

Information for Patients & Families

CARDIAC SURGERY



Liverpool Heart and Chest Hospital NHS Foundation Trust
Thomas Drive, Liverpool, Merseyside L14 3PE

**The Liverpool Heart and Chest NHS Foundation Trust
Hospital is a NO SMOKING HOSPITAL.**



Please refrain from smoking on site.

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Section 1

Introduction

This information booklet has been prepared to help you and your family understand more about the operation that is planned for you. It will give you general information about what to expect before coming into the Liverpool Heart and Chest Hospital and from your admission to your discharge home or to another care setting. It will also give you some practical advice about what to do when you get home.

Within the booklet are details of organisations and specialists that may be able to provide further information.

You will find a list of useful telephone numbers at the back of this booklet and use the space below to write down any questions you may want to ask during your admission or at your outpatients appointment.

Patient and Family Experience

The Liverpool Heart and Chest Hospital are committed to providing patients and their families with an exceptional care experience. Patient and family centred care is at the heart of what we do. You may wish to involve your family members or carers.

With your permission we are happy to share information about your care and condition with your family members. Please tell us with who and how much information you would like us to share.

Your experience is very important to us. If you, your family or carers have any concerns during your admission please let us know immediately by speaking to the Ward Manager or doctor in charge of your care.

The NHS's Commitment to you

When you are in hospital this is what you can expect:

- To be treated with respect and dignity at all times
- To receive a clear explanation of your condition and the treatment options available to you
- To be asked for your fully informed written consent to any operation or procedure
- To be sure that the information in your records will remain confidential
- To be involved in decision making about different aspects of your treatment and what procedure(s) are being carried out
- To keep your family and carers informed of your progress, if you wish.

Your Commitment to the NHS

In return, the Trust asks you to:

- Provide us with the necessary information about your condition, symptoms or medication in order to provide appropriate care
- The Trust operates a zero tolerance policy with regard to violence and aggression and we would therefore ask that all members of the public visiting our Trust, treat our staff with the same respect you expect from them

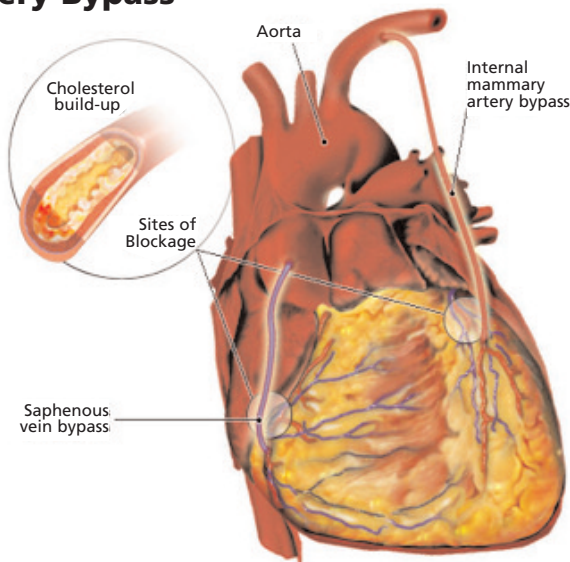
What Operation May I Need?

You will already have had some investigations for your heart and your Cardiologist has recommended that you discuss having heart surgery with a specialist surgeon. You may have coronary artery disease or valve disease or both. Over the next few pages there are brief descriptions of these conditions and how we treat them.

Coronary Artery Disease and Bypass Grafts

Your heart is a muscle and it receives its oxygen and blood supply through the coronary arteries. When these become blocked or narrowed your oxygen supply is lessened and you have chest pain. The surgeon will use one of your other blood vessels as the graft. This will be taken from your leg, your arm or an artery that runs just behind the chest wall. During bypass surgery one end of the graft is attached to your aorta (the main blood vessel that carries blood away from the heart) and the other end is attached to the blocked artery, beyond the blockage. Separate grafts may be used for each of the arteries that need bypassing.

Coronary Artery Bypass



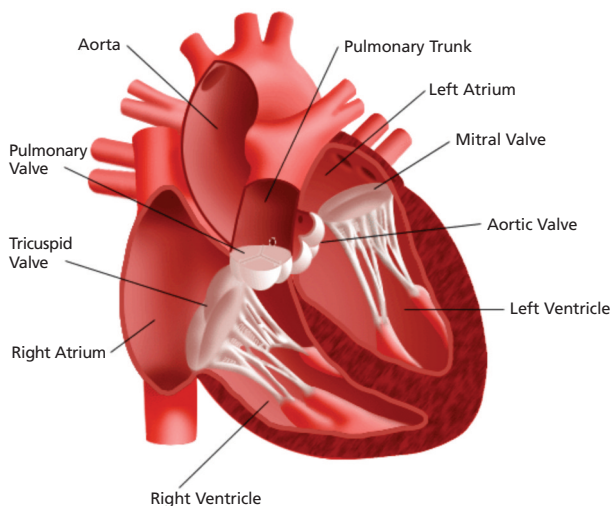
Valve Disease, Repair and Replacement

Your heart has four valves, which make sure that the blood flows through it and around your body in one direction. These valves can become damaged or diseased. When this happens they can either leak or become blocked. This causes you to feel unusually tired or breathless. The most common valves affected are the **Mitral, Aortic and Tricuspid**.

For mitral and tricuspid valve interventions, surgery can be performed either by dividing the breast bone (sternum), or using keyhole surgery techniques such as with robotic assistance using the £1.5m da Vinci robot. Robot surgery is the very least invasive therapy possible and Liverpool Heart and Chest Hospital is the only centre in the UK where this is available. Ask your surgeon if you are a candidate for this.

If your valve is being replaced, there are two types, tissue and mechanical. Each type of valve has advantages and disadvantages. If you have the mechanical valve you will need to take a blood-thinning tablet (usually Warfarin) for the rest of your life. If you have the tissue valve it may need replacing after approximately twelve to fifteen years, but there may not be a need for you to take Warfarin for life. Your surgeon will discuss both options and help you decide which is the best option for you.

Valves of the Heart



Benefits and Risks of Surgery

Benefits

Coronary Artery Disease Bypass Grafting

The intended benefit of surgery is to help alleviate the symptoms associated with your heart condition including:

- Improvement in your angina symptoms and therefore improve your ability to exercise
- Reduction in the risk of a future heart attack
- Increase your life expectancy

Valve Disease, Repair or Replacement

The intended benefits of undergoing surgery for valve disease repair or replacement is to help improve symptoms, prevent future heart failure and thus increase life expectancy.

Risks

What are the Risks Involved?

As with all surgical procedures, heart operations involve risks to the patient. These risks vary according to the type of operation or procedure, your overall health and your individual heart condition. Your consultant will discuss this with you, so that you are fully informed about the risks and benefits of the procedure. When you meet with your consultant please feel free to ask any questions you may have about the risks involved.

Alternatives

Your surgeon will discuss with you any other alternatives for treatment that are available including the option of not having surgery and continuation of your medical treatment.

Section 2

Before Coming Into Hospital and Your Operation

Pre-Investigation Clinic

You will need to have some investigations before coming into hospital and these are some of the tests that may be carried out:

- **Blood Tests** - A blood sample is taken from your arm and various tests are carried out including your blood group
- **Chest X-ray** – This will look at the size and shape of your heart and general condition of your lungs
- **Pulmonary Function tests** – These are breathing tests which measure how well your lungs are working
- **Electrocardiogram (ECG)** – This shows the electrical activity of your heart, recording your heartbeat and rhythm
- **Swabs** – These will be taken from your nose, throat and groin to check that you do not have any infections prior to your surgery. You will be given an information sheet regarding this.

Pre-Admission Clinic

As part of your preparation for surgery you will be reviewed by a Clinical Nurse Practitioner who is specially trained.

This assessment will take up to 2 hours and nurse will:

- Take a full history and perform a clinical examination
- Assess whether you require any extra support or have any disabilities
- Explain about the procedure and your hospital stay
- Provide you with a pack that has a shower wash and nasal spray to be used daily for 4 days prior to your surgery date and on the day of surgery.
- Explain about the recovery period following surgery
- Discuss cardiac rehabilitation
- Repeat any investigations if necessary
- Give advice on your medication including which tablets you should stop prior to coming into hospital

- Discuss any concerns or answer any questions you may have
- Advise you to visit your dentist before valve surgery; this will reduce the risk of infection on your new valve.
- Discuss your expected length of stay and approximate discharge date
- Arrange any additional help you may need such as a social or dietician referral, or advise you who to contact for advice about stopping smoking.

The nurses are available to help and support you so please feel free to ask them any questions you may have. Whilst you are waiting to come in for your operation and have any concerns about your illness/condition, you can contact one of the Clinical Nurse Practitioners on their helpline by telephoning **0151 600 1298**.

Smoking Advice

If you are currently smoking it would be best if you could give up smoking at least three months prior to your operation. Giving up smoking may not be easy and you will need support and encouragement from family and friends. Your GP can offer you support regarding this.

Day of Surgery Admission

Traditionally patients have always been admitted for cardiac surgery the evening before the day of surgery. More recently there has been a move towards same day admission (SDA) or day of surgery admission (DOSA) in which patients are admitted to hospital on the day of surgery.

Same Day Admission provision has considerable advantages for patients:

- Reduced length of stay (LOS) in hospital
- Improved patient journey and satisfaction
- Reduced risk of surgery cancellation

For reasons outlined above and in line with the Trusts commitment to deliver quality patient care, Liverpool Heart and Chest Hospital (LHCH) have implemented a new SDA service with a purpose built facility, the Aspen Suite to support the delivery of the service.

The SDA service will include ALL elective patients requiring cardiac surgery, unless otherwise stated by the operating consultant. Patients will be informed and consented during consultation with the operating surgeon.

Following consent for surgery patients must attend a pre-assessment appointment with a clinical nurse practitioner (CNP) and an anaesthetic review appointment with an anaesthetist to ensure all relevant investigations are completed ahead of surgery. These appointments will be made by a member of the surgical administration team and patients will be informed by letter and/or telephone.

Admission to Aspen Suite on the day of surgery will be at the following times:

- 7 am prompt if surgery is scheduled for the morning
- 10 am if surgery is scheduled for the afternoon

It is important that you attend on time because this will delay the theatre list and potentially lead to other patients having their surgery cancelled.

Due to limited waiting space, patients are asked to be accompanied by one family member, carer or friend. There is a conservatory opposite the Aspen Suite to help accommodate visitors.

Prior to your admission you will receive a phone call from the nursing staff on Aspen Suite to complete your nursing admission and give you the opportunity to ask any questions.

Full information relating to date and time of surgery will be provided by letter and/or telephone contact prior to your admission.

If you have any queries relating to your admission please contact the Ward Manager on 0151 600 1918 or a member of the team.

What to bring into hospital?

Please bring the following items with you:

- All your tablets in their original bottles or packets, which you will be asked to hand in to the nurses on your ward
- Your admission letter and this booklet
- Nightwear, dressing gown, underwear
- Flat comfortable full shoes or full slippers
- Small mirror, towels
- A wash bag containing: toothbrush, toothpaste, denture box, brush, comb, glasses in their case (if you wear them) shaving equipment, soap, flannel or small sponge. It would be helpful if you could label your denture box and glasses case with your name and date of birth before you come into hospital.

Following your surgery you will go onto the Post-Operative Critical Care Unit (POCCU) but your personal belongings will remain on the ward or your relatives can take them home for safe keeping.

Your toiletry bag will be labelled with your details and this will be sent up to you in POCCU. It is therefore important to put them in a small bag separate to your other belongings; this can be a toiletry bag or plastic bag, as per the pictures on next page.



There is very little space on the wards to store suitcases or clothes and your property may be packed away whilst you are in POCCU. In order to minimise the risk of loss or damage, it is in your best interests to only bring in what you will require for your stay.

Jewellery and Money

We advise that you only bring a small amount of money into hospital and advise that you leave any jewellery at home. All jewellery including wedding rings will need to be removed prior to surgery. If you do bring any valuables into hospital, please inform the nursing staff who will arrange for safe storage in the safe.

Please note the hospital cannot be liable for any loss of personal belongings during your stay with us.

Admission to Hospital

We believe that relatives or carers should be involved in your care and treatment whenever possible, if you are in agreement with this. It is particularly important to let us know if you have a specific requirement or a disability in order for us to provide you with extra support.

If you have any special needs we may need to complete a document called a 'Hospital Passport' which will detail all your requirements and this document will accompany you during your stay. We will hopefully have been informed of your needs before your admission so that any arrangements for extra support can be put in place. If we have not been informed please let us know as soon as possible.

Also, if English is not your first language or if you have any religious requirements please let us know and we will do all we can to help.

Single Sex Accommodation

Sharing an area or ward with members of the opposite sex will only happen by exception, based on clinical need (for example where patients need specialist equipment, such as in our critical care areas or when patients choose to share).

Arrival on the ward

Some of the tests you had in the pre-op clinic may need to be repeated. Do not be alarmed at this as some are done as a matter of routine, like your urine test, and your weight. Some may have to be repeated to check any abnormalities have been corrected. The reasons will be explained to you, but if you are still concerned, just ask.

On admission you will be met by a member of staff and orientated to the ward. You will be seen by an anaesthetist (doctor responsible for your anaesthetic). You will also be seen by a member of the surgical team to confirm your details from your pre admission clinic appointment.

Staff involved in your care

There are members of staff you will meet during your stay, however, all will be wearing identification badges – and will introduce themselves to you.

Teaching and further training

Medical students and other healthcare professionals cannot learn all they need to know from textbooks and lectures. During the period of your treatment, you may well be asked to consent to having students present or taking part in your examination or treatment, under the guidance of a qualified person. You have the right to refuse without affecting our standard of care to you in any way. Your co-operation in helping students may benefit other patients in the future.

Before Your Operation

Hair removal

Before the operation it will be necessary to remove hair from around the operation sites. The nurses on the ward will tell you how to do this and assist you if necessary. Please **do not** do this by yourself at home as shaving increases the risk of infection. If you shave too early you may cut yourself, which can be another source of infection.

Showering

It will be necessary for you to have a shower the night before and immediately prior to your operation. The nursing staff will advise you when the best time is for you to do this. Please bring in the pack that you were given in pre assessment clinic containing the shower wash and nasal spray. This will help to prevent any infection occurring in your wounds. If you need assistance when showering please inform the nursing staff.

Anaesthesia

This section is to give you a brief overview of what to expect from anaesthesia and the anaesthetist. Each individual operation and anaesthetic is tailored to the individual patient.

You will be required to attend a pre-operative anaesthetic appointment in the outpatients department. The anaesthetist will ask various questions concerning past anaesthetics, your general health and specifically questions concerning the symptoms of your heart disease. This is also the opportunity to discuss your care after the operation in the Post-Operative Critical Care Unit (POCCU) and methods of pain relief following your surgery.

Prior to your surgery, the anaesthetist is likely to alter some of the drugs that you normally take, removing some and adding others.

On the day of surgery patients are not allowed to eat from midnight and drink clear fluids only until 6 am, although in individual circumstances this may be altered by your anaesthetist. If in doubt, ask. This is to prevent the contents of your stomach going into your lungs after you are anaesthetised.

Theatre

Unless unable to, patients will walk to theatre from Aspen Suite. The walk is very short. If you feel unable to walk, a chair or bed transfer will be provided. After arriving in the operating theatre you will be asked once again to check your name and date of birth and what operation you are expecting to have. This is an important final check to ensure we have the right patient for the right operation.

Before going to sleep you will have a drip (small plastic tube) inserted into a vein and an artery, but your anaesthetist will use local anaesthetic to reduce any discomfort you may feel. After attachment of ECG stickers, the anaesthetist will ask you to breathe some oxygen from a face mask, anaesthetic drugs will then be injected into the drip and you will slowly drift off to sleep.

Your anaesthetist will stay with you throughout the operation and accompany you during your safe transfer to the Post-Operative Critical Care Unit (POCCU). The anaesthetist is responsible not only for keeping you asleep but also for controlling your blood pressure, heart rate, lung function, kidney function, temperature control and blood volume during the operation.

Following Your Operation

The length of time it takes to perform each operation is different. This depends on your condition and the type of operation you require. Each patient's recovery rate is different and again, this depends on your general health and any pre-existing conditions you may have.

Post Operative Critical Care (POCCU)

Following your operation you will remain in the recovery area within theatre for a while and then you will be transferred to POCCU. When you wake up there will be a tube in your mouth to help you to breathe. As this goes through your voice box you will not be able to talk, but the nursing staff will support you during this time, to enable you to communicate. This breathing tube will not make you gag, retch or vomit as during the operation your throat has become accustomed to the idea of a tube being in place. You will receive ventilator (breathing machine) support for a number of hours following your operation. The time you receive this support will depend on your condition following surgery. If you remain on this machine for a significant length of time you will receive drugs to keep you sedated and comfortable.

Once you are awake and able to breathe deeply on your own, the tube will be removed and replaced with an oxygen mask over your mouth and nose. It is important to take deep breaths and cough at regular intervals as this will help expand your lungs and prevent infection. You will also have additional drips in your neck or groin. Whilst this may sound unpleasant, our aim is to ensure that you remain as comfortable as possible. You will also have a urinary catheter in place. This will drain urine from your bladder and be attached to a drainage bag. The fluid taken in by your body and excreted (drained) will be continually monitored.

The main type of pain relief for the first 24 hours after your operation is Morphine. This will be administered either by the nursing staff or by a device known as a PCA or Patient Controlled Anaesthesia, which you are able to control yourself. This choice can be discussed with the anaesthetist before the operation. As soon as you are able, we will give you pain relieving medication by mouth in tablet form.

Irregular Heart Rate (cardiac arrhythmia)

On occasion some patients may experience heart rhythm disturbance/palpitations following surgery. This may happen in the first few days after your surgery. If you do experience these symptoms it is most important that you inform a member of the nursing or medical team.

Chest drains

Following surgery you will have two or three chest drains. These are tubes leading from your chest to a bottle, which will drain fluid or air from around your heart and lungs. These drains will be removed as soon as the fluid has stopped draining and they are no longer required. Prior to the removal of your drains you can be given some pain control. Once removed you may have a stitch at each drain site, which will be removed after 7-10 days. If you have been discharged home before stitch removal we will arrange for the district nurse to do this.

Pain relief

Effective pain relief is important following your surgery for your comfort and recovery. One of the main priorities of your nurse and anaesthetist is to reduce your pain as much as possible. In the first 24 hours following your surgery you will usually be given pain relief through the drips you have in place or through a device in your arm. As soon as possible we will give you your pain relief in the form of tablets.

It is our aim to keep you as comfortable and pain free as possible. It is very important that you inform the medical or nursing staff if you are experiencing pain or are uncomfortable.

Pacing wires

Depending upon the type of surgery you have had, you may have two small wires coming out of the skin on your chest. These are a precautionary measure; they are there in case your heart beats too slowly. These wires can be attached to a pacing box, which will give you the extra beats your heart needs. These wires will be removed before you leave hospital. If after the operation you feel that your heart is racing or misses a beat then please inform your ward nurse or doctor as this can sometimes occur after heart surgery.

Surgical Clips

During the bypass operation, small surgical clips are used to seal the cut ends of the blood vessels during the harvesting (removal) of the veins. These surgical clips are designed to remain in the body and are chemically inert (they do not oxidise in the body) and do not cause problems.

On occasion they can migrate (move) through the skin but this indicates that they are no longer required in the body so stop bleeding, and this process is harmless. Do not become alarmed or concerned if this happens to you.

Support Stockings

You may be given support stockings to wear following your operation to help your circulation and blood flow. In addition to this a small injection of anti-coagulant may also be given to help the blood flow freely and prevent clots (blood thinning drug) from forming. It is not unusual for you to feel aches and pains across your shoulders, neck and in your chest. You will need to wear your support stockings for 6 weeks following your operation. **Prior to your discharge the nursing staff will advise you of the date you can remove your stockings and document this in your discharge information.**

Breathing Exercises

Physiotherapy staff will visit you on Post-Operative Critical Care Unit to teach you breathing exercises. They are designed to increase your breathing function and also to make it easier to clear any secretions from your lungs.

It is a good idea to start practising the following exercises before you are admitted to hospital. After your operation you will be asked to do the exercises 1-2 times per hour.

1. Sit in a comfortable upright position and take a deep breath in through your nose. Hold the breath in for 3 seconds.
2. Sigh the air out through your mouth. This is the Deep Breath.
3. To huff, imagine you are steaming up a glass; a short, sharp out breath

3-4 Deep breaths
|
2-3 normal breaths
|
3-4 Deep breaths
|
2-3 normal breaths
|
2-3 Huffs
|
Cough

If your cough is clear then stop there. If your cough 'rattles' then repeat the whole cycle again. Please ask for pain relief if you are in pain when coughing or taking a deep breath.

It is very important to drink plenty of water throughout the day, which will help loosen any secretions.

Mobilising following your operation

Following your operation you will need to get up and about as soon as possible. The earlier you begin to get moving the better. It is important to get moving early as this helps the heart and lungs to recover and prevent constipation, stiffness and pressure ulcers (bedsores). You will be assessed and advised how to reduce your risk of a slip, trip or fall.

Each day as you recover following your operation you should aim to be more active. At first, the nursing and therapy staff will help and teach you how to move. If you are unsure, please ask.

If your surgical incision is through your breastbone it usually takes about three months for it to heal completely. During this time when standing up you are advised to push up through your arms with equal pressure through both sides.

If your surgical incision is to your left side instead there are no restrictions on the pressure you put through your arms.

The following information can be used as a guide to the first few days when you are back on the ward. It is important to remember however that everyone is assessed individually. You will be given individual advice by nursing and therapies staff.

- On the first or second day the nursing staff may ask you to sit out of bed and walk a short distance.
- On subsequent days you will be given a target to which you should walk.

Once you have started walking on your own you should aim to take a short walk every hour or two. By the time you go home you should be walking freely around the ward and the nurse or physiotherapy staff will ensure you can comfortably climb one flight of stairs.

If you have any problems with mobility the physiotherapy staff will assess your needs and offer guidance and support. Rest and sleep are also an important part of your recovery and are just as important as exercise. Nurses will advise you on achieving a healthy balance between getting enough exercise and enough rest following your operation.

Personal hygiene

Initially the nurses will help you with washing and changing at the bedside until you are able to go to the bathroom where you will be advised to either have a strip wash at the sink or if you are able to manage, a shower. If you managed to shower yourself before your operation then, by the time you leave us, you should be able to do so again.

Wounds

Most people have a wound down the centre of their chest (sternotomy) or a wound on the left side of the chest (thoracotomy). These may cause you discomfort or muscular aches in other areas such as your arm and your shoulder.

Eating and drinking

Initially your appetite may be poor and your sense of taste may be altered but the nurses will encourage you to try to eat and drink after your surgery. Prior to your operation you may have been advised about losing weight, but following surgery, in order for your body to recover properly and your wounds to heal after your surgery, you should not restrict your diet.

Your body needs a balanced nutritional intake, low in cholesterol and salt. Wait until you have been seen at your follow up appointment before starting a restrictive diet if this is necessary. If you need support with your diet whilst in hospital the dietician will be able to offer specialist advice and help.

Constipation and Nausea

Indigestion and constipation are also common, as your normal functions may slow down during the surgery. Some patients do suffer from nausea or an altered sense of taste as a result of the anaesthetic and the drugs. Do inform the staff if you are constipated or nauseated, as it can be treated.

Section 3

Discharge and Guide to First Few Weeks at Home

This section of the booklet contains discharge advice in order to prepare you for returning home. Before your admission please give some thought to how you will manage after discharge as during the first few days at home you may feel quite vulnerable, so it is advisable to have someone at home with you during this time.

Patients who have underlying conditions prior to cardiac surgery, such as mobility problems or other health conditions, may require a period of further rehabilitation. Need for this in-patient rehabilitation will be identified by the therapists during your stay. Arrangements will be made for you to transfer to your local district general hospital or a rehabilitation facility nearer to your home. This will be discussed in full with you by the therapists and discharge co-ordinator.

Please discuss any concerns you have regarding your discharge home with the clinical nurse practitioner at your pre-admission appointment or the nurses on the ward in order for the relevant plans to be put in place in advance of your discharge.

Transport Home

Please ensure that you have arranged your transport home and arranged for someone to pick you up and take you home if possible. Ambulance transport can only be arranged if your doctor considers it is medically necessary. It can take up to 48 hours to arrange ambulance transport. Please speak to the nursing staff if you have any problems. Please ensure a relative or friend brings in some suitable outdoor clothing for you to wear for going home. It is advisable to have them brought in at least the day before your planned discharge and please remember to ensure your valuables are returned to you if you have given them in for safe keeping.

If your plans change during the course of your admission it is important that you let the nursing staff know. This will allow them to arrange for you to have a safe journey from hospital.

Cardiac Rehabilitation

During your pre-admission appointment or following your surgery, a cardiac rehabilitation or competent ward nurse will talk to you about this national recognised programme aimed at helping and supporting patients with cardiovascular disease. It is an important part of your treatment as it provides you with education, physical and psychological support to help you, your family or carers to fully understand and manage your condition and its treatment to lower the risks of developing further cardiovascular disease.

You will be referred to your local service and they will contact you approximately 7 working days after your discharge.

Follow up appointments

You will also be given a follow-up appointment to see your consultant approximately 6-8 weeks after your discharge.

A Guide for the first few weeks at home following a sternotomy

Week one

Exercise is an important part of your recovery, but you should take things easy for your first few days at home. Aim to be as active as you were on your last day in hospital. Remember to carry on with the breathing exercises the physiotherapist taught you. Plan your day to include at least three trips upstairs. Walk around the house and garden for five minutes. Repeat during the day if you feel well enough. Have a sleep or a rest in the afternoon. Accept your limitations and don't over tire yourself.

Week Two Onwards

Do more activities around the house. Walk for about ten to fifteen minutes once or twice a day. Do not get overtired. Do light gardening but do not do any digging. You should not lift, push or pull anything more than ten pounds (e.g. a full kettle of water), as this will put pressure on your breastbone. Shop for light items (within a ten to fifteen minutes' walking distance); take short rides in the car as a passenger.

Weeks Four to Seven

At this stage you should be attending a cardiac rehabilitation class. Many of your activities may be guided by what you are doing at the class. You will probably be able to manage most of the household tasks, but still avoid things with lifting, pushing and pulling such as cleaning windows and heavy gardening.

Weeks Eight to Ten

Try to be as active as you were before your operation. Take regular exercise and increase the intensity. You should be able to do all the household tasks, but rest in between. You can take longer car trips and travel by plane. You may take up bowling, swimming, or other activities now. If you are unsure, you should check with your cardiac rehabilitation team. Continue to avoid heavy lifting and digging.

At the end of three months

You should be able to do everything you were doing before your surgery. If you wish to do contact sports, you should consult your GP first. It is important that you continue with the exercises you were taught in hospital, and do remember, it is usual to get aches and pains. The ligaments around your neck, back, chest and shoulders will still be stiff. By continuing with the exercises you will be limiting the discomfort.

Driving

Do not drive following discharge from hospital until you have been reviewed at your Out-patient appointment and advised by your surgeon that it is safe. It is your responsibility to inform your insurance company of your heart surgery.

Holders of a LGV and PSV license or patients who have had valve surgery must inform the DVLA. The telephone number is 0300 7906806 or visit their website at www.dft.gov.uk/dvla/medical.aspx

Bathing and showering

Wash daily; do not be afraid to get your wounds wet as this will keep them clean and encourage them to heal. Do not get in/out of the bottom of the bath for 8 weeks as this will put too much uneven pressure on your arms and therefore through your breastbone. This will not help with the healing process and may cause damage. It is safe to use a shower as long as you are able to access it safely without putting too much uneven pressure through your arms.

Rest, Sleep and Relaxation

During the first few weeks at home you will find that you tire easily so adequate rest and sleep are just as important for your recovery as exercising. Tell your friends and relatives when you are planning to rest; this will help cut down the amount of disturbance you get during this time. Try to get eight to ten hours sleep each night. You may find it difficult for the first week after leaving hospital, as your usual sleep pattern will have been disturbed. You may also find it uncomfortable. If you do, make sure you are taking your pain relief. You may also be more aware of your heartbeat at night, especially if you have had a mechanical valve replaced. You may hear it as a ticking sound. You will get used to this over time and eventually not notice it.

Moods and Emotions

Immediately after your operation you may have days when you feel down or depressed, this is known as the post-op blues. You may feel irritable or overly emotional and tearful. This can happen at any time, and without warning. It usually settles down within the first two months. Both you and your family will be affected by these feelings, so it is important that you discuss with them how you are feeling. If you are still feeling this way after a couple of months, or you feel unusually depressed, lacking concentration or experiencing memory loss, then you should contact your GP.

Anticoagulants (blood thinning drugs)

Warfarin is a type of anticoagulant. This is used to thin the blood to prevent the possibility of blood clots. The dose may vary depending on how thick or thin your blood may be. A blood test known as INR (Internationalised Ratio) will determine how thick or thin your blood is and your dose will be amended accordingly. It is very important to monitor your blood regularly and this is why you need to keep your appointment at your local hospital or GP to have your blood checked regularly.

Arrangements will be made for you to have an appointment at your local Warfarin Clinic before you are discharged

Stress

When you are stressed your body reacts in certain ways: Your muscles become tense, your blood pressure rises, you breathe more rapidly, you sweat and you become anxious. You can produce more sugar, fatty acids, cholesterol and adrenaline. This in turn slows down your digestive system and your immune system.

It is in your best interest to try to avoid something that you know is going to put you in a stressful situation.

Holidays and flying

You can holiday in this country whenever you feel well enough to travel. If you are thinking of going abroad we advise you to wait until after follow up appointment. If you are thinking of a long haul flight, then you should leave it longer, but should discuss and agree the best time with your consultant.

If you are taking Warfarin, you need to let your anti-coagulant clinic know, as they may need to adjust your dose. It is important that you cover your scars with complete sun block when sunbathing for at least the first six months to avoid sunburn. You must also inform your holiday insurance company of the details of your surgery.

Medication

The nurse discharging you will give you a supply of tablets, which should last at least two weeks. This will give you time to get your prescription to your GP ready for your repeat prescription. The medication you will now be taking will almost certainly be different to what you took before your operation. Therefore it is safer if you dispose of any previous drugs that you still have at home. They should be returned to your pharmacist for safe disposal.

Your GP will be sent a letter explaining what operation you have had, the medication you are now taking and that you have returned home. You will also be given a copy of this letter. You should keep an up to date list of your tablets with you at all times, and if you are taking Warfarin, then keep your dosage booklet with you.

Wounds

Depending on how long you are in hospital, you may have your stitches removed before you leave or you will be given a number to contact your nearest walk-in centre to make an appointment to have them removed. For patients who have restricted mobility or are unwell the district nurse will make arrangements to visit you at home.

If you have any concerns about your wound then you can contact the Tissue Viability Service 0151 600 1324 for advice, Monday – Friday between the hours of 8 am – 5 pm.

IMPORTANT - If your wound becomes red, suddenly becomes sore painful or starts to discharge fluid, you should consult your GP or district nurse immediately for advice.

Dentists

If you have had valve surgery it is most important that you inform your dentist. If you require any kind of dental treatment, you should expect to receive antibiotic cover. You should also inform them if you are taking Warfarin, as this may mean that you need to stop it prior to your treatment.

Who to contact if you have any problems after going home?

Following Discharge

When you are discharged, a letter will be sent to your General Practitioner advising of your treatment and a list of medication that you have been given to go home with.

After returning home, if you have any problems, questions or concerns, please do not hesitate to contact the ward you were discharged from to speak to a member of the ward team for up to seven days after going home. After seven days, please contact your General Practitioner.

If you need the services of a community/district nurse whilst at home, the nursing staff will arrange this for you.

If you have any queries regarding your appointment please contact your consultant's secretary who will be able to help you.

If you think that you need more urgent attention then you must seek advice from other medical services.

IMPORTANT - if you are in need of immediate help, for example if you are experiencing chest pain, breathlessness, palpitations or dizziness, please do not hesitate to contact your GP for assessment or attend your local A&E Department or if in doubt ring 999.

Mycobacterial infection associated with heart surgery

Public Health England (PHE), the Medicines and Healthcare Regulatory Authority (MHRA) and NHS England have carried out an investigation suggesting that a device used to heat and cool the blood during some types of heart surgery has been linked to a rare bacterial infection caused by *Mycobacterium chimaera*. This device (heater-cooler unit) is essential for carrying out heart surgery with the heart-lung machine (cardiopulmonary bypass) and is an issue that has affected heater-cooler units across the world.

The risk from this infection is very low - about one person in every 5,000 people who have open heart surgery for valve replacement or repair will develop it. For coronary artery bypass grafting using a heart-lung machine, the risk is substantially lower, about 1 in 100,000. For patients who do become infected, this infection can be slow to develop and difficult to diagnose. It is possible to develop symptoms years after surgery which is why we now routinely inform patients of this risk prior to surgery so they know what symptoms to look for, even though the risk is so small.

Symptoms of an infection with this bacterium have many of the same features of other illnesses. Therefore, if you experience any of the following, while it is unlikely to be caused by this bacteria, you should be seen by your consultant, GP or other health care professional in order for it to be excluded.

Symptoms to be aware of include;

- Unexplained fevers
- Unexplained weight loss
- Increasing shortness of breath
- Waking up with bed sheets showing signs of sweating (night sweats)
- Joint or muscular pain
- Nausea, vomiting or abdominal pain
- Abnormal levels of tiredness / fatigue
- Pain, redness, heat and / or pus around the surgical site.

Please note this infection cannot be spread person-to-person and remember that there are other causes for these symptoms so there is no need to be alarmed or to seek emergency treatment.

Be aware of the symptoms, particularly because the infection can take up to five years after surgery to appear. If you are diagnosed with the infection, treatments are available.

Further information is available at NHS Choices at: www.nhs.uk/Conditions/mycobacterium-chimaera-infection/Pages/Introduction.aspx

It is important to stress that the risks of infection from this bacteria are very low and much lower than the risks involved in not having appropriate treatment for your heart condition.

Section 4

Information about the Hospital

Visiting Times

**Wards – All wards have open visiting
between 8.00 a.m. to 8.00 p.m.**

We recommend strictly a maximum of 2 visitors per bed as patients can tire easily. In consideration for other patients please keep the noise levels within the ward areas to a minimum. Visitors are asked not to eat or drink whilst on the ward and are not permitted to use the patients' toilets or sit on the beds.

Visitors are not permitted to bring in food which requires re-heating. If your visitors do bring in food they must inform a member of staff to ensure this is safely stored and labelled.

Post-Operative Critical Care Unit (POCCU)

Visiting Times

**8 am - 9 am - for one hour only
(NO visiting between 9-11 am)
then from 12 noon - 8 pm**

- We recommend strictly a maximum of 2 visitors per bed at all times.
- We do not recommend that children under the age of 12 are allowed to visit the unit. Arrangements for children over the age of 12 to visit may be made at the discretion of the nurse in charge.
- Visiting hours can be tailored to meet the needs of individuals upon prior arrangements with the nurse in charge.

IMPORTANT - Visitors are requested not to visit the hospital if they have any signs of infection for example, colds, flu or diarrhoea and vomiting.

Health and Safety

It is important to prevent infections when patients are in hospital. By following a couple of requests, you can help matters greatly.

- Please can all visitors use the hand gels provided when entering and leaving the ward. This will help to prevent infections.
- Please encourage your doctors and nurses to clean their hands. They will not be offended if you ask them if they have cleaned their hands before attending to your needs.
- Visitors – please do not sit or lie on patients' beds. This is because you are adding to the risk of cross infection, as well as damaging the mattress.
- We do not recommend that you bring flowers into the hospital.

Relatives Accommodation

The Robert Owen House provides accommodation for the relatives of patients undergoing treatment at the hospital. The house is situated on site. The hotel style accommodation is built to a very high standard with 17 rooms, a mixture of family, twin and single rooms. A charge is made to guests for the accommodation with the cost of maintenance and upkeep being funded through the help of volunteers and charitable fundraising.

Please telephone **0151 600 1688** for more details or to make a booking. If your relative has any special requirements please inform staff at the time of booking.

Patient & Family Support Team

Being a patient, relative or carer can be a worrying or confusing time. Sometimes you may need to turn to someone for help, and the team can:

- Provide help, advice and support
- Listen to your concerns and suggestions
- Help sort out concerns or complaints quickly on your behalf

If you do have a concern or would like some extra support please ask a member of staff to put you in touch with the team or contact them directly on 0151 600 1517, 1639 or 1257 from 8.30 am - 5 pm Monday-Friday.

Religious Beliefs

If you wish to have a visit from our Chaplaincy Team or a minister of your faith, please inform the nursing staff and they will arrange this for you.

Your Comments and Feedback

Feedback from patients, their families or carers is valuable to us as we use your views to help improve the services we provide. During your stay you will be given an in-patient satisfaction survey, your views and comments are considered an important measure of the quality of services we provide.

USEFUL TELEPHONE NUMBERS

Hospital switchboard number	0151 600 1616
Clinical Nurse Practitioners Helpline	0151 600 1298
Patient & Family Support Team	0151 600 1517
Robert Owen House (Relatives Accommodation)	0151 600 1688
Post Operative Critical Care (POCCU) Reception	0151 600 1017
Post Operative Critical Care Unit (POCCU)	0151 600 1148 0151 600 1149 0151 600 1116 0151 600 1140
Aspen Suite	0151 600 1918
Cedar Ward	0151 600 1166
Elm Ward	0151 600 1169

For further information visit:

www.lhch.nhs.uk
www.bhf.org.uk

Or contact:

The British Heart Foundation Heart Information Line on:
020 7554 0000.

This booklet is available in large print on our website at www.lhch.nhs.uk or if you would like a copy please ask a member of staff.

If you require a copy of this leaflet in any other format or language please contact us quoting the leaflet code and the language or format you require.

إذا لديك الرغبة في الحصول على نسخة من هذه المعلومات بأي لغة أخرى أو بشكل آخر (على سبيل المثال بخطوط كبيرة) ، الرجاء الاتصال علينا على الرقم 0151 600 1257 موضحا الشكل أو اللغة التي ترغب فيها.
如果您想索取一份以其他語文或形式（如大字體）編印成的資料傳單，請致電 0151 600 1257 向我們查詢，並說明您所需要的形式和語文。
ئەگەر ئەم زانیاریانەت بەھەر زمانیکی تر یاخود شیۆلانیکی تر دەوئیت (بۆ نموونە بە چاپی گەورە) ئەوا تکایە بە ژمارە تەلەفۆنی 0151 600 1257 پەیوەندیەمان پیۆه بکە و ئاماژە بدە بەر زمانە یانخود شیۆهییە کی دەتەوئیت
W celu uzyskania niniejszej informacji w innym języku lub formacie (np. dużym drukiem), prosimy o kontakt z nami pod numerem 0151 600 1257 podając wymagany format lub język.
Haddii aad u baahan tahay koobiga wargelintan oo luqad ama qaab kale (sida far waaweyn) fadlan nagala soo xiriir 0151 600 1257 adiga oo noo sheegaya luqadda ama qaabka aad wax ku rabtid.

CTPALS064

Date of Publication:

Date for Review:

Version 9

August 2019

August 2022

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