

Your planned cardiac surgery

Cardiac Services

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Information for Patients

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The staff in the cardiac surgery department would like to welcome you.

Coming into hospital is not something that people ever look forward to. The aim of our department is to make it as easy as possible for you and your relatives/carers. So, if there is anything we can do to help you, or if you have any ideas about how we can improve our service, please let us know.

This leaflet aims to give you and your relatives or carers information about

- your condition,
- your appointment before surgery,
- your planned surgery.

If you would like any more detailed information about your operation, or your stay, please ask any of the nursing staff.

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What is coronary heart disease (CHD)?

- Coronary heart (artery) disease is the term used to describe furring and narrowing of the arteries (blood vessels) around the heart that provide blood flow to the heart muscle.
- The gradual build-up of fatty materials in the inner lining of the arteries is the most common cause of narrowing of the coronary arteries.
- **Angina** is the name given to the feelings or symptoms that happen when the build-up is enough to restrict the blood flow down the artery. This means the heart muscle does not receive enough blood and oxygen. These symptoms may include chest pain or discomfort as well as breathlessness.

1. Coronary artery bypass graft (CABG) surgery

CABG surgery is an effective way of treating angina. It improves the blood supply to your heart and helps to stop your symptoms. Your surgeon will only suggest bypass surgery if they think no other options can keep you healthy, like drugs or angioplasty. The aim of the CABG is to 'bypass' the narrowed sections of the arteries to have good blood flow to the heart muscle.

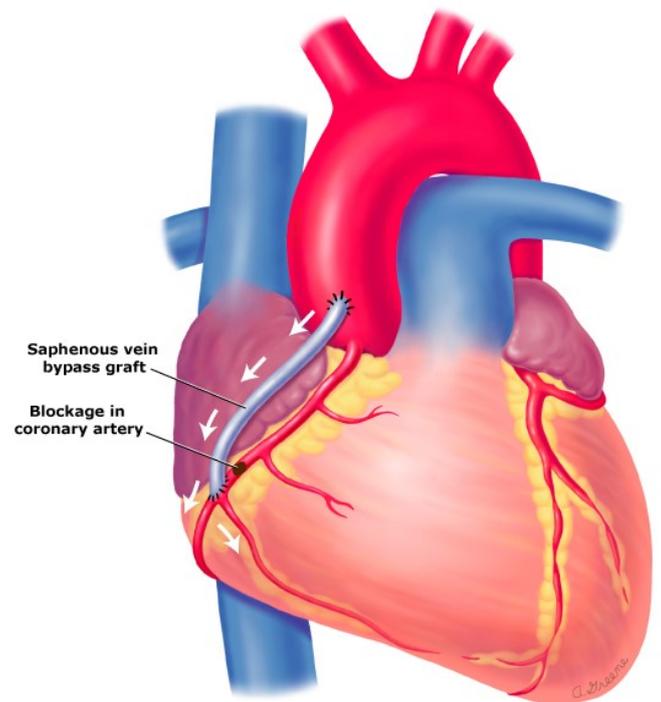
We use veins and arteries to bypass the narrowed or blocked coronary arteries. We sew them into place.

These veins and arteries come from

- the leg (saphenous vein),
- the arm (radial artery),
- or the chest wall (internal mammary artery).

Your surgeon may use a combination of veins and arteries.

Your body can cope quite well without the veins/arteries we use for bypass. You have other vessels in your legs and arms. These will take over the work of the ones that have been taken out.



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What are the benefits of CABG surgery?

After bypass surgery, 8 out of 10 (80%) gain excellent relief from their symptoms of angina lasting for at least 5 years and often for longer.

Besides symptom relief, bypass surgery can

- prevent heart attacks,
- improve life expectancy,
- improve your quality of life and help you to live longer.

What are the risks of CABG surgery?

No operation is without risk. National estimates on general risk exist, but your surgeon will discuss individual risks with you. They will consider your specific health circumstances.

The main CABG surgery risks are:

- The bypass operation will not cure the cause of your narrowed or blocked arteries. This means your angina can return if the grafts become narrowed or blocked. You can reduce this risk by following a healthy lifestyle. The Cardiac Rehabilitation team will discuss this with you.
- The risk of death within the first month is between 2 to 3%.
- The risk of serious stroke is between 1 to 2%, but may be higher if you have more risk factors.
- The risk of an irregular heartbeat, atrial fibrillation (AF), is 20 to 40%. This condition is common after heart surgery. It can be put right by taking medication.

Other risks include:

- Breathing difficulties
- Excessive bleeding
- Infection
- High blood pressure
- Fluid retention in legs
- Blood clots
- Kidney problems
- Tummy (abdominal) complications
- Poor blood supply (limb ischaemia)

2. What is heart valve disease?

The heart has 4 chambers. The upper 2 chambers get blood from the body or lungs. The lower 2 chambers pump blood to the lungs or around the body. There are 4 valves. These allow the blood to flow through the heart in the right direction acting like a 1- way system. This is so that the blood can get oxygen from the lungs and delivered to every cell in the body.

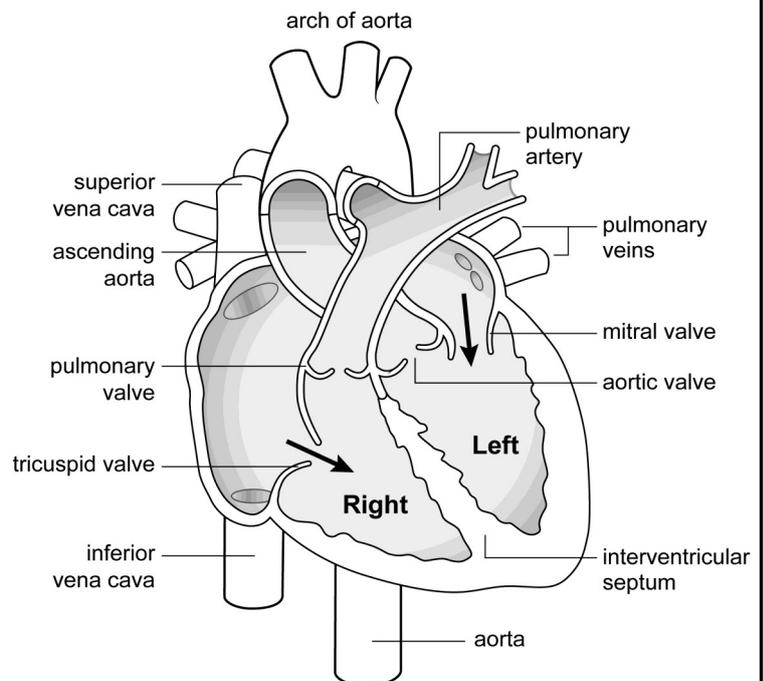
Heart valve disease occurs when there is **stenosis** or **regurgitation**:

Stenosis is a narrowing of one of your heart valves. This means it cannot open properly. It restricts the flow of blood out of the heart.

Regurgitation means that the valve is 'leaky'.

It does not close properly and allows the blood to go in the wrong direction. This can affect any of your 4 valves.

Heart valve disease can cause breathlessness, tiredness (fatigue), dizzy spells, chest discomfort, palpitations or swollen ankles, depending on which valve is affected.



Why does heart valve disease happen?

- You may have been born with abnormal heart valves (congenital heart disease)
- Aging can cause narrowing of the aortic valve
- Infection of the heart valves (endocarditis) or rheumatic fever which can cause leakage
- Other heart conditions can also affect your heart valves

Valve replacement and valve repair

You can have these operations to help your symptoms and live a nearly normal life. Your surgeon will suggest valve surgery only if the leak or blockage is serious and no other treatment can keep you healthy. Prescription drugs will relieve the symptoms but the valve will continue to get worse. We use valvuloplasty to give short term relief of your symptoms.

- **Valve repair** - Your surgeon may be able to repair your valve. This is more common with leaking mitral and tricuspid valves.
- **Valve replacement** - Your surgeon will replace your heart valve by sewing in place an artificial valve.

Types of valves

- **Tissue valve** - These valves are usually made with tissue from pig, cow or sheep heart valves. The tissue is like human valve tissue. They are treated so that your body will accept them.
- **Mechanical valves** - These valves are made of metal (titanium) and carbon. If you have a mechanical valve implanted you may hear a 'clicking' noise. This is just the sound of the valve working and is quite normal. It may be more noticeable after exercise or when you lie down.

Risks of valve replacement and repair

As with any operation, valve operations are not risk free. Your surgeon will talk to you about the benefits and risks based on your health. You should think about these risks in relation to the risk to your health if you do not get treatment for your valve disease.

Main risks:

2 to 10% of patients having valve surgery die within 30 days of the operation, depending on which valve is operated on and the general condition of your heart. If you have surgery to 2 or more valves, the risk rises to 5 to 15%.

Other risks include:

- Difficulty in breathing
- Excessive bleeding
- Infection
- Tummy (abdominal) complications
- High blood pressure
- Irregular heart rhythms and need for a pacemaker
- Fluid retention and swelling in the legs
- Blood clots
- Stroke
- Kidney failure

Discussing your surgery options in the cardiothoracic clinic

Your Cardiologist will have referred you to one of our cardiothoracic (heart) surgeons at the Glenfield Hospital in Clinic D. Your surgeon will check if surgery will help you. During your consultation, they will discuss the risks of surgery and how long you may have to wait for your operation. If you have any questions, please do ask.

Your consultant, his/her team and cardiologist will arrange for you to have any tests you need. Once we have all the information, your name will be put on the waiting list.

The Consultants secretary will contact you with your pre op assessment date and the date of your operation. If you cannot attend your appointment, please phone the hospital number and ask to be put through to the consultant's secretary.

My Consultant is :-.....

Hospital Telephone Number - 0300 303 1573

What should I do while I am waiting for my operation?

Dental check-up

You will need to visit your dentist within 6 months before your operation. Please make sure your teeth and gums are healthy. Infected gums or teeth can introduce bacteria into the bloodstream. This can cause complications. This is very important for heart valve patients. If your teeth and gums are not healthy, your operation may be postponed.

Planning for after your operation

Most people are discharged home between 5 to 7 days after the operation. Once you know your operation date, it is a good idea to start thinking about how you will manage on your return home. It is important to remember that you will not be able to manage everything on your own. You should aim to have somebody to help you for 1 to 2 weeks.

What happens at my pre-operative assessment?

Before you come into hospital you will need to come to a **pre-operative assessment** appointment in Clinic D at Glenfield Hospital. This is to prepare you for your operation and to help to ease any concerns that you may have. Please be prepared to stay up to **4 hours**.

Our pre op assessment team will review your medical history and check you are well enough to have surgery. You will have a number of tests including an ECG, chest X-ray and blood tests.

Please bring a pee (urine) sample and a list of all your current medication.

A doctor or specialist nurse will talk to you about your operation. You will sign a consent form. If you have any concerns or questions, please do discuss them with us.

A nurse on the clinic will make a full assessment of your needs by taking a nursing history and discussing your care with you.

During your visit to the pre op assessment clinic you will be tested for **MRSA** (Methicillin Resistant Staphylococcus Aureus), a type of bacteria. Moistened cotton swabs will be wiped on the skin around the inside of each nostril and an area of skin between your legs (perineum).

The nurse will also give you a medicated body wash (stellisept) and nasal cream (Bactroban or Naseptin). You will need to start using these **3** days before your admission. You will carry on using them during your hospital stay. Instructions on how to use these will be given to you. Evidence suggests that clearing bacteria from your nose and body reduces the risk of picking up an infection after surgery.

When can my friends and family visit?

The cardiac surgery wards are open to visitors from 2pm to 8pm. We ask that you only have 2 visitors at your bedside at any one time. Children are allowed to visit but must be closely supervised. We advise that babies or very young children do not visit because of the risk to them of infection.

Immediate family/carers are welcome to visit on the morning of the operation, but please speak with one of the ward nursing team to arrange this. It would be helpful if during the time of surgery family/carers let us know where they can be contacted so that we can tell them of progress if needed.

Visiting hours for Adult Intensive Care Unit (AICU) and Surgical Enhance Care Unit (SECU) are 2pm to 8pm. Immediate family/carers are very welcome to visit you while you are in AICU and SECU.

When you are admitted, please check with the ward to make sure that these times are still correct.

Telephone enquiries

Your family/carers can ask about you at any time.

Cardiac Surgical Unit Direct Dial Lines:

Ward 31 0116 258 3781 or 0116 258 3503

Surgical Enhanced Care Unit 0116 258 3251

Adult Intensive Care Unit 0116 258 3527

While you are on the main ward you will have a bedside phone which you can receive incoming calls. You can also buy a phone card to make outgoing calls.

Accommodation for relatives and carers and carers

Limited accommodation is available for your relatives or carers. This can be arranged before the date of admission by telephone.

Accommodation Officer: External 0116 225 5388 Internal 71 5388

Coming into hospital

Admission date

Your Cardiothoracic Consultant's secretary will arrange your admission date with you. You will normally be admitted in the afternoon, the day before surgery. Sometimes we will admit patients on the same day as their operation. Your surgeon will discuss this with you if they think you are suitable.

If you become unwell before your admission date, please contact your consultants secretary as you may not be well enough to come in for your operation. Details of who to contact will be on your admission letter.

Admission

On the day of your admission you will need to contact the bed manager to make sure that your bed is available. Please make arrangements for someone to bring you in to hospital.

What to bring into hospital with you

Before your operation please bring only 1 bag containing:

- 2 sets of night wear and a dressing gown. You will find front buttoning nightwear easier to put on after surgery.
- Underwear (Bras are essential for support and need to be comfortable without wires)
- Slippers or footwear with backs (not mules or flip flops)
- Toiletries
- Medication
- Stellisept (body wash) and Bactroban/Naseptin (nasal cream), which was given to you during your pre op assessment.

Please **do not** bring towels in with you. The ward will give you what you need.

The Ward does not have facilities to store lots of personal property. Please ask your family/carer to bring fresh clothes and other items you may need once you have had your operation and have return to the ward.

Valuables

University Hospitals of Leicester NHS Trust recommend that valuable items are not brought into hospital or are sent home. Your household insurance covers valuable items for loss, theft, and damage. The Trust is not responsible for any loss or damage to patient belongings. This applies unless the belongings are given to staff for safekeeping and a receipt is given.

Preventing infection

Please wash your hands regularly to stop the spread of infection. Remember to wash them before eating and after going to the toilet.

We ask visitors to:

- Clean your hands before and after you have contact with the patient.
- Do not visit if you are suffering from a cough, cold, diarrhoea or feeling unwell.
- Do not sit on the patient's bed.

What happens on the day of my operation?

- Before your operation you will be told by the nursing staff when to stop eating and drinking. This is usually about 6 hours before surgery. This allows your stomach plenty of time to empty before you are given your anaesthetic.
- The nurse will remove any hair from your chest and other areas that need to be clear with clippers.
- You will be asked to shower using stellisept body wash.
- You will be given a theatre gown to wear.
- Before your operation you may be given medicine (pre-medication) to make you feel comfortable and relaxed.
- You will be taken to the operating theatre reception on your bed and from there into the anaesthetic room.
- A small plastic tube (cannula) will be put into your hand so we can give you your anaesthetic. Once asleep you will have your operation.

What happens during my operation?

- You will have your operation in a theatre at Glenfield Hospital.
- You will have a general anaesthetic. Then, your surgeon will make a cut through your breast bone (sternum) to access the heart.
- Usually your heart is stopped and a machine takes over to help your circulation and breathing. This is called a heart lung bypass machine. You may have your operation while your heart is still beating, your surgeon will discuss this with you if he/she thinks this is an option.
- Once the grafts and/or valves are sewn into place, your surgeon will restart your heart and take you off the heart lung bypass machine.
- The breastbone is then wired together with 5 to 6 strong wires. These hold the breast bone together until it has healed.
- The wound is then closed.

Surgery times

The length of time that each operation takes will vary from procedure to procedure.

The times given are approximate and only offer a rough guide for your information.

For coronary artery bypass grafts	3 to 4 Hours
For replacement of heart valves	3 to 4 Hours
For both CABG and valves	4 to 5 Hours

What happens after the operation?

Immediately after your surgery, you will be transferred to the Adult Intensive Care Unit. During the operation and for some time afterwards you will be connected to a breathing machine (ventilator). A dedicated nurse will monitor your progress. When you wake up you will be wearing an oxygen mask. The painkillers that you have been given will make you feel sleepy (drowsy).

You will also be connected to other tubes and wires. These will monitor your heart rhythm and blood pressure and let staff check your condition. You may also have small pacing wires which are removed once your heart rhythm is stable.

There will be tubes coming from the bottom of the wound (chest drains). These let any fluid left from the operation drain away. Without these tubes, fluid would build up inside the chest cavity. These drains are usually removed before you leave the Adult Intensive Care Unit.

A narrow plastic tube (catheter) will be placed in your bladder to drain away your pee. This make sure that we can check the function of your kidneys after your operation. You will also have a drip attached to a tube in your neck and/or arm to give you fluids and medications. These lines are removed after you return to the ward and you are eating and drinking properly.

The next morning you will be seen by a Physiotherapist and helped to get out of bed into a chair. This will help you to breathe better and keep your lungs clear of infection.

Adult Intensive care units (AICU) are always busy places with a lot of activity 24 hours a day. Please note that we do not have separate male and female areas on AICU.

Recovering in hospital

Returning to the ward

Most patients return to the ward the day after their operation. Some patients may need to stay a little longer either in AICU or in the Surgical Enhanced Care Unit (SECU). A longer stay in AICU or SECU should not make you worry. There is also a high dependency area on the ward for patients who need extra monitoring. As your condition continues to progress, you will then be moved into one of the ward beds. The medical and nursing staff will keep your family updated on your progress.

Pain control

Most patients say that they feel sore and stiff after their operation. The soreness is from the

wound sites and muscular aches and pains from lying in one position during surgery. We offer painkillers in many different kinds of ways to help ease the pain. It is important that you let your nurse know if you are in a lot of pain as this will affect your breathing and your recovery.

Physiotherapy

The physiotherapist will visit you each day until you are able to walk around on your own. You will be encouraged to walk about as much as you are able within the first few days.

The aims of physiotherapy during your stay are:

- To help reduce any problems with your breathing or aches and pains that can occur after any surgery which may slow down your recovery.
- To show you how to continue your recovery when you get home.
- Plan exercise activity in stages according to your individual needs.

You can repeat the exercises on your own to increase your fitness and confidence. Before you are discharged home you will be given advice and instructions. If you have any individual questions your physiotherapist will answer them.

Getting dressed

We encourage you to wear your own clothes in hospital. Please ask your relatives to bring in some comfortable loose fitting clothes to wear, after leaving the intensive care unit. Ladies are advised to bring in an old comfortable bra (without wires) for support.

You will find that your feet may swell a little in the first few days after the operation so new slippers may be difficult to get on and off. Try to “wear them in” beforehand.

After surgery

Most patients having heart surgery are attached to a heart lung bypass machine. This device is used to support your circulation during the operation. The combination of the bypass machine and the anaesthetic can cause mood and sensation changes. These are usually temporary and settle down over the next few days or weeks. People who have had heart surgery have reported:

Taste: Many people have a metallic taste in their mouths or they find that all the food tastes the same. This may affect your appetite. If you are not eating well try to eat something at each meal time and eat a small snack between meals.

Vision: It is common to see flashing lights, wavy lines, bits missing etc. This will improve with time. We do not recommend having your eyes tested for about 3 months.

Smell: If your sense of smell changes it will soon return to normal.

Hearing: You may notice a loss of hearing or find that noises echo.

Concentration/memory problems: Most people find that concentration is not at its best after their operation. This will improve over the next few weeks but you may continue to be affected when you are tired or under stress for the next 6 to 12 months.

Mood: 3/4 (75%) of patients will have days when they feel down, depressed, over-emotional or tearful. It is possible for this to come and go over the next 12 months. If you find that your mood does not seem to be improving visit your GP for their advice.

Hallucinations: You may have hallucinations, which means seeing things that are not really there. You may have very vivid dreams. These tend to happen during the first few days after the operation and usually stop after about a week.

Tiredness/exhaustion: disturbed sleep is common after the operation. It should settle once you are back into your normal routine. You may find it more comfortable to sleep on your back at first because of your chest wound.

When can I go home?

Each heart operation is unique, but recovery will follow a similar pattern for you all. Your recovery will follow a **step-by-step** progression. It is more important to concentrate on the fact that you are progressing, rather than on how long it is taking.

When you go home, you will be on your way to feeling well again. **Think positively** about yourself, your progress, and your recovery and look forward to the future.

Before you go home the physiotherapists will see you.

The Cardiac Rehabilitation team will contact you at home by telephone. They offer helpful advice on your recovery and help to prevent complications.

Some patients go straight home from the hospital.

- Patients from outside of Leicestershire sometimes go back to their referring hospital for a few days. This decision is made by the medical and nursing team after your operation.

Please make sure that you have arranged for someone to pick you up and take you home.

Medication

Your pharmacist or your nurse will talk to you about the medicines that you will take home. It is usual for your medicines to be changed by the doctor after your operation. You will be given a discharge letter which will have your medicines listed on it.

Advice for patients needing oral anticoagulants

During your hospital stay you may have been told you need to take medication called **warfarin**. This helps to stop blood clots forming, or may stop an existing clot from growing. This effect is known as **anticoagulation**. Anticoagulants such as warfarin interfere with the body's natural clotting mechanisms and thin the blood.



You may be given warfarin for any of the following reasons:

If you have had:

- A prosthetic (metal) heart valve
- A tissue heart valve
- A procedure called Endarterectomy during bypass surgery
- Any complications after surgery, such as irregular heartbeat.

Warfarin is a preventative treatment in these circumstances. It works to improve blood flow and stop blood clots (thrombosis). These can be life-threatening. The length of time you need warfarin will depend on why you are taking it. Before going home, you will be given an appointment with an anticoagulation nurse to help manage your warfarin therapy.

For more information about your warfarin please contact the Anticoagulation helpline on (0116) 258 5069. The helpline is open on Monday to Friday from 10.30am to 3.30pm.

Further help and advice

www.activateyourheart.org.uk/ is one of the first interactive websites for heart patients and their relatives and friends in the UK. This site will offer heart and health related information available.

www.lnds.nhs.uk this is the website that gives information about weight loss, diabetes, lipid lowering diets and healthy eating for heart patients.

www.bhf.org.uk British Heart Foundation

Previous reference: CAR017-1212

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغةٍ أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل

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Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

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