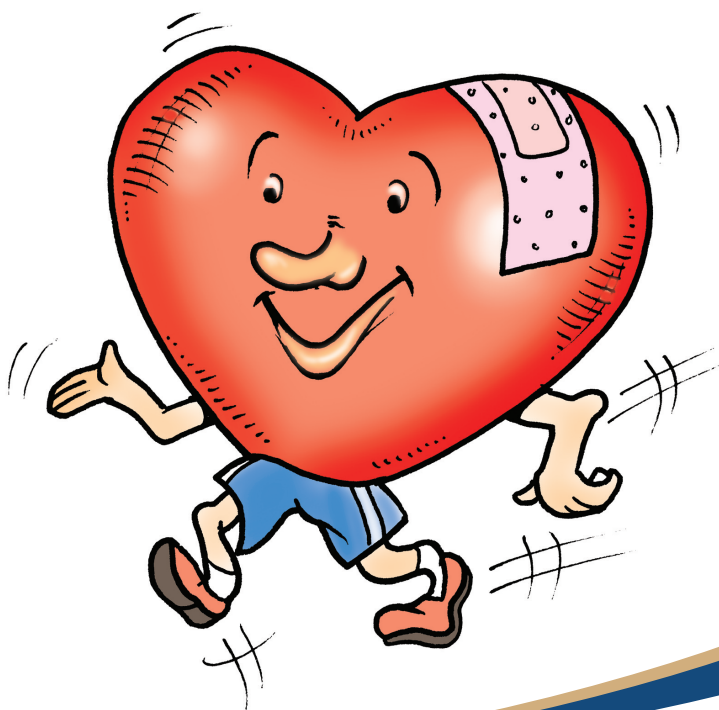


Cardiac Surgery

Patient Information Leaflet

A guide to your journey for you and your relatives/carers



GIG
CYMRU
NHS
WALES

Bwrdd Iechyd Prifysgol
Caerdydd a'r Fro
Cardiff and Vale
University Health Board

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Important Phone numbers (Direct lines to the areas/individuals)

Case Managers

Cath von Oppell - for Mr. O'Keefe, Professor von Oppell and Mrs Deglurkar _ 029 20748093

Mabel Phillips - for Mr. Azzu, Mr. Kulatilake and Mr. Mehta _ 029 20742892

C5 cardiac _ 029 20743346

Cardiac Intensive Care Unit (CICU) _ 029 20743265 or 029 20742286

Cardiac High Dependency (CHDU) _ 029 20745445

Cardiac Rehabilitation _ 029 20743384

Cardiac Advice Line _ 029 20745430

Dietitian _ 029 20744294

Physiotherapy _ 029 20747747

and ask for bleep number 5295 for the cardiac physiotherapist

University Hospital of Wales main switchboard _ 029 20747747

Phone Enquiries

Please feel free to phone at any time regarding your relative's condition, but it is helpful if you can allocate a spokesperson for your family in order to minimize the phone calls we receive.

Notes

[illegible]

Introduction

Welcome to the Cardiothoracic Unit at the University Hospital of Wales Cardiff. Whilst you are under our care, we would hope that your stay is pleasant and rewarding and if this is not the case, please do not hesitate to inform a member of staff.

This booklet has been designed to give you information about your forthcoming surgery. The hope is that after reading it, patients and relatives will have a clear understanding of why the operation is needed, what is to be expected during your stay in hospital, and more importantly, what to expect when you go home.

You will find blank pages in the booklet for you to note down your questions and any issues that may be worrying you, and any member of staff will be happy to answer them for you.

Who can you contact if you have queries or problems?

You can telephone the Case Managers, who work with the Cardiac Surgeons, if you have queries relating to:

- Waiting for surgery
- The pre admission clinic
- Your admission to hospital

The Case Managers are

Cath von Oppell - for Mr. O'Keefe, Professor von Oppell

029 20748093

Mabel Phillips - for Mr. Azzu, Mr. Kulatilake and Mr. Mehta

029 20742892

If they are not available, please leave a message on the answerphone and they will get back to you.

Why do you need Surgery?

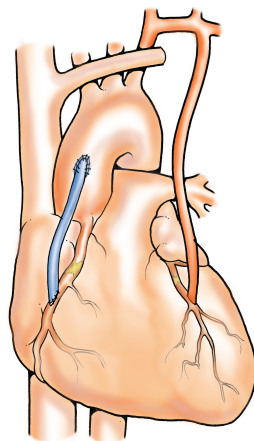
There are various reasons for undergoing heart surgery; the two main reasons are usually for disease of the coronary arteries and disease of the heart valves.

Type of Surgery

Coronary Artery Surgery

Coronary arteries are the blood vessels which supply the heart muscle with oxygen and energy. These arteries can become narrowed or blocked due to the build up of fatty matter and this may limit the blood supply to the heart muscle, causing symptoms. The most common symptom is chest pain and this is often called angina, however, some people may not have any symptoms.

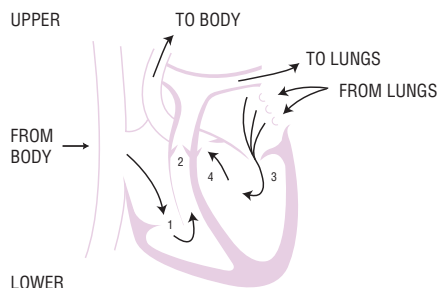
Coronary artery surgery involves taking a vein or artery from the arm, leg, or behind the breast bone (the mammary artery) joining it to the aorta and then positioning it beyond the blockage or narrowing. This bypasses the blood around the blockage to give energy and oxygen to the heart muscle.



Valve Surgery

Within the heart there are 4 valves which make sure that the blood flows around the heart in one direction. These are:

1. Tricuspid
2. Pulmonary Valve
3. Mitral
4. Aortic



The valves can become damaged or diseased causing them to leak (valve regurgitation) or they may become narrowed and rigid (valve stenosis).

These problems can cause strain on the heart which the patient may recognize as tiredness or being short of breath. The damaged heart valve may be detected by a doctor in the form of a heart murmur; however, some people may not have any symptoms at all.

In some patients, only one valve is affected, in others there may be two or more. The aortic and mitral valve are the most commonly affected and the valve may be repaired or replaced.

A **valve repair** involves the surgeon repairing the tissue of the valve and the surrounding area. This may include using a “ring” to support the valve (annuloplasty).

If a repair is not possible, then the valve will need to be replaced. The valve can be replaced with either a tissue valve or a mechanical valve, and your surgeon will suggest which type of valve is best for you as an individual.

Mechanical valve - these are usually made of carbon or steel. This type of valve will require you to take anticoagulant tablets for the rest of your life (usually Warfarin). This is to prevent blood clots forming on the artificial surface of the valve.

Tissue Valves - The tissue is a valve from a pig or cow which has been treated with a substance which helps to preserve it. If you have a tissue valve, you may only have to take Warfarin for up to three months, if at all, and will depend on the surgeon's advice.

*This type of valve will “wear out “ and currently is expected to last for approximately 15 – 20 years before needing re- replacement

The MAZE Procedure

The MAZE procedure is performed on the left and right atrium for the treatment of an irregular beat. Atrial fibrillation is an abnormality of the electrical system on the heart. The electrical signal in the heart has become irregular and hence the heartbeat is irregular. The MAZE procedure disrupts this irregular electrical signal and the result is what looks like a ‘children's maze’ in which there is only one pathway that the electrical signal can follow. The normal rhythm of the heart is then restored in approximately 80% of patients. The procedure requires ‘open heart surgery’ requiring cardiopulmonary bypass (the heart lung machine).

If the **type of surgery** that you are expecting is not mentioned, then please do not hesitate to ask the nursing or medical staff.

Risks

There are risks associated with your surgery. Please ask the doctor about the risks.

Getting Ready for Surgery

Lifestyle

There are certain risk factors that can contribute to heart disease, particularly coronary heart disease. Once you have been referred for heart surgery, use the waiting time to raise your overall level of fitness. There are 6 main things you can do:

1. **Keep physically active** - although some people waiting for surgery may be limited in the amount of activity they can do, gentle exercise can help keep you moving and as fit as possible. Discuss with your Nurse/ Doctor the amount of activity that you can safely do. However, if you get chest pain during exercise you should stop and rest before continuing providing it settles completely.
2. **Stress** - waiting for heart surgery can be stressful. Some people may believe that stress played a part in the development of their heart problem. Events leading up to the illness may have accelerated the process but it is important to be clear that heart disease is a chronic disease of the coronary arteries and any damage to the tissues and/or valves will have taken place over time. Stress however can have a significant influence on the rate of recovery and your confidence to return to your normal lifestyle. Stress can raise your blood pressure which is ideally best avoided before surgery. It is important to address any concerns or questions you may have to avoid a build up or fear of uncertainty.
3. **Diet** - Diet can affect your heart health in many ways. This will be explained in more detail in the “post-op information” section of the booklet. Before cardiac surgery, the most important dietary messages are:
 - Drink plenty fluids (aim for 10 cups per day)
 - Eat regular meals
 - Follow a balanced diet; a wide range of foods, including fruit & vegetables, starchy foods, dairy foods & meat/fish or alternatives

Ideally, in the weeks leading up to surgery, you should be well nourished, to help you to recover faster following the operation. If you have experienced any unintentional or rapid weight loss recently, or a loss of appetite, please alert your case manager who will refer you to the Dietitian. When you arrive on the ward you may notice they have different menus to the general wards; these are based on healthy heart guidelines. A leaflet explaining this can be found at your bedside.

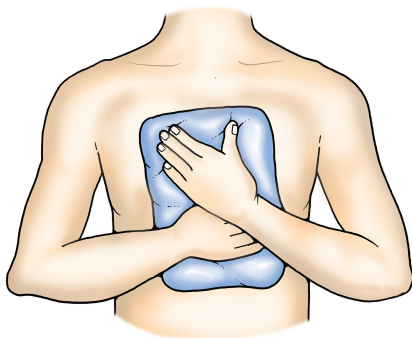
- 4. Visiting your dentist** - if you are having valve surgery you must visit the dentist prior to your operation. This is because any infection in the teeth or gums can spread to the new valve and cause complications. Please make sure that you explain to the dentist the reason for your visit as you may need antibiotics before having treatment. This is also important to remember after your operation. The guidance on needing antibiotic cover for dental treatment if you have valve problems have changed and if you are unsure if you need them, please ask your consultant.
- 5. Smoking** - if you smoke, it would be better if you tried to stop smoking. Smoking makes the coronary arteries narrower and encourages blockages in them. It also damages your lungs. If you continue to smoke right up to the time of operation, it may increase the risk of complications after the operation such as breathing problems and may also affect the healing of your wounds. The benefits after giving up only become apparent 3 months after stopping. Therefore it is important to stop as soon as possible.

If you need help to stop smoking, ask your Doctor about counseling or nicotine replacement products.

- 6. Breathing Exercises** - chest problems can occur after surgery even if you have no history of chest illness or smoking. The physiotherapist will give you exercises before the operation to keep your lungs clear of phlegm and make sure your lungs are opening up well.

Several breathing exercises are recommended to help reduce the likelihood of chest problems after your operation. Please start practicing these by yourself as soon as possible - it may help to start them before the operation to help develop a routine.

- Sit upright
- Take a deep breath in down to your lower ribcage
- Hold the breath for a count of three (try not to do this forcefully)
- Breathe out gently
- Repeat 3 - 4 times regularly throughout the day



Effective coughing is also EXTREMELY important after your operation

- Sit upright
- Support your wound by putting your hands on your chest.
- Take a deep breath in, then cough strongly from your tummy

Always ask for more painkillers if pain or discomfort prevents you from deep breathing or coughing effectively.

Be aware of your posture!

Sitting or lying slumped in bed will prevent your lungs from expanding properly.

Getting ready for discharge home after your surgery

You may think that this is a strange time to discuss going home when you haven't even had your operation, but it is important for you to know what to expect. The aim of your surgery is to improve your quality of life and get fitter than before. You should not need to make any alterations to your home after surgery.

After a heart operation, average length of stay in hospital for 5 to 7 days. For some patients, the length of stay may be shorter than 5 days or longer than 7 days. It all depends on how quick you recover and the decision to send you home will be made by your Consultant team.

During this time, you will be encouraged to become more independent. By the time you are discharged, you should be able to have a shower without help, dress in your outdoor clothes without help and should have walked up one flight of stairs with the physiotherapist.

It is important to have someone to help you at home for the first 1 -2 weeks after your operation, and this person will need to stay overnight. If you live alone, then we may be able to transfer you to the care of a hospital nearer your home. This will be discussed with you on your admission to hospital.

Transport home - please arrange your own transport home. The aim is for you to be discharged by 10am. If there is a problem with getting transport please let us know on your admission to hospital as hospital transport will require 48 hours to book. This is normally a shared taxi.

Your admission to Hospital

When will I be admitted?

The Case Managers in the Preadmission Clinic will advise you on when you will be admitted to hospital for your surgery. They will also advise you to start using the Bactroban ointment for your nose and your groin.

The case managers will also give you instructions on what tablets you need to stop taking in preparation for your operation.

What do I need to bring with me?

We advise you to bring in a minimal amount of personal belongings with you. This is a guide to what you may need whilst you are in hospital.

- The tablets that you are taking
- Nightwear x3
- Toiletries
- Towel
- Sturdy slippers or shoes (To avoid slips and falls, sturdy slippers or shoes should be worn at all times when standing or walking)
- Dressing gown
- Loose change

Please avoid bringing in the following

- Items of value, including sentimental value
- Bank cards and cheque book
- Excessive amount of money.

Remember - a hospital is a very public place and you will be responsible for your property unless you hand it over for safe keeping, with a receipt given to you.

In line with Trust policy please do not bring in a portable TV or radio. TV and radio facilities are available and cards may be purchased from the ward.

Preparation for your operation

You will be admitted to ward C5, and before the operation you will be visited by a number of staff, including the anaesthetist, and a staff member of the Cardiac Intensive Care Unit who will give you information of what to expect immediately after your operation. You will also be given the opportunity to visit the CICU.

Before your operation, the following preparation will be required

Body Hair Removal

Part of the preparation for surgery includes removing hair from the body. This normally includes the chest, abdomen, arms and groins, and the legs. One of the nurses will do this for you, using clippers. DO NOT attempt to shave yourself, or use hair removing creams or waxing.

Bath or shower

It is important for any patient having surgery that the skin is as clean as possible in order to reduce the risk of infection. Ward staff will advise you to have a bath or shower and wash your hair using an antiseptic soap the evening before and the morning of the surgery. If you are too unwell to have a bath or shower, the nurse will help you at the bed side.

Eating before your Operation

The ward nurse will keep you informed as to when you must stop eating and drinking (Nil by Mouth).

The Pre med

Normally one or two hours before your operation you will be given a pre med. This is a drug prescribed by the anaesthetist to relax you before the full anaesthetic is given. It is either given in tablet form, injection or both.

It is important to stay in bed once the premed is given, as you may feel quite sleepy. You will be given a call bell so that you can alert the nurse if you need anything.

Going to the Operating Theatre

When the theatre staff are ready you will be taken to the operating theatre on a trolley. A porter and a ward nurse will accompany you, and on your way, you will be given oxygen to breath through a facemask.

Once in the anaesthetic room you will be given an injection of drugs and you will then be asleep for the whole operation.

You will be in the operating theatre for 4 to 6 hours, but this is just a guide. Some patients are in theatre for shorter or for longer, depending on what kind of operation is being performed. After your operation you will be transferred to the Cardiac Intensive Care Unit.

What to expect in Cardiac Intensive Care Unit

You will be sedated and a machine will help you to breath. This is called a ventilator. Once you are ready to breathe on your own you will be allowed to wake up and weaned off the ventilator. When you are stable enough, you will be moved to the high dependency or back to the ward.

Waking Up

After your operation and as you wake up you may feel 'groggy', you will have several drains and tubes attached. They are initially to help your body back to recovery. Most people have the following:

A tube to help you breathe - the tube may be uncomfortable and you will be unable to speak and most patients don't remember having the tube in place. It will be removed as soon as you are able to breathe on your own. Once the tube is removed you will have a face mask to give you oxygen.

Chest Drains - you may have 2 - 3 chest drains positioned in your chest and they are usually removed within the first 48 hours

Intravenous Lines - you will have a line in your neck vein which will provide you with fluids (whilst you are unable to drink), pain relief and antibiotics.

Catheter - you will have a tube in your bladder which allows you to pass urine. This will remain in place during your initial recovery period.

Noise and Lights

The ITU environment can be quite noisy especially with alarms and it is normal to have the lighting on for some of the day and some of the night. Although the lights and noise can be disturbing this is normal for cardiac intensive care and nothing for you to be concerned about.

Pain Relief

We aim to keep you as comfortable as possible. Whilst you are on the ventilator and sedated you will be given continuous pain relief infusing into your neckline. If you still experience discomfort alternative pain relief can be administered.

Physiotherapy

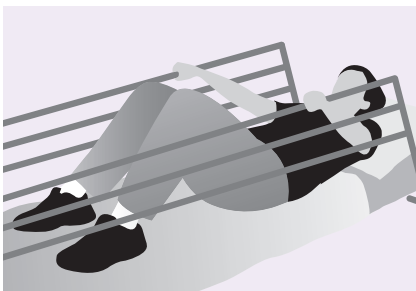
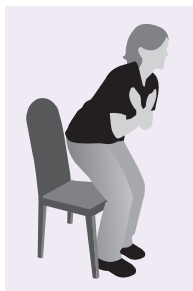
The physiotherapist will visit you early on in the recovery process in order to help you with your deep breathing, coughing and go through the breathing exercises that you were taught before the operation. This will help prevent any chest problems occurring and aid a speedy recovery. In the absence of the physiotherapist, you will be reminded to take 3 sets of 4 deep breaths at least every 30 minutes.

You will also be given a cough pad to support your wound which will make coughing and breathing less sore.

Always ask for tablets to control your pain if pain or discomfort is preventing you from breathing or coughing effectively.

For most heart operations, the breast bone is split into two which is called a sternotomy. This will take around 8 – 12 weeks to heal. It is wired up inside to hold it together and it is very important not to pull and push using your arms. This is so that your chest wound and breast bone can heal properly.

DO NOT use your arms to pull yourself up into a sitting position - ASK FOR HELP



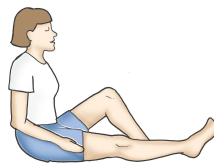
DO NOT push yourself up from the arms of the chair using your hands- instead support your chest using your support pad, rock forwards and back and push up with your legs.

It is important to become active as soon as possible after your operation. It is important to exercise your legs to improve circulation, to help avoid blood clots forming and to reduce swelling in the legs. If you have a leg wound, this will also help reduce the tightness and pain.

You will be sat up in the chair as soon as you are well enough to do so. If you are not able to do so, the nurses will help you sit upright in bed.

These exercises are designed to improve circulation and muscle strength.

- Pull your toes towards you and then point them down x10
- Make circles with your feet x5 to the left, x5 to your right
- Press your knees down into the bed if you are lying, or if you are sitting raise one foot at a time out in front of you.



Please do not sit with your legs or ankles crossed as this can restrict blood flow in your legs.

Personal Hygiene

Due to limited space in the intensive care unit you will only need these items for your stay with us:-

- Wash bag
- Shaving foam (male patients)
- Pyjamas / night gown and dressing gown
- Slippers
- Dentures
- Spectacles / hearing aid if applicable.

The nurse will arrange for your property to be taken to the CICU. All the rest of your property can be kept on the ward or taken home by your family.

Eating and Drinking

Once you are awake, you will be encouraged to drink water. When you are able to tolerate this, you will be able to eat and drink as your appetite improves.

How long will you stay on CICU?

Every patient is an individual and as a result everyone recovers at their own pace. Some patients spend as little as a few hours on the CICU, and then move to CHDU or the ward. Some patients recover more slowly and stay on the unit for longer periods.

Visiting - Please do not walk into the unit unattended!

CICU

Immediate members of the family and close friends are welcome to visit. There are no restricted visiting times as such, but we do ask that you restrict visiting until after the early morning doctors round. You will be asked to leave when certain procedures need to be carried out in the unit.

CHDU

Visiting hours in the CHDU are from 3.00 - 8.00pm. This allows the patients adequate rest time during their recovery.

On arrival at the CICU/HDU visitors are asked to ring the bell for assistance which is located at the reception desk.

Only 2 visitors are permitted at a time to each bed area.

Where to find us

CICU is situated in C block on level 3.

Ward C5

When you are well enough you will move to the ward.

Patients on the ward are either waiting for or recovering from their operation. The ward is divided into North and South, but is run as one area. There is no guarantee that you will be placed on the same side of the ward as you were before your operation.

The recovery process on the ward

As your body starts to recover from a major operation you will feel tired. You will need help for the first few days with showering and dressing, but you will soon become independent.

You should continue to do your breathing and coughing exercise whilst on ward C5 and you will also be expected to become more active. For this reason it is important for you to be as pain free as possible.

You will be offered regular tablets to control your pain and always ask for them if the pain or discomfort is preventing you from breathing, coughing or moving effectively.

As your breastbone is healing you must be careful not to put it under strain, and this includes the way you get out of bed and stand up from the chair. The physiotherapist will show you how best to move.

The **physiotherapist** plays a large part in your recovery after your operation. Please refer to the physiotherapy booklet for exercise and breathing advice.

Your wounds will depend upon the type of surgery that you have had but will all be checked once per day. If the wound is oozing, the dressing will be changed daily, as required.

If you have had a vein removed from your leg, you may need to wear **support stockings** to help with the blood flow and to help minimize swelling. These will be provided by the hospital and should be worn for 6 weeks after the operation.

The **Cardiac Rehabilitation Team** will visit you on the ward to discuss your recovery and what to expect during your first 6 weeks at home. Arrangements will be made to contact you at home in order to discuss your progress, and to refer you to your local cardiac rehabilitation centre.

Some of the tablets you take can contribute towards **constipation** so you will be encouraged to take laxatives to prevent this. It is important to let the nurse know if you are having difficulty in going to the toilet. Excessive strain is not recommended.

Your discharge home - what will be arranged

- **Tablets to take home** - you will be given a 1 week's supply of tablets to take home on the day of discharge. You will need to obtain a repeat prescription from your GP. You will be given an information card explaining why you are taking each tablet and this will also be explained to you by one of the nurses. Please do not hesitate to ask questions if you are unclear about your tablets.

- **INR clinic** - this will need to be arranged if you are being discharged home on Warfarin. Not all GP practices monitor INR levels in which case the ward will refer you to your local hospital. It would help the nursing staff if you found out from your GP before your admission to hospital as to assist with the discharge planning.
- **District Nurse** - if you require a dressing change, or stitches removed, then the district nurse visit will be arranged by the ward before you leave.
- **GP letter** - this letter will be given to you to take to your doctor's surgery. It gives a brief summary of your hospital stay and the type of operation that you had and also a list of the tablets that you are now taking. Try to take it as soon as possible to your GP as you will need to arrange a repeat prescription for your tablets. If you are staying at a different address to your own, then you will need to register as a temporary patient at a GP surgery for that address.
- **Out patients' appointments** - these will be made for you by the ward receptionist. There will be one to see the surgeon. If you do not receive it on discharge, then it will be posted on to you.
- **Sick note** - if required, this can be obtained from the ward receptionist.
- **Transport** - Please arrange your own transport home. You can safely ride in a car, but you are not exempt from wearing a seat belt.
- **Support services** - you will be asked in the preadmission clinic whether you will need social work / support services input for when you go home, and the ward staff will arrange this if required. Please do not hesitate to ask staff if you would like to be referred to the support services.

Before you leave, an opportunity will be given for you and your family to discuss the **advice sheet** with a nurse. We would also recommend that you and your family watch the video "Better than Before - Life After Heart Surgery", available on Patientline. Please ask the nursing staff for more details of this and other videos that are available.

Going home - what to expect?

Going home is the next step on the road to recovery following heart surgery. These guidelines have been written to anticipate most of the questions that are likely to crop up over the next few weeks. Remember these are guidelines. People recover at different speeds and it is very common to have good days and not so good days.

The anticipation of going home is often combined with apprehension about leaving the security of the hospital and you may find it takes a little while to settle down. There may be a feeling of anticlimax and your partner may feel that it is a traumatic time e.g. leaving you on your own for the first time. These are very natural feelings which will subside as you settle back home. Do not worry if you feel irritable or emotional at times, or experience mood swings in the initial stages. Some people also find that their concentration is not good to begin with. These are fairly common problems and will improve. Try to take one day at a time.

The aim of your operation is to improve your quality of life and get you fitter than before. As your strength returns, you will want to do more and should be encouraged to do so. Following the advice given to you by the ward staff, the physiotherapist and the Cardiac Rehabilitation will help you make a safe and timely recovery.

Pain

For most heart operations the breastbone is divided and therefore will take a number of weeks to heal properly. During this time (up to 8-12 weeks and in some cases longer) it is common to experience aches and pains in the chest, back and shoulders. A painkiller e.g. paracetamol should be taken to relieve this and is usually effective when taken as prescribed, 4 times a day. You should be able to cough and hold yourself tall without too much discomfort. Some people may also experience pins and needles in their fingers. If you have any concerns or need stronger painkillers, you need to consult your family doctor. You should be aware that some painkillers cause constipation. Remember to drink plenty of water and eat fresh fruit. If laxatives are required please discuss with the ward nurse before leaving hospital or your GP.

Lifting

As your breastbone is healing, you must be careful not to put it under undue strain. Avoid lifting, pushing or pulling heavy objects - more than 8 - 10 pounds for 6 weeks, also awkward reaching and straining. This includes for example, no ironing, Hoovering, or carrying shopping. Use both hands and turn to face whatever you are trying to move. Light activities are allowed e.g. washing up, light cooking etc. Everyday household activities e.g. plugging in a kettle lead may cause discomfort. Stick to light household tasks initially build things up gradually.

Rest

You will probably feel weak initially and tire quickly. Take care to build things up gradually with plenty of sleep, including an afternoon nap if needed. Try to get a balance between activity and rest. You may need to limit the number of visitors you have when you first go home.

Sleep

Your sleep pattern may be disturbed after the operation. Some people suffer from nightmares or hallucinations initially which can be as a result of the bypass machine and the anaesthetic used. These are unpleasant but should disappear within the first few weeks.

Exercise

This will be discussed with you by the physiotherapist before you leave hospital. Please refer to your physiotherapy booklet which provides a rough guide to an exercise programme. Exercise will help you and your heart get fitter if carried out carefully and sensibly.

Sexual Relationships

These may be resumed when you feel ready. You and/or your partner may feel apprehensive initially - this is perfectly normal. Try to choose a comfortable position to begin with that does not put too much pressure on your chest - a less active role is preferable - and do not be afraid to discuss your fears with your partner. Avoid intercourse soon after a heavy meal, and try to find a time when you feel rested and relaxed. If you encounter any difficulties in this area, it could possibly be connected with your tablets in a small number of cases. If in doubt consult your doctor.

Eyesight

It is very common to experience visual disturbances for the first 6 weeks after your operation. People wearing glasses may find that their vision is variable and their glasses do not seem to work as well as they did before. This is a temporary situation and it is therefore inadvisable to consider having your glasses changed in the first 4-6 weeks after surgery.

Hygiene

You are able to take a shower / bath (preferably a shower initially) once your wound is dry and healing. Try to avoid extremes of temperature and wash gently around the wound site.

Wounds

If you develop a temperature or notice any redness, tenderness or discharge around the wound site, contact your GP who will prescribe the appropriate treatment or refer you back to us if necessary.

If you have a **leg wound**, you may experience more discomfort from your leg than your chest. There may be a small area of numbness or pins and needles around your ankle which usually resolves with time. This is due to a division of nerves situated close to the vein in that area. You may also experience swelling of the foot and ankle of the affected leg. When you are not walking around, try to sit with your leg up at least level with your body, preferably higher. You are advised to wear the elastic stockings for 4-6 weeks to help reduce the swelling. They are not so important at night and may be washed out in the evening and reapplied the next day. If the swelling in your ankles persists, contact your doctor. Valve patients do not require the elastic stockings once home. The stockings are contra-indicated in people who suffer with claudication of the legs.

Anticoagulation therapy

Most people after valve surgery will need an anticoagulant e.g. warfarin either short or long term to prevent blood from clotting on the valve. People with a mechanical valve will need warfarin for the rest of their life. It is very important before you leave hospital to understand your warfarin, how long you need to take it, where and when you need to have your blood checked, and what the warfarin level should be. (You will be given a warfarin advice booklet which will be discussed with you before you leave hospital).

Infection (valves)

If you have a temperature or any sign of infection it is important to see a doctor and remind them that you have had a heart valve replaced. This is due to the small possibility of the infection being related to the valve.

Dentist

It is important for anyone with a valve surgery to have regular (at least 6 monthly) dental checks because of the possible risk of infection. Make sure your dentist knows you have had a heart valve replacement - Your surgeon would have advised you whether you need to have antibiotics before your dental treatment.

Work

Many people return to work after approximately 3 months. This will depend on your recovery after the operation and the nature of your job. In some cases it may be necessary to consider changing your job or retiring. Discuss the options with your family and your doctor.

Driving

Ordinary Licence

If you drive a car, moped or a motorcycle (group 1) and you have had routine heart surgery without complications the DVLA state that you must not drive for 1 month. You do not need to inform the DVLA and you should have your doctor's approval before starting to drive. Your insurance company may have different rules to the DVLA so let the company know that you've had heart surgery.

HGV Licence

If you have an HGV licence, speak to your hospital doctor and cardiac rehab nurse. You must contact the DVLA.

Flying

If you are planning a holiday abroad, check with your doctors as to when they are happy for you to fly. The cardiac rehab nurses have information on insurance, which they will give you when you attend the program.

If you have a pacemaker, report to someone at the airport to avoid the archway metal detectors as it may trigger off the alarms. The amount of metal contained in a heart valve or the stainless steel wires in your chest on their own will not trigger the alarms. However, these combined with other metal items you may be carrying may be enough to activate the alarm system. If in doubt, speak to an airport official before walking through the detector.

Stress

Try to avoid stress as much as possible. If you are the kind of person who becomes tense and anxious under the pressure of work or domestic life, you will put a strain on your heart. Try to avoid stressful situations and work at ways of helping you relax. Additional information is provided on page 28. Better organisation may help reduce the pressure on your time. Practice relaxation exercises to help you learn to relax. If this is a particular problem for you, ask to see the occupational therapist on the ward for a relaxation tape.

If your blood pressure was high before the operation, make sure someone at your doctors surgery keeps a regular check on it. You will probably need to stay on treatment for high blood pressure.

Smoking

People who continue to smoke after surgery for coronary artery disease are much more likely to experience a recurrence of angina and need a second operation. You can be referred to a smoking cessation nurse for help if needed. (For information on stopping, see ward staff).

Alcohol

Alcohol in moderation is permitted. The Health Education Council recommends a 2-3 units of alcohol per day for women and 3-4 units for men but you should not exceed 21 units per week for men and 14 units per week for women. Try to have a couple of days each week free from alcohol. However, large volumes of alcohol should not be taken with strong painkillers or if you are taking warfarin. For further information see *Alcofacts* - a guide to sensible drinking available from Health Challenge Wales.

Diet

If a particular diet has been advised, it is important to stick to it. If you are having any problems please ask your doctor or nurse to refer you to a Dietitian. In general, a healthy diet means trying to increase your fruit and vegetable intake, and reduce the amount of fat (particularly animal fat), sugar and salt. However, it is common to suffer a poor appetite following surgery and the Dietitian may discuss specific dietary recommendations with you as necessary at this time. Additional information on healthy eating is provided on page 30.

If you have had coronary artery bypass surgery, make sure you (and your family) have your cholesterol and triglyceride levels checked by your GP and repeated regularly if they are found to be high. You will be invited to a cardiovascular risk factor clinic after your bypass surgery for a fasting cholesterol test and to discuss other risk factors with a cardiac rehabilitation nurse.

There may be some food or drink that can affect the action of your tablets. Please read the small print on your tablets or ask your pharmacist for advice.

Rehabilitation

A cardiac rehab nurse will visit you on the ward with information regarding discharge and the follow up care you will receive. Patients who live outside the Cardiff area will be referred onto their local cardiac rehabilitation service.

Cardiff and Vale patients will be visited at home. Our aim is to provide you with the appropriate education, support and guidance to help you fully recover from your operation.

A Cardiac Rehabilitation programme is available across Cardiff and Vale with similar courses run from other hospitals throughout Wales. The course is available approximately six weeks after your operation and consists of a 2½ hour session twice a week for 6 weeks. The programme includes education, exercise and stress management/relaxation.

If you would like to contact a UHW rehabilitation nurse following discharge, you may do so on 029 20 743384. Alternatively, please feel free to contact the cardiac surgery advice line at any time.

Advice Line

If you have any more questions when you go home after your heart operation or wish to have a chat with a cardiac nurse, any time day or night, our 24 hour advice line is available on Cardiff 029 20745430. However, if you feel unwell you do need to contact your GP

All that remains is for us to wish you a speedy recovery and a new lease of life - following heart surgery!

Additional Information

Stress

Here are some of the possible stressful aspects of having a heart problem:

- Being in hospital and having medical tests and treatment
- Having operations postponed
- Having to make lifestyle changes such as stopping smoking or changing diet
- Having to learn about and to take new tablets
- Feeling at risk of further heart problems
- Troubling thoughts such as “why did this happen to me”
- The impact of heart problems on family and friends
- Family and friends being over protective
- Having to take time off work and then going back to work

The way we feel when we are stressed is caused by the three overlapping features:

1. The way we think about the situation (our thoughts and feelings). Do you focus on the negative aspects which then make you feel down about the situation?

2. The way we behave when we are faced with the situation (how we act when we are stressed). Do you bottle things up? Is your sleep affected by worrying thoughts? Are you irritable with family? Do you talk faster than normal?
3. The physical effects of stress (what happens in our bodies that indicate we are stressed). Are you tense, having headaches, feeling restless? Is your heart racing?

When there is a problem with the heart the physical effects of stress can be very confusing and can add to the fear that something is wrong with the heart. When we are stressed or threatened our bodies automatically produce chemicals to help us cope. One of the chemicals is called Adrenaline. It can make your heart race, your breathing faster, you may sweat, you may feel tense and have butterflies in your stomach. These symptoms will not harm you, but if they are not addressed they can build up to a point where they can be frightening.

The ABC of stress means:

- A** - Awareness that you are under stress
- B** - Balance
- C** - Control

Suggested Ways of Dealing with Stress

- **Talk it out** - share it with someone else.
- **Write it out** - it is easier to see it in perspective when it is on paper.
- **Shrug it off** - raise your shoulders then drop them and relax.
- **Breath it away** - breathe in and out heavily a few times - calm your thoughts.
- **Sort it out** - list practical options, weigh up for and against - then decide.
- **Delay it** - put aside 15 minutes for a worry session - leave it until then!

Suggested Attitudes to Stress

- **Laugh it off** - look for the funny side - there is one in most situations.
- **Distance it** - imagine a few years from now - how important will it be then?
- **Balance it** - look at the good side as well as the bad. Be positive.
- **Exaggerate it** - what is the worse thing that could happen? Is it likely?
- **Hold it** - pause and think - then take a fresh look. Is it really so bad?
- **Escape it** - try to find something to help you relax i.e. music, a hobby, pets.

If you would like details of relaxation exercise please ask the nursing staff who will contact the occupational therapist.

General Guide to Healthy Eating

The cardiac menus try to follow healthy heart guidelines by offering more fish & chicken, less fatty produce and more fruits and vegetables. If you are overweight, any weight loss is beneficial by a combination of diet and exercise as advised by your doctor and dietitian. Think “healthy eating” not “going on a diet”. Enjoy your food.

General Guidelines

1. Eat plenty of foods high in fibre e.g. wholemeal / granary bread, pulses, fruit and vegetables. Aim to eat 5 portions of fruit and vegetables a day.
2. Eat less red meat and more lean poultry and fish. Remove all visible fat / skin from meat.
3. Oily fish e.g. sardines, salmon, are rich in omega 3 fat which is good for the heart. Aim to eat 2 or more large portions (200-400g) a week.
4. Use margarine high in mono-unsaturated fat for spreading and baking e.g. olive oil based spread. Try a mono-unsaturated oil in cooking e.g. olive or rapeseed oil.

5. Aim to eat less than quarter of a pound / 100g cheese a week. Try 'half fat' or low fat cheeses. Limit eggs to one a day.
6. Reduce the amount of salt and sugar in the diet.
7. Aim to drink 8-10 cups of fluid a day.
8. Keep an eye on food labels, looking for products containing 'a little' sugar, fat and salt and 'a lot' of fibre.

Guide to Food Labeling

A Lot	A Little
10g of sugars	2g of sugars
20g of fat	3g of fat
5g of saturates	1g of saturates
3g of fibre	0.5g of fibre
1.5g of salt	0.3g of salt
0.6g of sodium	0.1g of sodium

If you have any specific questions about your diet, cholesterol or triglyceride levels please ask your Doctor or Nurse to refer you to a Dietitian.

If you are trying to lose weight. . .

- 1.** Try to eat three regular, balanced meals a day.
- 2.** Eat more high fibre foods e.g. fruit, vegetables, wholegrains. Choose fruit as a snack between meals rather than biscuits or crisps or rather than a pudding after a meal.
- 3.** Cut down on fried and fatty foods such as sausages, fried chips, hard cheese, chocolate and pastries. Use skimmed or semi skimmed milk.
- 4.** Try to avoid frying food and choose healthier cooking methods such as grilling, steaming or poaching.
- 5.** Reduce sugar intake. Artificial sweeteners can be used as an alternative if needed.
- 6.** Cut down on alcoholic drinks. Men should have no more than 3-4 units / day and women 2-3 units / day and include alcohol free days. Alcoholic drinks contain a lot of calories which can make it hard to lose weight.

If you would like help losing weight please ask your Doctor or nurse to refer you to a Dietitian.

[illegible]

Risk Factor Reduction/Goals

[illegible]

[illegible]

