



# Help Yourself to a Healthy Heart **PREPARING** for Heart Surgery



Respecting everyone  
Embracing change  
Recognising success  
Working together  
**Our hospitals.**

  
**Above + Beyond**   
For Patients. For Health. For Bristol.

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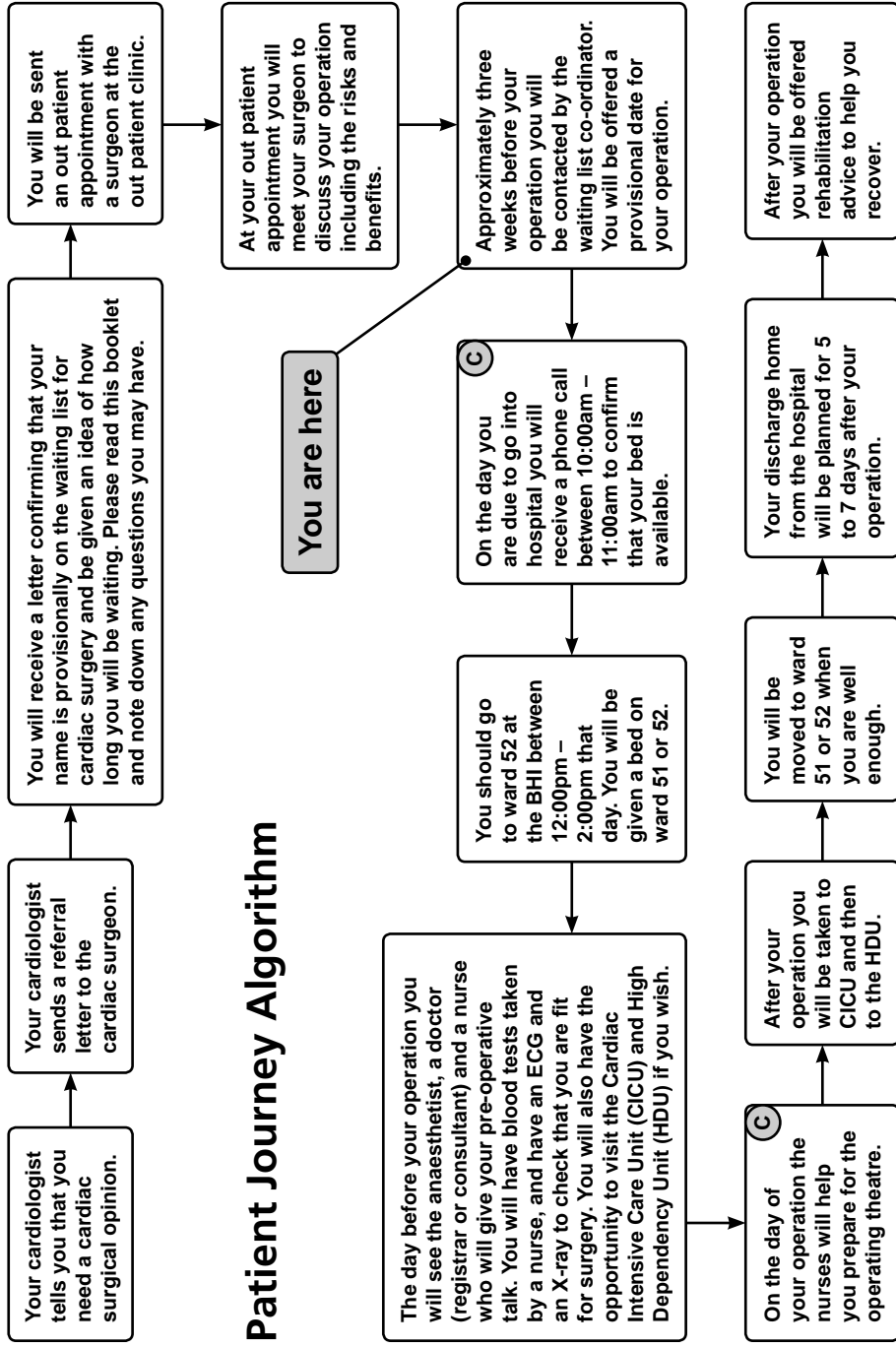
## Introduction

- You have been referred to the Cardiac Surgery Unit at the Bristol Heart Institute. We have put together this booklet to help you, your family and friends prepare for this. We aim to explain the different stages of care before and after your operation.
- We hope that this book will help answer many of your questions. There is space at the back to note down any further questions you may have.

## Research and teaching

- The Bristol Heart Institute is a teaching hospital and the cardiac surgery unit is affiliated to the University of Bristol.
- There are many research projects and you may be asked if you would be willing to take part in one. Your medical team will discuss this with you when you are admitted for your operation. If you do not wish to be involved your care will not be affected.

### Notes & Queries



## Patient journey

### Out-patient journey

- You will be notified of your out-patient appointment by post following referral for cardiac surgery. This may be at your local hospital when one of the cardiac surgeons from the BHI visits or at the BHI itself. At this appointment you will meet a cardiac surgeon who will explain the type of operation you need. You will also discuss the risks and benefits of having this operation. The surgeon will give you an idea of how long you can expect to wait for your operation. The current arrangement determines that your total waiting time will not exceed 18 weeks.
- After your out-patient visit your name will be added to the Waiting List for surgery. The Waiting List Co-ordinators will send you written confirmation that you are on the Waiting List. The Waiting List Co-ordinator works closely with the surgeons to schedule your operation date.
- You will need to have a dental check in the six months prior to your admission. If you have not seen your dentist within six months please arrange an appointment. If you are having a valve repaired or replaced please tell your dentist prior to any treatment (including scale and polish).

### In-patient journey

- If you are already in hospital waiting for surgery your cardiologist will refer you to the cardiac surgery department at the Bristol Heart Institute (BHI). Once referred, you will be placed on an in-patient pool list. The Waiting List Co-ordinators will give your ward a provisional date for surgery. Arrangements will be made by your ward to transfer you to the BHI, usually one day before your surgery..

## Planning your discharge home from hospital

- **48 hours notice must be given if you need hospital transport to take you home. Please tell the nurse when your admission paperwork is completed on arrival at the hospital. Using hospital transport can sometimes delay your discharge home. It is always preferable for a friend or relative to take you home if you can arrange it.**
- Recovery time in hospital after heart surgery varies from person to person, but we hope that you will be fit to leave hospital 5-7 days after your operation. Hospital is the right place to be when you are in need of specific medical or surgical treatment. However, returning to your home environment is a vital step in your recovery from heart surgery.
- It is a good idea to start planning your move back home before you arrive in hospital. When you arrive at the hospital we will give you an expected date for you to leave. It is important that you are aware of this date so that we can work together to make sure the necessary arrangements are in place and avoid any delay in your leaving hospital.
- We will begin by looking at your home situation and working with the relevant staff to ensure everything necessary is in place to enable you to leave hospital when you are fit to do so.
- You should try to arrange your own lift home. If this is not possible please let us know when you arrive in hospital.
- When you leave hospital you will need to have someone you can rely on with you for the first week, day and night, although it is fine to be left alone for short periods during the day. This can either be in your own home or with a relative or friend.
- If you have problems finding someone to care for you during this time please speak to your GP about convalescence services in your area. Alternatively, you may wish to arrange private convalescence care at your own cost.
- You will not be able to drive or perform any heavy manual tasks for six weeks after your operation so you will need help during this time. You will need help with tasks such as vacuuming, ironing, gardening or walking the dog.
- Some patients find the task of preparing and cooking meals very tiring for some time after returning home. If you live alone or are a carer yourself discharge staff at the BHI will be able to arrange for you to be assessed by Social Services to determine whether help may be available to you. Alternatively, you may wish to use private services.
- It is worth enquiring whether you are eligible for employment related convalescent care e.g. Armed Forces, British Legion homes.
- Patients who have served in the armed forces or who are widows or widowers of armed forces personnel, may be eligible for financial support from the Soldiers, Sailors and Airmen Family Association (SSAFA) if a convalescent home is required. You will need to contact the local branch secretary of the SSAFA before you go into hospital to discuss possible financial help. You will find telephone number of your local branch in the directory or you can contact head office on **020 7403 8783** or **[www.ssafa.org.uk](http://www.ssafa.org.uk)**.
- Should you require ongoing medical treatment after your operation you may be transferred back to your local district hospital under the care of your cardiologist. If this is the case the nursing staff at the Bristol Heart Institute will make the necessary arrangements for your transfer. Your transfer date will be dependant on the availability of beds at your local hospital and may take a few days to arrange.

## Your visit to the Out-patient Clinic

- At this visit you will meet a surgeon who will explain the type of operation you need. You will also discuss the risks and benefits of having this operation. The surgeon will give you an idea of how long you can expect to wait for your operation.
- After your out-patient visit your name will be added to the Waiting List for surgery. The Waiting List Co-ordinator will send you written confirmation that you are on the Waiting List and details of any dental checks you may need before the operation takes place. The Waiting List Co-ordinator works closely with the surgeons to schedule your operation date.

## Heart Health whilst waiting for your operation

- The coronary arteries provide the heart muscle with blood which carries the oxygen needed by the heart. In coronary heart disease a fatty substance called cholesterol builds up in the walls of the coronary arteries, narrowing or blocking these arteries. This reduces the volume of blood reaching the heart muscle. When sufficient blood cannot reach the heart muscle it is starved of vital oxygen and angina pains may be experienced.
- Whilst waiting for your operation you have a great opportunity to make valuable changes to your lifestyle, which may improve your recovery and future health.
- There are many people who are able offer help and support both before you go to hospital and in hospital. The British Heart Foundation can send you copies of their information booklets,

which cover all aspects of heart health free of charge ([www.bhf.org.uk](http://www.bhf.org.uk) - telephone: **020 7935 0185**). Your GP and practice nurse can advise you before you go into hospital.

- They are also able to refer you to specialists if you need extra help. Once you are in hospital the doctors and nurses should be able to answer any questions you may have.
- It is a good idea to try and get your family and friends involved in any lifestyle changes you make so that they can support and encourage you. They may even benefit from a healthier lifestyle themselves.
- There are certain key risk factors, which you need to think about if you have heart disease. By making positive changes to improve your health you can greatly reduce the damage they do to your body.

## High Blood Pressure

- The higher your blood pressure, the shorter your life expectancy. People with high blood pressure run a higher risk of having a stroke or heart disease.
- You should have your blood pressure checked regularly by your GP or practice nurse. If you need medication to control high blood pressure you should familiarise yourself with when and how often you take your tablets. Your medication should be reviewed before and after your operation.

## Raised cholesterol

- Too much cholesterol in your blood may cause the arteries to the heart to become narrowed by a build-up of fatty material called atheroma within their walls. This narrowing of the arteries is called coronary artery disease.
- You should have your cholesterol levels checked regularly by your GP or practice nurse before and after your operation.
- You may need tablets to help lower your cholesterol level. It is important that you continue taking these tablets after your operation.
- The most common cause of high blood cholesterol levels in the UK is too much fat in the diet. You can help to lower your cholesterol by eating a healthy balanced diet low in saturated fats.

## Smoking

- Smoking is a major cause of heart disease. Smoking can also damage your lungs, which can lead to complications after your operation.
- Smoking increases the build up of cholesterol deposits (atheroma) in the arteries causing narrowing of the arteries. The chemicals carbon monoxide and nicotine in smoke also have an effect on your heart. The carbon monoxide reduces the amount of oxygen in the blood and therefore deprives the heart of vital oxygen. Nicotine stimulates the body to produce adrenaline which makes the heart beat faster and raises blood pressure, causing the heart to work harder.
- Your recovery from surgery will be quicker, and less painful, if you quit smoking as soon as possible before your operation. You will also be on track to remaining a non-smoker after your operation.

- For support and practical help on stopping smoking and nicotine replacement therapy you can ask your GP surgery to put you in contact with a Smoking Cessation advisor or call Quit-line free on **0800 002 200**.

## Diet and healthy eating

- A healthy balanced diet is a vital part of a healthy lifestyle. If you have coronary heart disease, it brings extra benefits too. Eating well can help lower your blood cholesterol level and therefore help prevent further narrowing of the arteries.
- There is plenty of information on healthy eating available from your GP or practice nurse, the British Heart Foundation or one of the many books in your local library or bookshop. The main points to remember are:
  - Eat fewer foods containing fats, especially saturated animal fats. Instead try to choose oils and spreads high in monounsaturates and polyunsaturates.
  - Eat plenty of fruit and vegetables. Aim for at least five portions per day (not including potatoes).
  - Increase your fibre intake by eating wholemeal breads, whole grain cereals, rice, peas, beans and lentils.
  - Try to avoid processed foods, which are high in fat and salt – get into the habit of reading food labels to check what they contain.
- If you are overweight you can greatly improve the speed of recovery after your operation and your long term health by losing weight. Studies show that losing weight can help to reduce blood pressure, lower cholesterol and reduce your chances of developing diabetes.

- You should aim, with the support of your GP or practice nurse to lose weight gradually (0.5-1kg per week). It may be helpful to join a weight loss organisation or diet club for support in losing weight. Do be wary of quick fix short-term solutions and promises of rapid weight loss, as they may not be a healthy way to lose weight.

## Alcohol

- It is important that you are aware of your drinking and how it can affect your body. Drinking too much alcohol can damage your heart and increase blood pressure. Alcohol may also cause problems with drugs you are taking for heart disease.
- The current guidelines for safe drinking suggest up to 14 units of alcohol a week for women and 21 units of alcohol per week for men.
- **1 unit of alcohol is equivalent to:**
  - Half a pint of normal strength beer or larger.
  - One small glass of wine.
  - A single pub measure of spirits (25ml).
- You should spread your consumption of alcohol evenly over the week and try to have at least one alcohol free day each week. It is essential to avoid excessive alcohol if you are taking Warfarin.

## Stress

- Research shows that stress can worsen the symptoms of heart disease and make it harder to make lifestyle changes such as giving up smoking or eating healthily.
- If you suffer from stress try to pinpoint what causes you to feel this way and try to avoid such situations whenever possible. If stress is a serious problem your GP or practice nurse may offer advice on relaxation.

## Diabetes

- If you have diabetes it is important that you manage it as part of a healthy approach to your operation. You should have regular checkups with your GP or practice nurse and take any medication as prescribed. Aim to keep your blood sugar levels within normal limits where possible (4-8 mmol).

## Exercise

- Physical activity is very good news for your heart. It helps lower your blood pressure, reduces stress and helps you to control your weight. Your heart is a muscle and like any other muscle in your body it needs regular exercise to keep fit and healthy.
- **Physical activity has many benefits:**
  - It helps to normalise your blood pressure.
  - Can reduce stress, anxiety and depression.
  - Helps you to lose weight.
  - Aids stopping smoking.

- Can improve your cholesterol profile by increasing 'good' High Density Lipoprotein HDL cholesterol levels.
- Improves your sleep patterns.
- Gives you more energy.
- Even if you are limited in the amount you can do, just a little gentle exercise each day will help. Remember to keep your activity regular, frequent and within, rather than beyond your limits.
- **Listen to your body and be guided by your symptoms. If you experience any of the following you are doing too much and should stop and rest:**
  - Angina – heaviness or tightness in the centre of your chest which may spread to your arms, neck, jaw, back or stomach.
  - Excessive shortness of breath.
  - Palpitations – your heart feels as if it is beating abnormally fast, irregularly or heavily.
  - Dizziness or feeling faint.
  - Nausea.

## Getting yourself fit for surgery

- It is very important to keep yourself as active as possible before your cardiac operation. Improving your fitness levels whilst you wait for surgery will speed your recovery in the long run. Always check with your GP or consultant before you start taking exercise.
- If you have a GTN (Glyceryl Trinitrate) spray you should keep it with you whilst you exercise. Avoid very cold, hot or windy weather if you are going outside. You should not exercise for two hours after a meal as this puts extra strain on your heart.
- It can be helpful to keep a diary of your activity so that you can keep track of your progress. Try to gradually increase the amount you do each day by incorporating physical activity into your daily life. Try walking rather than taking the car or bus or do more domestic chores for instance. You might find it helpful to exercise with a friend or relative to help your confidence and motivation.
- You should try to take a walk every day. Start at a slow pace over a short distance avoiding hills and steps. You can gradually build up your speed and distance, as you get stronger. **A good way to pace yourself is to ensure that you can comfortably hold a conversation whilst you walk.**
- If you suffer from angina choose a distance you know you can walk easily without getting symptoms. Repeat this walk twice a day for two days, each time assess whether it is easy or difficult. Once you find that distance easy you should slowly increase the distance each day.

- Moderate aerobic exercise such as cycling, swimming and dancing are all good for your heart but it is important to build up slowly if you have not been exercising regularly. Intensive or strenuous activities should be avoided.

## Arranging your operation date

- The Waiting List Co-ordinator at the Bristol Heart Institute will contact you approximately one month before your operation. During this call you will be able to discuss a mutually agreeable date for your operation.
- A letter confirming your proposed operation date will be sent out after this call has taken place. This letter may also contain important information about when you should stop taking certain medication before your operation. Take all your medication as prescribed unless you are instructed to stop.
- On the day you are due in hospital you will be contacted by the Waiting List Co-ordinator between 10:00am and 12:00pm to confirm that a bed is available. The Waiting List Co-ordinator will confirm the time you need to arrive at the ward. We will call as early as possible. If you are due into hospital on a Saturday or Sunday you will be asked to contact the ward direct before you leave home to confirm bed availability.

## Hospital in-patients

- Your ward will be contacted by the Waiting List Co-ordinator to confirm bed availability and transport will be arranged by your hospital ward on the day.

## Coming into hospital for your operation

- When you come into hospital for your operation you will be greeted by a member of staff and allocated a bed on either ward 51 or 52. Both wards are for the care of patients before and after heart surgery.
- Please be aware that wards 51 and 52 accommodate male and female patients. Men and women are nursed in separate bays on the wards. The High Dependency Unit and Cardiac Intensive Care Unit where you will be treated after your operation are mixed sex units.
- **Remember - your operation will not usually take place on the same day you are admitted to the ward so you should eat and drink as normal, unless otherwise instructed.**

## Ward routines:

### 1. Doctor's rounds

The doctors start their rounds at approximately **7:45am**. They may be a little later over the weekend and on Bank holidays.

### 2. Meal Times

<b>Breakfast</b>	<b>7:00am - 8:00am</b>
<b>Lunch</b>	<b>12:00pm - 1:00pm</b>
<b>Tea</b>	<b>5:00pm - 7:00pm</b>
<b>Evening drinks</b>	<b>10:00pm - 11:00pm</b>

### 3. Drug rounds

The nurses dispense medication at approximately the following times:

**8:00am, 12:00pm, 6:00pm and 10:00pm** each day.

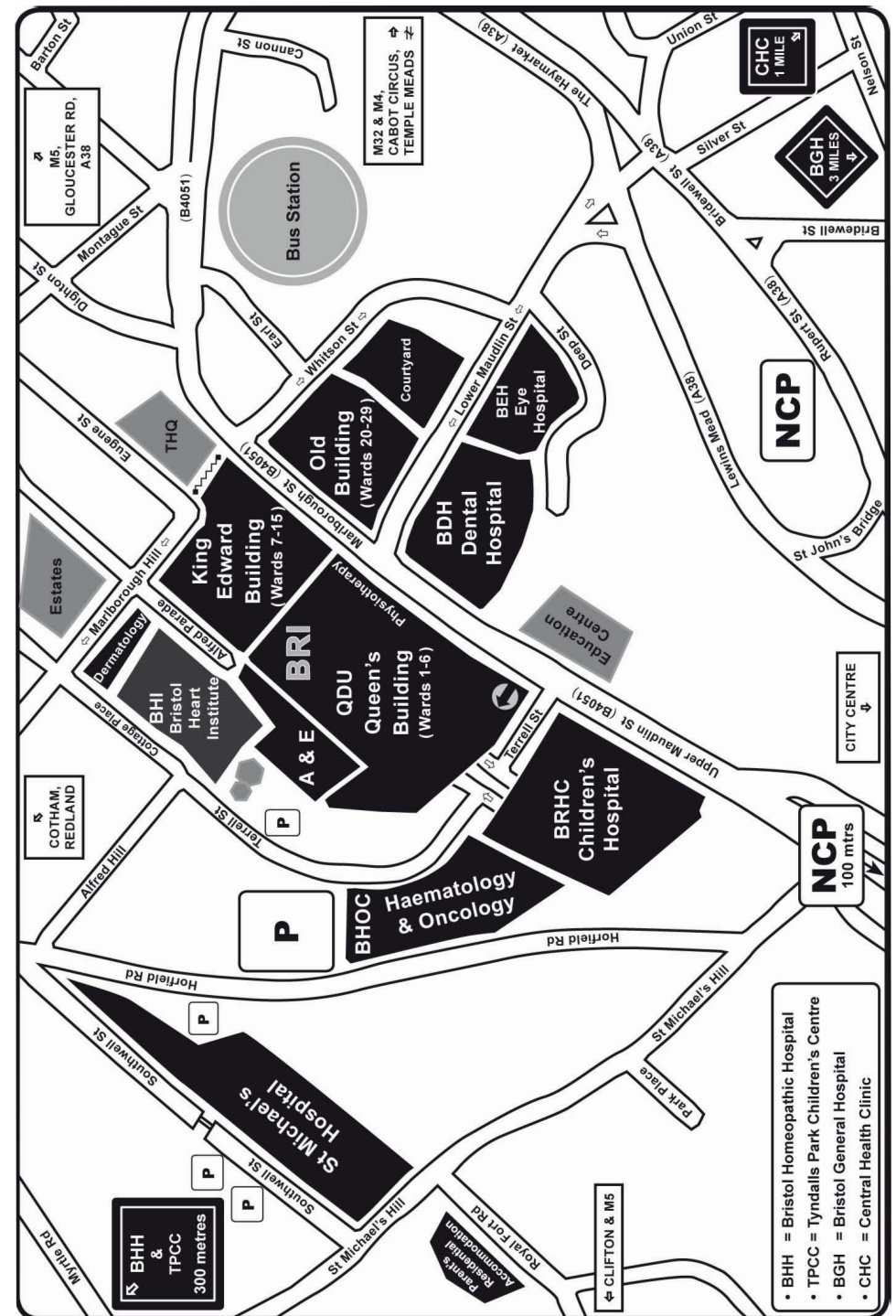
- Always ask if you need extra pain relief between scheduled drug rounds.
- You should only take medication including painkillers given to you by hospital staff. Always ask if you need extra pain relief between scheduled drug rounds. This allows us to monitor your pain control and keep you safe. Please bring all of your current medication into hospital with you in the original packaging. You will be discharged with a months worth of medication. Your own supply will be returned if it is medication you are still prescribed.

## The ward receptionist

- **Is able to help you with the following items:**
  - Sick notes.
  - Medical insurance claim forms.
  - Information about accommodation for relatives.

## Your stay in hospital

- When you arrive at the ward you will be shown around and allocated a bed. A nurse will help to complete your admission paperwork. If you wish you can visit the Cardiac Intensive Care Unit and the High Dependency Unit to see where you will be cared for after your operation. The nurse will also run through the pre-operative procedures described in this booklet and answer any questions you may have. A relative or friend is welcome to stay with you during this time.



## Who else will you see before your operation?

### Ward registrar

- **The ward registrar will:**
  - Take a full medical history.
  - Give you a physical examination to ensure you are fit for surgery.
  - Answer any questions you may have.

### Anaesthetist

- **The anaesthetist will:**
  - Check your medical history and run through your anaesthetic form with you.
  - Explain what will happen to you in the anaesthetic room before your operation.
  - Explain what will happen during your operation.
  - Explain how the ventilator (breathing machine) works.
  - Answer any questions you may have.

## Surgeon (consultant or senior registrar)

- **The surgeon will:**
  - Explain what will happen during your operation.
  - Explain where the veins or arteries for your graft will come from if you are having a Coronary Artery Bypass Graft (CABG).
  - Discuss the different valves available if you need a new valve.
  - Answer any questions you may have.
  - Explain the consent form to you and discuss the risks and benefits of the operation and ask you to sign the form if you agree.
  - The surgeon and anaesthetist may come and see you at any time when they are free to do so. It may be between operations or after they have finished operating for the day. If your operation is scheduled for a Monday they may see you on Sunday evening.

### Notes & Queries

## Preparing for your operation - procedures carried out on the ward before your operation

- You will be asked to shower with an anti-bacterial soap called Hibiscrub both the night before your operation and on the morning of your operation. This is to help prevent infection.
- If you are on bed rest then a wash with a bowl and Hibiscrub will be sufficient. The main areas to concentrate on are your neck, chest and groin. The nurses will give you a bowl on the morning of your surgery.
- Your hair also needs to be washed with Hibiscrub when you shower before your operation. Please bear this in mind if you are thinking of having your hair done before the operation.
- Male patients must shave on the **morning** of their operation. You need to have a full shave, to include the chest, arms and possibly legs depending on where the grafts are to be taken from. The nurse will give you electric clippers for this purpose and explain how, when and which areas to shave on your admission, please do not shave your body prior to your admission.
- A nose swab will be taken for culture on admission, as this is where MRSA is often found even in healthy people. You will be prescribed a course of Bactroban cream and Hibiscrub wash. The Bactroban cream is applied to both nostrils 3 times a day and you will wash with the Hibiscrub once a day. This is the current treatment for MRSA and is either a five day course or stopped if your nose swab is negative to MRSA.
- To apply place a small amount of cream on your little finger and insert into one nostril. Repeat for the other nostril.

## On the morning of your operation

### If you are first on the operation list:

- Your last food will be at 12:00 midnight the night before your operation and your last drink at 5:00am on the day.
- A member of staff will wake you up at 5:00am.
- If you are mobile you should shave with clippers as described before your second shower with Hibiscrub.
- You will usually be given pre-operative medication (a pre-med) around 6:00am. The pre-med will help you to relax prior to your operation (it is usually a type of sleeping tablet).
- You should expect to leave the ward after 8:00am.

### If you are second, or occasionally third, on the operating list:

- Your last food will be cereal or toast with a hot drink at 5:30am and last drink at 8:00am on the morning of your operation.
- If you are mobile you should shave with clippers and shower with Hibiscrub during the morning.
- You will be prescribed a pre-med. The time is dependent on the first operation of the day. The ward will be kept informed by the theatre staff. A pre-med will relax you prior to your operation.
- You should expect to leave the ward some time between 11:00am and 2:00pm.

## **Before you are given your pre-med the following things will happen:**

- Your bed will be made ready for theatre.
- You will be asked to empty your bladder.
- You need to change into a theatre gown. You should not wear anything underneath the gown.
- You must remove all jewellery – including wedding rings.
- You may want to leave your jewellery and other valuables at home whilst you are in hospital.
- Rings must be removed because during your operation fingers may become swollen and rings may then restrict the blood flow to your fingers. If rings cannot be removed because they are too tight they may need to be cut off. Ensure your rings can be removed with soapy water before you come into hospital.

## **After you have had your pre-med the following things will happen:**

- The nurses will advise you not to get out of bed as this medicine can make you very sleepy and wobbly. If you need anything, ring for a nurse using the call bell supplied.
- The theatre porters will collect you from the ward, and accompanied by a member of staff, will take you to the anaesthetic room from where you will be moved onto the operating table.
- In the anaesthetic room the anaesthetist and an anaesthetic nurse will look after you.

## **What happens in the anaesthetic room?**

### **Whilst you are still awake:**

- You will be connected to a heart monitor via wires fixed to sticky pads on your chest.
- You will have a peg put on your finger to measure the level of oxygen in your blood.
- You will have a drip put into a vein in your arm so that you can be given fluids during your operation.
- You will have a special drip put into an artery in your arm. This measures your blood pressure with every heartbeat and remains in place during your operation and whilst you are recovering in the Cardiac Intensive Care Unit.

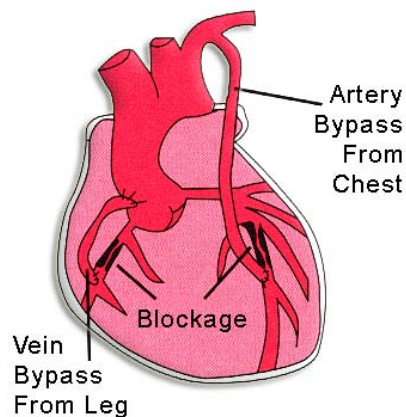
### **Once you are asleep:**

- You will have tubes put into the large vein in your neck. These are a larger type of drip. Necklines are used to give you medication during and after your operation.
- You will have a urine catheter put in to allow the doctors and nurses to monitor your kidney function.
- You will be put on a ventilator (breathing machine): when you are asleep under anaesthetic you cannot breathe on your own, so a machine does it for you. You will have a plastic tube inserted into your mouth and down your throat. This tube will be connected to a ventilator.

# Your heart operation

## Surgery for coronary heart disease

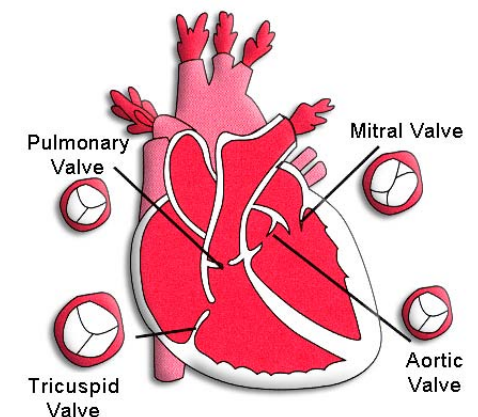
- The coronary arteries provide the heart muscle with blood. In coronary heart disease a fatty substance called cholesterol builds up in the walls of the coronary arteries, narrowing or blocking these arteries. This reduces or prevents blood reaching the heart muscle.
- A coronary artery bypass graft (CABG) is an operation to bypass the narrowing or blockage. A bypass graft is sometimes a piece of vein taken from your leg or the radial artery from your arm. One end is stitched to the aorta (a large artery close to the heart) and the other end is stitched onto the coronary artery beyond the blockage.
- In many patients the internal mammary artery is used as a bypass graft. This artery lies within the chest wall. One end is detached and stitched to the coronary artery beyond the narrowed segment.
- A bypass graft is created for each of the main coronary arteries affected by coronary artery disease. Commonly two or more grafts are necessary.
- This procedure maybe carried out with the heart still beating or with the use of a heart-lung (bypass) machine when the heart is stopped during the operation.
- Most operations are performed by dividing the breast bone but some bypass operations are now performed using a thoracotomy incision.



- This is an incision made between the ribs. The incision will be part of the discussion you have with your cardiac surgeon on admission.

## Surgery for heart valve disease

- Sometimes it is possible to repair a heart valve. This is quite common for the mitral valve but not for the aortic valve. However it is often necessary to replace the valve. Replacement valves are made of either mechanical moving parts or natural tissues.
- Mechanical valves are very strong and last forever. However, there is a tendency for blood to form clots on these valves. This prevents the valve from working properly. To ensure this does not happen it is essential to take Warfarin tablets which thin the blood. The dose of Warfarin must be closely monitored with blood tests to ensure that the blood is thin enough to prevent blood clots but not so thin that bleeding occurs spontaneously. The blood tests will be needed for life, usually at 6 week intervals.
- The alternative to mechanical valves is a tissue (porcine, bovine or homograft) valve. This is more natural and usually will not require long term warfarin. However, tissue valves only last for 12-15 years.
- You will have the opportunity to discuss the type of valve best for you with your surgeon before the operation.



## What will happen after your operation?

- Immediately after surgery when you are still asleep you will be moved from the operating theatre to the Cardiac Intensive Care Unit (CICU).
- You will stay in CICU for approximately 24 hours after your operation.
- In CICU you will have one-to-one specialised nursing care, supervised by the intensive care consultant, at all times.
- You will be attached to a machine that keeps a constant check on your blood pressure, heart rate, temperature and the oxygen levels in your blood.
- You will have chest drains. These are plastic tubes coming out of your chest just below your ribcage. They prevent any blood collecting around your heart after the operation.
- You will be kept asleep and on the breathing machine for as long as necessary after the operation. The decision to wake you will be taken by the nurse-in-charge or the anaesthetist. They will make sure your blood pressure and heart rate are stable before waking you up. Once the decision to wake you has been made the nursing staff will stop the medicines that have been keeping you asleep and you will start to wake up.
- When you wake up the first thing you will notice is the tube in your mouth – most people do not find this uncomfortable. When the nurses are sure that you are fully awake and aware of what is going on, they will ask you to cough as they pull the tube out. After the tube has been removed you will be given oxygen through a clear plastic mask. You will be able to have a drink of water around half an hour after the tube has been removed.

- You may not remember much about these first 24 hours after your operation, as you will either be asleep or drowsy. If your recovery is going well you will be moved to the Cardiac High Dependency Unit (CHDU) the following day. Some people remain in CICU for longer. This does not mean that you will not make a good recovery.

## What will happen in the Cardiac High Dependency Unit?

- **Once you reach the Cardiac High Dependency Unit (CHDU) you will be much more aware of what's going on and it is here that your recovery starts in earnest.**
- Your chest wound will be covered with a dressing for the first few days after your operation. When the dressing comes off you will see that your chest has been sewn up with dissolvable stitches underneath the skin. However some surgeons use clips, which are usually, removed ten to fourteen days post surgery.
- If you have had a Coronary Artery Bypass Graft (CABG) you may also have a leg or arm wound. This wound is also sewn up with dissolvable stitches, covered with a dressing and initially wrapped in a bandage.
- The bandages will usually be removed from your leg one day after the operation. You will then wear surgical stockings on both legs twenty four hours a day in hospital, but can take them off to wash your feet or shower. Nursing staff will give you more than one pair. When you leave the hospital you will only need to wear the stocking only on the leg with the wound for six weeks.

- Your urine catheter will be removed and you will then be able to pass urine normally. Your urine volume will be measured for the first 24 hours so you will have to use a bottle or commode.
- Surprisingly cardiac surgery is not a very painful operation when compared to many other operations. With the modern painkillers you should not experience severe pain at any time but inevitably there is some soreness and discomfort.
- You will be connected to a Patient Controlled Analgesia (PCA) pump. This machine allows you to control your pain relief. It is a pump with morphine in a syringe connected to a drip in your arm. When you press the button on your handset a measured amount of morphine is given. The machine locks automatically for 5 minutes after you have a dose so you cannot give yourself an overdose. The PCA is especially useful when you are being seen by physiotherapists or having your drains removed.
- If you have a thoracotomy wound you will have a small tube inserted into the space beside your spine (similar to an epidural). A local anaesthetic will block any pain by anaesthetising the nerves in the side of your chest with the wound; your anaesthetist will explain this to you.
- Your chest drains will be removed the day after surgery. You will have your PCA to hand and the nurses will ensure that you have adequate pain relief. You will have a chest x-ray once the drains have been removed to ensure your lungs are well expanded.
- A physiotherapist will visit you after your operation. On your first day after surgery you will be helped to get out of bed to sit in a chair. The next day you will be encouraged to walk a short distance and to practice your breathing and coughing exercises.
- It is essential that you start moving about as soon as possible after your operation. You may be surprised how soon this can

happen but it is a vital factor in speeding up your recovery. The risk of most common complications such as chest infection, constipation and pressure sores can be greatly reduced by early mobilisation.

- You could be moved from CICU to HDU or from CICU to ward 51 or 52 at any time from the day after your operation.

## Moving back to the main ward

- If you are well enough, you could be moved to the main ward the day after your surgery. However, generally this happens from day two onwards.
- On days three to five after your operation you should become gradually more mobile and will be encouraged to take walks of up to 100m around the ward on a regular basis. You will also be encouraged to shower.
- The physiotherapist will also ensure that you are able to walk up and down stairs comfortably before you go home.
- Some people get what is known as the 'three day blues' after their operation; they feel depressed and perhaps tearful. Don't worry, this is completely normal and by taking it easy you should feel better after a day or two.
- On the fourth day after your operation you will have a routine chest x-ray, ECG and blood test. Pacing wires are sometimes used during heart operations to control the heart rate. If you had pacing wires inserted during the operation they will be removed three or four days after the operation.

## Physiotherapy and self help after cardiac surgery

- Physiotherapists are trained in breathing; coughing and movement techniques that can help you make a smooth recovery. The physiotherapists role is to help you to recover as swiftly as possible from the operation. Some people will only need advice and others will need more practical assistance. Here is some advice about how to help yourself recover from the operation.

## How an anaesthetic can affect your breathing and what you can do about it

- Lungs produce phlegm as part of their natural clearing system. After an anaesthetic this clearing system is slowed down and therefore phlegm can collect and cause a chest infection. The lower part of the lungs can also become slightly deflated.
- **It is important to clear the phlegm and re- expand your lungs as soon as possible after your operation. The best ways to do this are as follows:**
  - **Moving:** get out of bed and start moving about. The staff will help and encourage you to do this.
  - **Deep breathing:** you can also do some deep breathing exercises - take a deep breath and take an extra sniff on top, hold for 4 seconds then relax as you breathe out. Repeat 3 times.

- Try to do this exercise every half hour once you wake up after surgery. When you take a big breath after your operation you will feel a stretch in the front of your chest. This will not do any damage to the wound.
- **Coughing:** to clear phlegm out of the lungs - hold a rolled up towel over the wound as a support. Take a deep breath in and then cough, holding the towel. It may be sore but you cannot damage your operation or burst the stitches.
- **Position:** the best position for your breathing is sitting upright in bed or better still, sitting in the chair. Your physiotherapist may also advise you of other positions to help clear your chest and to do your breathing exercises. Avoid sitting slumped as this stops your lungs expanding properly.

## What else can you do after your operation?

- Your legs may feel stiff after the operation if you have a leg wound. Make sure you keep them moving, especially bending at the knee.
- To help breathing and to keep shoulders supple - stretch your arms up to the ceiling, shrug shoulders up and down, roll shoulders backwards then forwards.
- You will be encouraged to move yourself around the bed. Try not to push through your arms as this can be sore and will put stress on your wound. You will be given assistance but you won't be lifted. The staff will encourage you to do as much as possible yourself.

## What progress to expect with your physical activity after the operation

- Progress can vary after surgery. On average, this is what you can expect:
  - **Day 1**  
Deep breathing/coughing  
Getting out of bed and sitting in a chair for a couple of hours  
Arm and leg exercises  
Marching on the spot to help expand your lungs
  - **Day 2**  
Continue breathing exercises  
Walk about 20 metres with some help several times during the day
  - **Day 3**  
Start walking on your own up to 50 metres or more every 2 hours
  - **Day 4 & 5**  
Walking up to 100 metres regularly  
Practice stairs (with a physiotherapist or nurse)  
You will then start to increase the distance you walk.  
Avoid becoming too breathless. You should be able to talk as you walk.
- Before you leave hospital a physiotherapist will advise you on how to exercise at home and return to normal activities. The physiotherapist will also answer any questions you have about your physical recovery.

## On the day you leave the Bristol Heart Institute

- Before you leave you will be given a supply of medication. The nurses will explain the purpose of each of your drugs. If you are not leaving before 10.00am you may be moved from your ward to the clinical support unit (CSU) to wait for your transport. This allows us to prepare your bed for the next patient. You can normally expect to leave the hospital around 2pm although this can vary if you need tests or changes to your medication on the day of discharge.

## What happens next

- Before you leave hospital you will be given a copy of **Help Yourself To A Healthy Heart** (*The Red Book*) which covers all aspects of your recovery, how you can access support and information for when you leave hospital. You can also discuss any questions or anxieties with the nurses looking after you.
- You will have a follow-up appointment with your consultant, or a member of his team at the Bristol Heart Institute, about six weeks after you leave hospital. This will be to discuss your recovery and check the progress of your healing.

## Cardiac Rehabilitation

- It is usually beneficial to attend a cardiac rehabilitation programme after your operation. It will help you to complete your recovery and maximise the long-term benefits of your operation.
- Most programmes are run by a specialist nurse or physiotherapist and offer advice on exercise, relaxation and general health. You will have the opportunity to meet other cardiac patients and benefit from their support and advice. Friends and family are welcome to attend the programme with you.

- Sessions usually start 6 weeks after you leave hospital and are based at your local hospital or health centre. Before you leave hospital you will be told which programme you have been referred to, who will contact you and when. You will also be given a Helpline number for any queries and the contact number for the rehabilitation service in your area.

## Useful contacts

### **Bristol Heart Institute (BHI)**

Tel: **0117 342 6558** or **0117 342 6559**

### **Patient Support & Complaints Team**

Tel: **0117 342 3604**

### **British Heart Foundation**

Tel: **020 7554 0000**

**[www.bhf.org.uk](http://www.bhf.org.uk)**

### **Diabetes UK**

Tel: **020 7424 1000**

**[www.diabetes.org.uk](http://www.diabetes.org.uk)**

### **Alcohol Advisory Service**

Tel: **020 7530 5900**

### **Quitline**

Tel: **0800 002 200**

**[www.quit.org.uk](http://www.quit.org.uk)**

## Notes & Queries

## Information for visitors

- When you arrive at the ward you should let the staff know that you are a visitor.
- Please do not stay too long – it is important that patients rest after heart surgery.
- No more than two visitors should be with a patient at any one time. There are day rooms on the wards where you can wait – please ask a member of staff to direct you.
- Children over the age of 11 are welcome to visit the wards.
- You must switch off your mobile phone as they can cause interference with medical equipment. Mobiles can be used in non-patient areas.
- Flowers and plants are not allowed on CICU, CHDU or the wards.
- There are toilet facilities for visitors between wards 51 and 52 and on CICU.
- **For infection control purposes we would ask visitors not to sit on patients beds and to use the alcohol hand gel provided as requested.**
- **Please do not visit if you are unwell yourself, for example if you have a cough or a cold. You must not visit if you have, or have had vomiting or diarrhoea in the last 72 hours.**

## Visiting times

- **Visiting hours** on CICU, CHDU and the wards are between **2:00pm - 3:00pm** and **6:30pm - 8:30pm**.
- There is a bell and intercom at the entrance to CICU and HDU. After ringing the bell you must wait for a member of staff to check if it is all right for you to enter the unit. When visiting CICU please come to the unit from the BRI entrance, level 6, Queen's building.

## Telephoning the ward for information

- One person should call the ward for news on behalf of all family and friends of a patient. This means the nurses can concentrate on caring for patients rather than spending time on the phone to lots of different friends and relatives. There are premier bedside telephones at every ward bed space which you can use to contact patients directly.
- If you wish to speak to nursing staff you should phone after 10:00am when ward rounds have been completed. If possible mealtimes should be avoided, as staff will be busy helping patients.

## Times to call on the day of the operation

- If your relative is the first person on the operating list they will leave the ward around 8:00am. The best time to telephone CICU for news of the operation is after 1:00pm.
- If your relative is the second or third on the list, they will leave the ward any time from 11:00am on. The best time to telephone CICU for news of the operation is after 6:00pm.

## Useful telephone numbers

Ward 51	0117 342 6551 0117 342 6651
Ward 52	0117 342 6552 0117 342 6652
CICU (Intensive Care)	0117 342 0329 0117 342 0330
CHDU (High Dependency)	0117 342 0326 0117 342 0327
CHDU (BHI)	0117 342 5941
Waiting List Co-ordinator	0117 342 6558 0117 342 6559

## Refreshment facilities for visitors

### Bristol Heart Institute (BHI) :

- There is a **bistro** in the **atrium** of the **BHI** which is open **Monday - Friday : 8:00am - 6:00pm.**
- There are vending machines with cold drinks and snacks in the atrium that are replenished daily.

## Queen's Building:

### WRVS Snack bar – level 2

9:30am – 5:30pm      Monday to Friday

11:00am – 4:00pm      Saturday and Sunday

### WRVS Shop – level 2

9:30am – 4:00pm      Monday to Friday

10:00am – 5:00pm      Saturday and Sunday

## Old Building:

### Bistro – ground floor

Open 6 days a week: **Breakfast**      7:30am – 11:00am

**Lunch**      12:00pm – 2:00pm

**Supper**      6:00pm – 8:00pm

- Tea and coffee served all day until 8:00pm, please note however that the bistro closes between 2:00pm and 2:30pm daily and is **closed all day on Sundays.**

## Accommodation for relatives

### 10 / 10a Marlborough Hill East

- Five rooms in this house are available to relatives of cardiac surgery patients at the BHI. The house is a 10 minute walk from the ward (uphill) and comprises only basic accommodation, with shared kitchen and bathrooms. There is a charge for use of the rooms. Priority is given to the relatives of patients who are unwell in CICU.
- For further information on accommodation please contact the ward clerk 8:00am – 4:00pm, Monday to Friday:

**Ward 51            0117 342 6551**

**Ward 52            0117 342 6552**

### Notes & Queries

### Notes & Queries



For access to other patient leaflets and information  
please go to the following address:  
**[www.uhbristol.nhs.uk/patients-visitors-and-carers/  
patient-information.html](http://www.uhbristol.nhs.uk/patients-visitors-and-carers/patient-information.html)**

**Hospital Switchboard: 0117 923 0000**



**Minicom: 0117 934 9869**



**[www.uhbristol.nhs.uk](http://www.uhbristol.nhs.uk)**



For an Interpreter or Signer please contact the  
telephone number on your appointment letter.



For this leaflet in Large Print, Braille, Audio, or  
Email, please call the Patient Information Service:  
**0117 342 3728 / 3725**

