artery wall open.

Unstable Angina

Angina that comes on with less and less activity, or even while resting.

Further contacts

Health advice

Emergency SMS service for hard of hearing and deaf people

Allows registered mobile phones to text an emergency to **999**. A text relay assistant will speak your emergency to the 999 operator. **You must register your mobile phone with the service before an emergency happens. Text register to 999.**

Website: www.emergencysms.org.uk

NHS Choices

NHS Choices is an online health information service. It has a self-help guide, a list of common health questions and a health A-Z. It contains over 700 topics covering illnesses and conditions, tests and dentist or support groups online.

Website: www.nhs.uk

NHS 111

111 is the NHS non-emergency number. It's fast, easy and free. Call 111 and speak to a highly trained adviser, supported by healthcare professionals. Available 24 hours a day, 365 day a year, free from landlines and mobile phones.

Tel: 111

British Dietetic Association

Offers factsheets on a variety of food and nutrient aspects on medical conditions.

Website: <https://www.bda.uk.com/food-health/food-facts/all-food-fact-sheets.html>

Other advice

Citizens Advice Bureau

City Centre CAB, 31 New York St, Leeds LS2 7DT

Tel: 0113 223 4400 **Text relay:** 0344 411 1445

Website: www.citizensadvice.org.uk/local/leeds

Directgov money, tax and benefits

Directgov is the official online government information service. The Money, Tax and Benefits section includes information on tax and any benefits you may be entitled to (including details of how to make a claim). Other topics covered include pensions, mortgages, managing your finances and managing debt.

Website: www.directgov.uk

Alcohol/drug misuse

Alanon

National 24 hour helpline and local meetings in Leeds for friends/families of problem drinkers.

Tel: 0800 008 6811 **Email:** enquiries@al-anonuk.org.uk

Website: www.al-anon.org.uk/groups/leeds

Alcoholics Anonymous

Daily meetings in the Leeds area for men and women who have experienced problems with alcohol and want to stop drinking.

Helpline: 0113 245 4567

Email: help@alcoholics-anonymous.org.uk

Website: www.alcoholics-anonymous.org.uk

Forward Leeds

Alcohol and drug service in Leeds for adults, young people and families

Tel: 0113 887 2477

Email: info@forwardleeds.co.uk

Website: www.forwardleeds.co.uk

Anxiety and depression

Improved Access to Psychological Therapies (IAPT)

This is a service aimed at supporting people suffering from depression and anxiety disorders.

Tel: 0113 843 4388

Anxiety management 'app'

SAM is an application to help you understand and manage anxiety.

Website: www.sam-app.org.uk

Samaritans

Confidential 24-hour listening service.

Tel: 0113 245 6789 Free phone: 116 123

Email: jo@samaritans.org

Website: www.samaritans.org

Bereavement

Cruse bereavement care

Bereavement support, information and advice for any bereaved person, regardless of age, nationality or belief.

Tel: 0113 234 4150

Email: leeds@cruse.org.uk **Website:** www.cruse.org.uk

Carers

Leeds Carers Centre

First Floor Leeming House, Vicar Lane, Leeds LS2 7JF.

Advice, information, financial help, social events, courses and support from other carers.

Tel: 0113 380 4300 **Email:** advice@leeds.org.uk

Disability

DIAL: Disablement Information & Advice Line

The Mary Thornton Suite, Armley Grange Drive, Leeds LS12 3QH. Information and advice line covering most aspects of disability including benefits, access, education and employment, holidays and leisure. Enquiries by phone or letter.

Tel: 0113 467 6981 **Text relay:** 18001 + 0113 + 378 2990

Website: www.dial-leeds.org.uk

Driving

Driving and Vehicle Licensing Association (DVLA)

Drivers Medical Enquiries, DVLA, Swansea SA99 1TU.

Drivers medical information can now be found under the Motoring section in Directgov.

Website: <http://www.dvla.gov.uk>

General health information

Exercise

A website full of ideas from the 'walking the way to health' initiative.

Website: www.walkingforhealth.org.uk

British Heart Foundation

Offers information and advice covering specific conditions, treatments and information about looking after your heart.

Tel: 020 7935 0185 **Helpline:** 0300 330 3311

Email: supporterservices@bhf.org.uk

Website: www.bhf.org.uk

NHS smoking helpline

Advice on stopping smoking. **Helpline:** 0300 123 1044

Website: <http://www.nhs.uk/smokefree>

Eatwell

Information on healthy diets, understanding food labels and on health issues like obesity. It can help you find a registered dietitian or nutritionist.

Website: www.nhs.uk/Livewell/healthy-eating

Heart UK

Cholesterol Charity which provides information on the risks of high cholesterol and cardiovascular disease.

Tel: 01628 777 046 **Helpline:** 0345 450 5988

Email: ask@heartuk.org.uk

Website: www.heartuk.org.uk

Healthtalk

Healthtalk lets you share in other people's experiences of health and illness.

Website: www.healthtalk.org

Patient medicines helpline

Tel: 0113 206 4376

Email: medicines.information@nhs.net

Medicines information

Website: www.leedsth.nhs.uk/a-z-of-services/leeds-pharmacy-services/contact-us/

Older People

Age UK, Leeds

Provides range of services for older people from Leeds including meals on wheels, hospital aftercare, educational and social courses, insurance and advocacy.

Tel: 0113 389 3000

Website: www.ageuk.org.uk

Leeds Neighbourhood Network Schemes

Age UK also provides information regarding Neighbourhood Network Schemes. Neighbourhood Network Schemes are community based, locally led organisations that enable older people to live independently and pro-actively participate within their own communities.

Tel: 0113 389 3000

Website: www.ageuk.org.uk/leeds/about-age-uk-leeds/neighbourhood-network-schemes/

PALS

Patient Advice and Liaison Service - The Leeds Teaching Hospitals NHS Trust

Great George Street, Leeds LS1 3EX

A PALS officer can give you advice about what services might be available in your area. Advice can also be given about how to lodge a complaint. **Tel: 0113 206 7168** or **0113 206 6261**

Email: patientexperience.leadsth@nhs.net

Website: www.leadsth.nhs.uk/patients-visitors/patients-and-visitor

Voluntary Services/Networks in Leeds

If you're looking for support/assistance after you have been discharged from hospital, there is a vast amount available. You can get assistance with practical tasks such as shopping and gardening, assistance with checking benefits and completing the forms, social groups and drop-in centres to name a few.

These services are available through three main networks that can be accessed by telephone or on-line. They are:-

Leeds Directory

Aims to support you to live well. **Tel: 0113 378 4610**

Website: <http://leedsdirectory.org>

Neighbourhood network solutions - older peoples forum

Tel: 0113 244 1697

Website: www.opforum.org.uk

Royal Voluntary Services

Aims to find the voluntary service that's right for you.

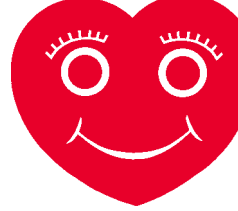
Tel: 0330 555 0310

Website: www.royalvoluntaryservice.org.uk

Blood pressure and heart rate record

Here is a table for you to keep a record of your blood pressure (BP) and heart rate (HR) when they are checked by your healthcare professional.

Date	BP	Pulse



We are Take Heart

Take Heart is a small, but professional charity, run on a completely voluntary basis, raising funds exclusively for the Yorkshire Heart Centre at Leeds General Infirmary, St James's hospital and its units within The Leeds Teaching Hospitals NHS Trust. We were founded in 1989 by a small number of heart patients wishing to return something for the excellent care received.

From a small beginning, we have raised nearly six million pounds and this has been used to provide comfort and enhance the surroundings for the many thousands who visit the centre every year. We have also made significant progress in supporting staff in their work and improving their working environment.

Some of the major achievements of the charity are the provision of a suite of relatives rooms available free of charge when required, a roof garden providing a peaceful area for patients and relatives, and an internal garden. We provide free bedside television, free telephone calls and free internet for all patients on the heart wards and we have recently provided changing rooms for an additional MRI scanner. Take Heart have refurbished most waiting areas and made sure that patients enjoy comfort of the highest standard. We also fund information booklets (such as the one you are now reading) which are available in all the Heart Centre wards.

Look around and you will see many items provided by Take Heart. One of the schemes we are most proud of is the Take Heart Suite, costing nearly £500,000. This suite has been created to provide a unit for patients to be admitted to instead of a ward for planned procedures such as pacemakers.

This increases the number of patients who can be treated in a day and reduces waiting times, In the first year alone over 1,000 patients went through the suite. Patients can relax there in comfort after their procedure before they go home. The staff who work there get so much positive feedback from patients and they love working in the new environment.

Take Heart funds are raised in many ways - through donations - events - sponsorship, and bequests, mainly through its thousands of members and supporters.

We would love you to become a member of Take Heart. As a member, you will receive our newsletter about five times a year and if you wish to take part in anything, this is absolutely at your choice. Please note that you will never be bombarded with follow-up mail. You can join by going to our web site www.takeheart.net or picking up a form from any ward reception area.

**Gina McGawley,
Chairman, Take Heart.**

For more information contact:

Take Heart, 'F' Floor, Jubilee Building,
Leeds General Infirmary, Leeds LS1 3EX.

Tel: 0113 392 2888

Email: office@takeheart.net

Website: www.takeheart.net

*Use your
SmartPhone
to visit our
website:*



MEMBERSHIP APPLICATION

Membership of TAKE HEART is open to anyone for a once only fee of £1.50. In return you will receive a regular newsletter keeping you informed of the charity's activities.

YOU CAN ALSO JOIN ONLINE AT: www.takeheart.net

Title: Surname(s):

First Names: Member 1:

Member 2:

Address:

.....

..... Postcode:

Telephone: Email:

Date:

An attractive Take Heart badge is available at £1.00. Please indicate the quantity required and add the cost to the Membership fee.

No of Badges required:

I enclose a cheque for £ payable to **TAKE HEART.**

DONATION FORM

Donations should be sent to: THE TREASURER, TAKE HEART, 'F' FLOOR, JUBILEE WING,
LEEDS GENERAL INFIRMARY, LEEDS LS1 3EX.

I would like to make a donation of £ to TAKE HEART.

Name:

Address:

.....

.....

Postcode: Date:

If you are a UK taxpayer, the Charity can benefit further from your donation.

If you would like further details, please tick this box:

PLEASE MAKE ALL CHEQUES PAYABLE TO TAKE HEART.

**DONATIONS ARE ALWAYS WELCOME AND WILL BE
ACKNOWLEDGED, AND PUBLISHED IN OUR NEWSLETTER**

Please send completed Membership/Donation forms to:

THE TREASURER, TAKE HEART, 'F' FLOOR, JUBILEE WING,

LEEDS GENERAL INFIRMARY, LEEDS LS1 3EX. TEL: 0113 392 2888. EMAIL: office@takeheart.net



Registered Charity No. 1002063

Raising funds exclusively for the
Yorkshire Heart Centre
at Leeds General Infirmary,
St James's Hospital
and its units within the
Leeds Teaching Hospitals NHS Trust

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Leeds General Infirmary, Great George Street, Leeds LS1 3EX.
Tel: 0113 392 8110 or 0113 392 5639.*

This booklet has been edited and compiled by the cardiac rehabilitation nurses with guidance from the Leeds cardiac surgery team, Take Heart and Medical Illustration. We also received valuable feedback from service users. We would like to thank everyone who gave their time to contribute.



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