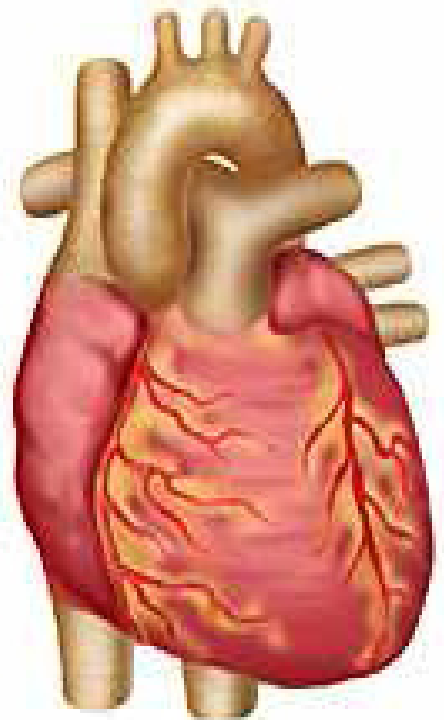




ST JOHN OF GOD

Subiaco Hospital

Your Cardiac Surgery



The purpose of this booklet is to give you and your family a basic understanding of your Cardiac Surgery. Thank you for taking the time to read and learn about your surgery.

Please ask the staff any questions that you may have.

Remember to bring this booklet into hospital with you so you can use this as a guide during your recovery period.

The information presented in this booklet is a guide only and is not intended to be a substitute for the advice given by your doctor.

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Chief Executive Officer  
St John of God Subiaco Hospital

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Last updated September 2012

St John of God Health Care is a  
leading provider of Catholic hospitals,  
diagnostic and outreach services,  
basing its care on the values of  
Hospitality, Compassion, Respect,  
Justice and Excellence.



## Important information about your cardiac surgery

Your surgeon is: \_\_\_\_\_

Your date of surgery is: \_\_\_\_\_

Your anaesthetist is: \_\_\_\_\_

Ask your doctor if you need to stop the following medications:

- Anticoagulants (e.g. Warfarin, Clopidogrel (Plavix), Aspirin, Prasogrel, Dabigatran) \_\_\_\_\_
- Anti-inflammatory tablets (e.g. Naprosyn, Celebrex, Voltaren) \_\_\_\_\_
- Hormone replacement therapy \_\_\_\_\_
- Other / natural remedies \_\_\_\_\_

You must fast from the following at:

- Food \_\_\_\_\_
- Water \_\_\_\_\_

Your PreAdmission Clinic appointment is: \_\_\_\_\_

You must come into hospital (main reception) at the following time: \_\_\_\_\_

Please remember to bring the following into hospital

- Toiletry bag
- Loose clothing to wear home
- Current medications in their boxes
- Scans and X-rays

Your expected date of discharge will be: \_\_\_\_\_

Please ensure that your family / friend is aware of the expected discharge date and time. Time of discharge is 10am.

Your follow-up appointment is on: \_\_\_\_\_



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## Introduction

This booklet is designed to provide you and your family with a basic overview to provide you with a clearer understanding of the procedure when you come into hospital for your surgery. Your doctor should have discussed with you the details of your surgery and if you have any concerns relating to this surgery, it is advisable that you discuss these with your surgeon or anaesthetist.

## The Heart

The heart is the organ responsible for pumping blood through the lungs and body, and is located in the chest cavity behind the breast bone, known as the sternum. (Fig.1)

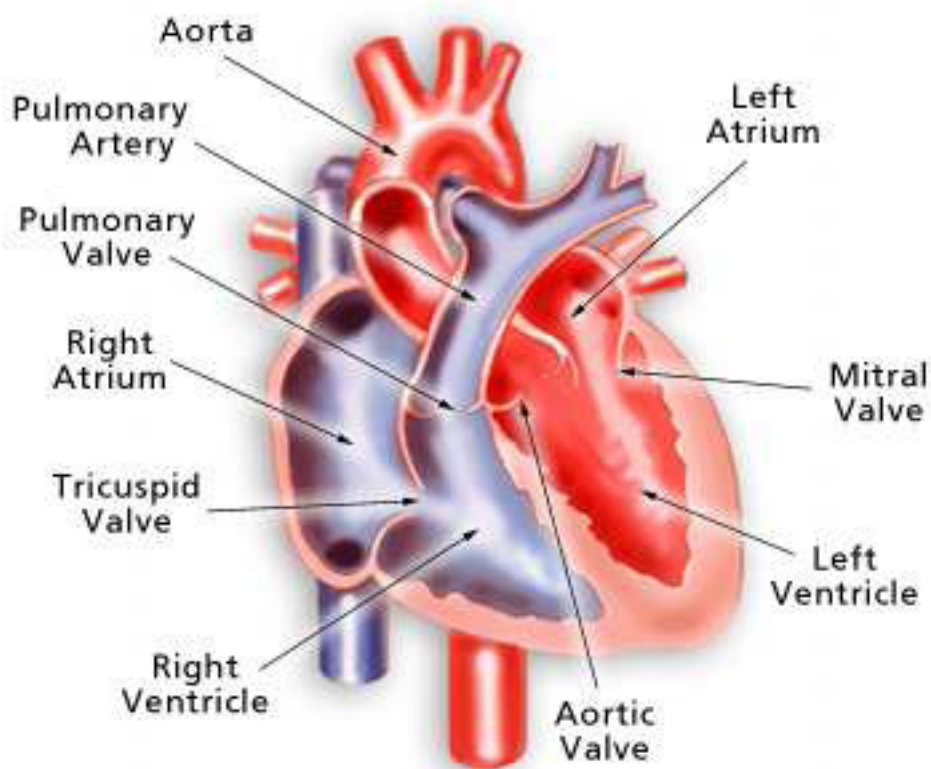


Figure.1



## Coronary Artery Disease (CAD)

There are several coronary arteries which deliver oxygen and nutrients to the heart's own tissue. These coronary arteries can become blocked by a build up of cholesterol fats, often referred to as "plaque". Plaque deposits can make the arteries stiff and irregular. This is called atherosclerosis or "hardening of the arteries". There can be a single blockage or multiple blockages, and they can vary in severity and location. (Fig. 2)

Any narrowing, or blockage, of the coronary arteries reduces the blood supply to the heart tissue, therefore reducing the amount of oxygen and nutrients delivered. This inhibits the normal function of the heart muscle.

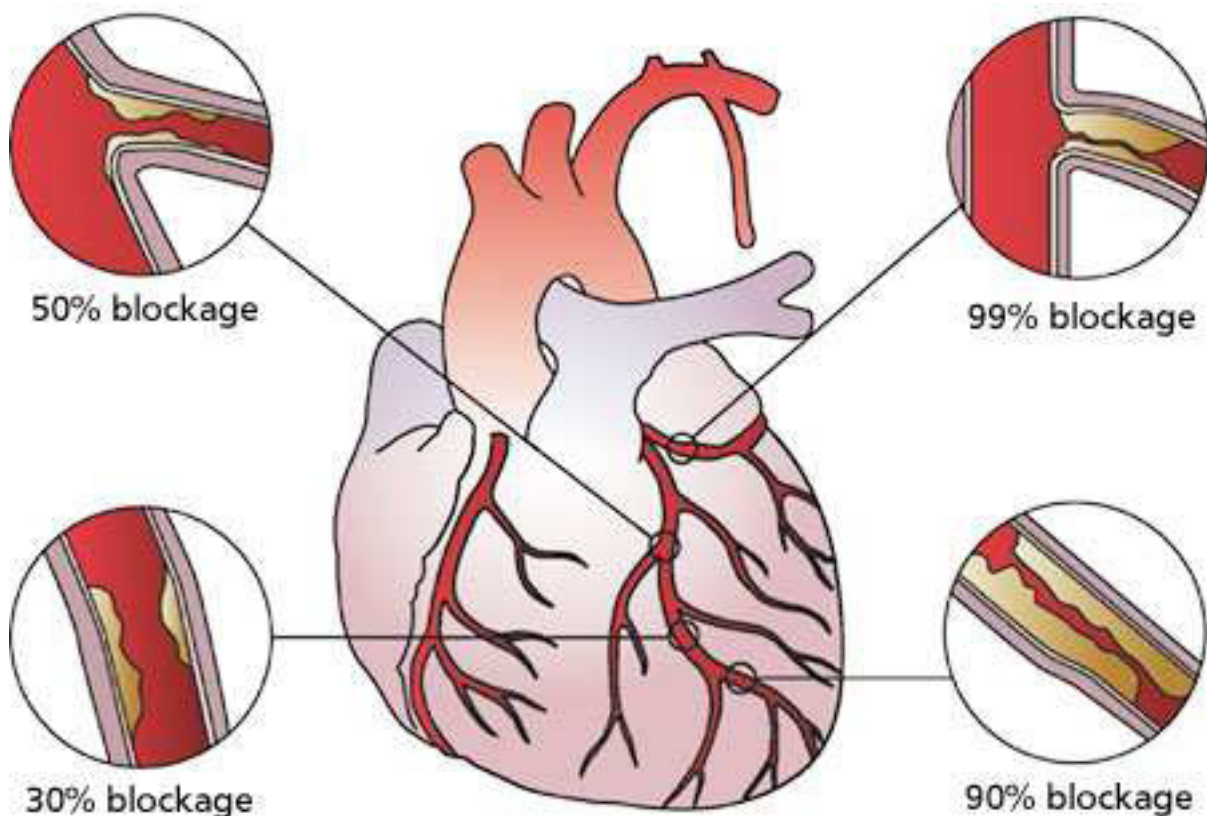
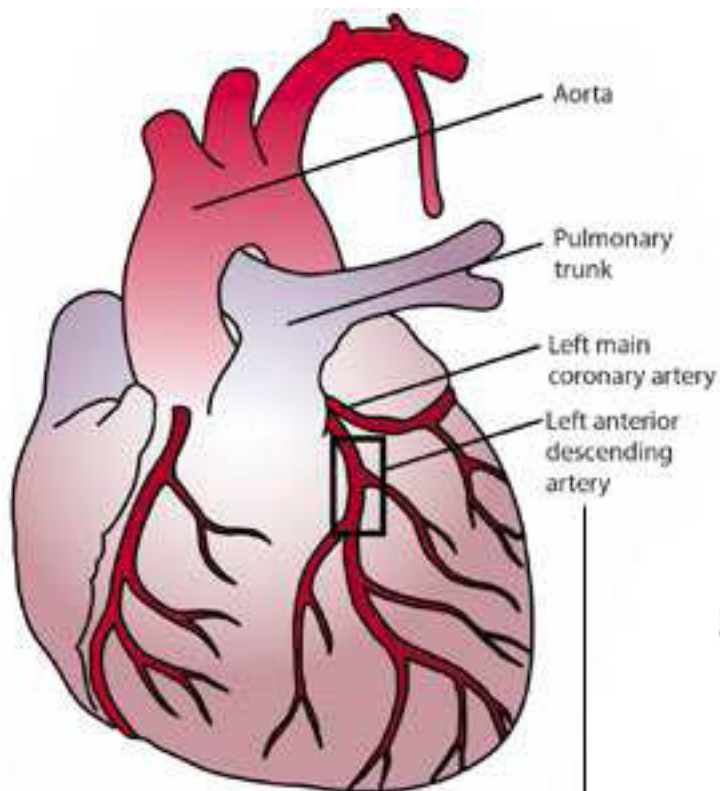


Figure.2

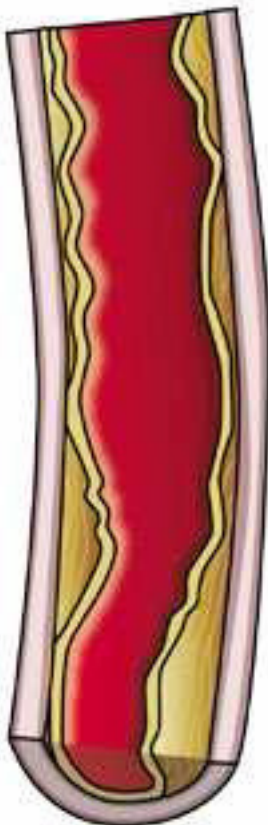


**Anterior view  
of the heart**

**Enlarged section of left anterior descending artery**

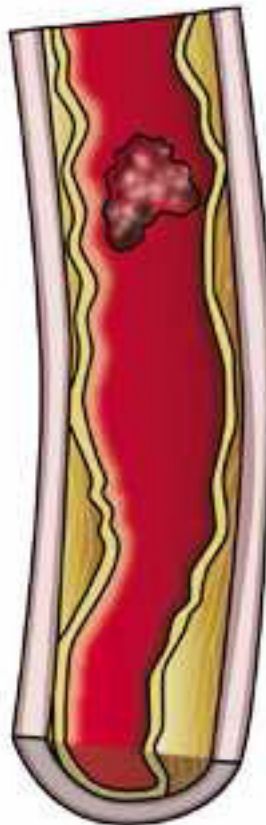
**Initial Condition**

Patchy areas of atherosclerotic plaque compromising the lumen as much as 30%.



**Thrombosis**

Passage of large thrombus through vessel within the blood stream.



**Subsequent Condition**

Thrombus lodged within the vessel and completely occluding blood flow.



Figure. 3

## Valves of the Heart

The diagram below (Fig. 4) illustrates the four valves of the heart and where they are located within the heart. The heart valves in reality are not in this simplified orientation, but the diagram serves to show the valves and their relationship to each other.

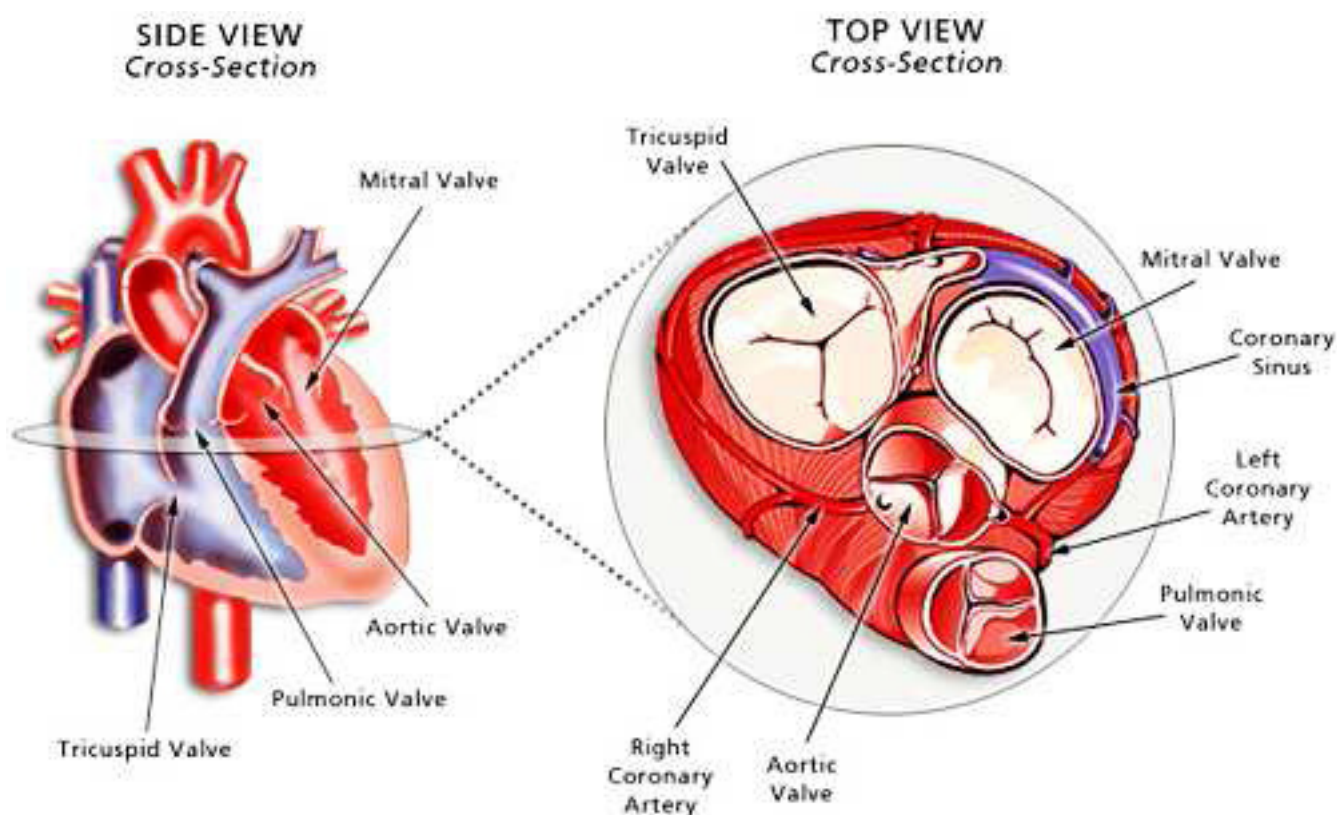


Figure. 4

The valves of the heart are located within the chambers of the heart and are critical to the proper flow of blood through the heart. All of the valves, when functioning normally, act as one-way valves, allowing blood to flow either from one chamber to another, or allowing blood to flow out of the heart, in only one direction. The valves control the flow of blood through the heart by opening and closing during the contractions of the heart.

The four valves are known as:

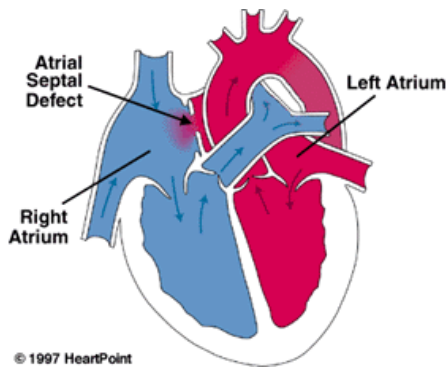
1. The tricuspid valve
2. The pulmonary valve
3. The mitral valve
4. The aortic valve

Diseases of the valves can occur for a variety of reasons. Some people are also born with abnormalities or may acquire damage from infection or other diseases.

## Atrial Septal Defect

Atrial septal defect (ASD) is a form of congenital heart defect that enables blood flow between the left and right atria via the interatrial septum. The inter-atrial septum is the tissue that divides the right and left atria. Without this septum, or if there is a defect in this septum, it is possible for blood to travel from the left side of the heart to the right side of the heart, or vice versa.

This results in the mixing of arterial and venous blood, which may or may not be clinically significant.

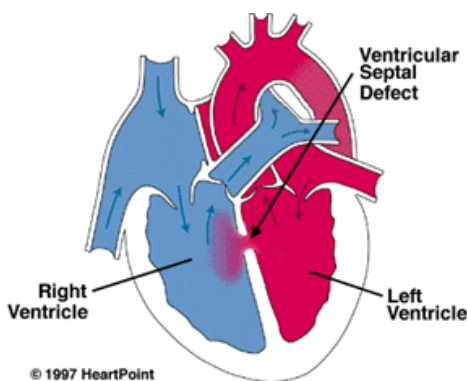


## Ventricular Septal Defect

A ventricular septal defect (VSD) is a defect in the ventricular septum, which is the wall dividing the left and right ventricles of the heart.

A ventricular septal defect allows oxygen-rich (red) blood to pass from the left ventricle, through the opening in the septum, and then mix with oxygen-poor (blue) blood in the right ventricle.

It is the most common congenital cardiac anomaly and is also the type that will most commonly require surgical intervention





## Types of Surgery

### Coronary Artery Grafting

Coronary Artery Grafting (CAG), or bypass surgery, is a surgical operation in which the surgeon uses a section of vein, usually from the leg, or an artery of the chest wall or forearm, to create a new route for oxygen-rich blood to reach the heart muscle.

The most commonly used vessels are the internal mammary arteries, which are inside the chest wall, or the greater saphenous veins, which are in the leg. The Radial artery in the arm may also be used as a graft.

These vessels are "spares". Removing them does not affect you.

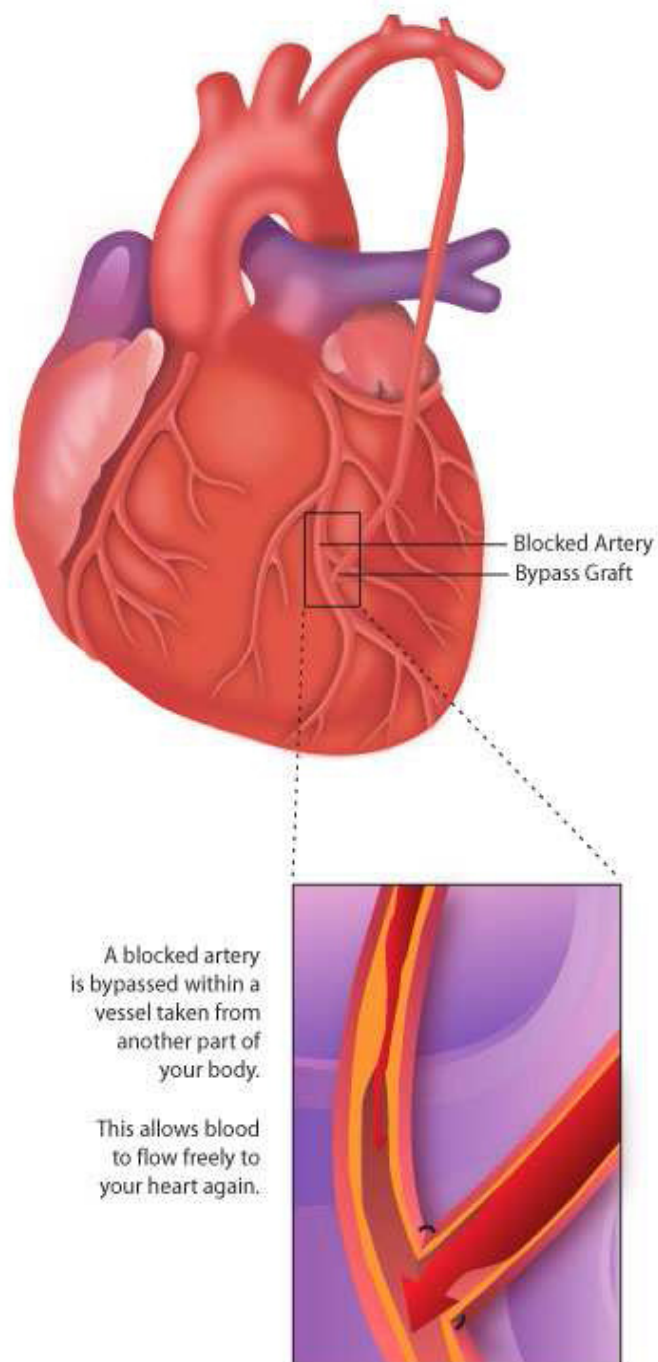


Figure. 5

## Procedure

One end of the vein or artery is connected to the coronary artery that is blocked or narrowed beyond the blockage or narrowed area.

The other end of the vein is connected to the aorta. Usually the other end of the artery is left connected to the main artery from which it branches. By creating this new conduit for blood flow to the heart muscle, the graft is said to "bypass" the narrowed or blocked section of the coronary artery in question.

Depending on the number and location of blockages, between one and seven bypasses are performed. (Fig.5)

A patient who undergoes CAG surgery usually stays in the Intensive Care Unit (ICU) for approximately 2 days, with a total hospital stay of 5-10 days.

## Heart Valve Surgery

During heart valve surgery, one or more valves are repaired or replaced. Repair means that the valve is mended to help it work better. Replacement means the diseased valve is removed and a new valve is inserted in its place. Your surgeon will talk with you about his or her plans for surgery and any other procedures you may need.

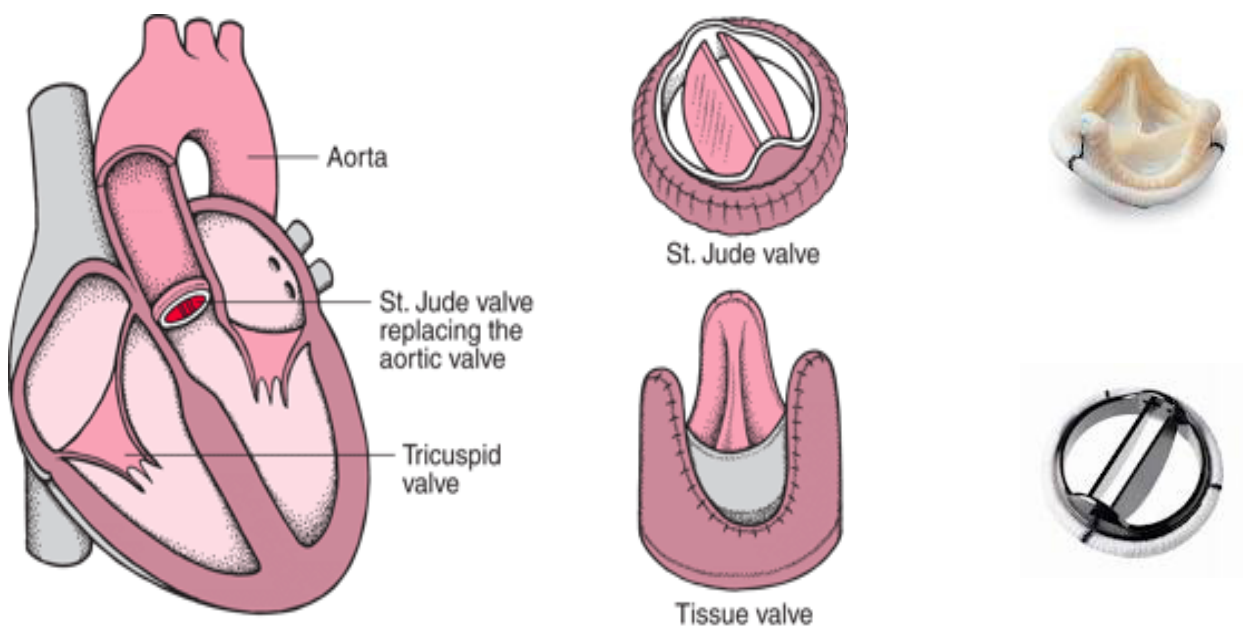


Figure. 6

## Repairing a Valve

During valve repair, a ring may be sewn around the opening of the valve to tighten it. Other parts of the valve may be cut, shortened, separated, or made stronger to help the valve open and close efficiently.

## Replacing a Valve

If a valve can't be repaired, it may be replaced with a prosthetic valve. Two kinds of prosthetic heart valves are available:

Mechanical valves are created from man-made materials. Lifetime therapy with an anticoagulant (sometimes called a "blood thinner") is needed when these types of valves are used. This medication prevents blood clots from forming on or around the valve.

Biological (tissue) valves are taken from pig, cow, or human donors. These valves don't last as long as mechanical valves. But when tissue valves are used, long-term use of an anticoagulant often isn't needed. (Fig. 6)

Your doctor will talk with you about choosing the best valve for you. This depends on factors such as your age, your occupation, the size of your valve, how well your heart is working, your heart's rhythm, your ability to take an anticoagulant, and how many new valves you need.

## Minimally Invasive Mitral Valve Repair

Minimally invasive heart valve surgery replaces or repairs heart valves using smaller incisions.

This means that you have a shorter hospital stay, less blood loss and pain and a faster recovery time. Your risk of infection is also reduced.

Your surgeon makes an incision 5-8 cm on the right side of your chest.

You will also have several small incisions, less than 1 cm, for which your surgeon will use to insert the camera and instruments to perform the operation.

It will take approximately 4-6 weeks for your wound to heal.

## Atrial or Ventricular Septal Defect Repair Surgery

### ASD Repair Surgery and VSD Repair Surgery

The surgical treatment for Atrial or Ventricular septal defects is open-heart surgery.

The heart is stopped and opened, and the hole is closed with a patch made of a synthetic material like Dacron or a patch of pericardium. The septum can also be closed using stitches.

## Preadmission Clinic

Before your operation the hospital will contact you and make an appointment for you to attend the Preadmission Clinic where you will be interviewed by one of the Preadmission nurses. The aim of this is to ensure you are prepared for your hospital admission and you will also be asked questions relating to your medical history, allergies, diet and medication. It is also an opportunity for you and your family to visit the intensive care unit and ward if you so wish to do so.

You will visit with the Cardiac Educator after your preadmission interview and they will go over in detail what to expect while you are in hospital for your heart surgery. They will be able to answer any questions you might have about the surgery and your hospital stay. If you have any concerns about managing at home following your operation please discuss this with the nurse.

The following is required for your Preadmission appointment.

- A list of your current medications
- Details of any previous surgery or existing medical conditions
- All forms, letters and requests from your doctor or anaesthetist
- Any questions you may have in relation to your hospital stay

Your doctor may have requested certain tests in preparation for your surgery. These tests may be organised at the time of your Preadmission interview. It may also be necessary to order special compression stockings to prevent complications of blood clots. If your surgeon has requested this, these stockings can be measured and ordered through the hospital.

The hospital also has pastoral care and interpreter services at no charge, available for patients. Please inform the Preadmission nurse, during your interview if you would like to avail of these services. If you have any other questions about your Preadmission appointment or your admission, please ring 9282 6097.

## Please notify your doctor if you have

- any infection
- any fever or high temperature
- scratches or cuts on your skin
- urinary infection
- recent dental work
- any cough, cold or flu symptoms

It is possible that these may affect your surgery. If you are a smoker, we suggest that you try to stop or cut down prior to your surgery.

If you need assistance to achieve this, contact the "Quit Line" on 13 13 48 or the National Heart Foundation on 9388 3343 ([www.heartfoundation.com.au](http://www.heartfoundation.com.au)) or speak to your Clinical Pharmacist about nicotine replacement therapy whilst you are in hospital. Please note that St John of God Subiaco Hospital is a smoke free environment.



## Pre-operative Physiotherapy

You will be seen by the physiotherapist prior to your surgery and they will provide education on what is required to facilitate your recovery as smoothly as possible. They will also see you daily while you are in hospital.

The physiotherapist will explain the importance of coughing to you and show you how to perform the deep breathing exercises correctly.

### Breathing exercises

Breathing exercises are very important to prevent chest complications after surgery such as chest infection or lung collapse.

If you practice deep breathing exercises before the operation, it will be easier for you to do these afterwards.

### Support coughing

After your operation it is important to cough to clear any sputum. The chest wound is supported by holding a pillow or rolled up towel firmly against the chest and leaning slightly forward.

## What to bring into Hospital

- Medicare and Private Health care details
- Medications you are currently taking - please bring them in the original box or foil container
- Please bring any cards into hospital with you; that allow you to have subsidised medication ... e.g: Pension card, Veteran Affairs card or a Safety net card.
- All relevant x-rays/scans/angiogram CD (please check with your doctor)
- All forms, letters and requests from your doctor and/or anaesthetist.
- A small amount of change for newspapers/magazines.
- Nightie/pyjamas, dressing gown (not too long) and slippers.
- Toiletries including toothbrush, tissues, soap and shampoo.
- Glasses, dentures and hearing aids.

NOTE: Please do not bring any valuables or large amounts of money into hospital. Whilst all care is taken, we cannot be responsible for your belongings.

The type of hospital accommodation offered depends upon the type of care needed, your preference and its availability.

During your stay, a room change may be necessary as your needs change. Please discuss your preferences with us and we will make every effort to satisfy your accommodation requests throughout your stay.

Please notify us if you do not wish to receive visitors or phone calls during your hospitalisation.

## Patient Medication Information

The Pharmacy Department at St John of God Subiaco Hospital, which is owned by the hospital, employs suitably qualified pharmacists to assist you to manage your medications during your admission to hospital and then when you are discharged home again.

There may be some of your medications that need to be stopped before your operation. You will need to check with your surgeon or anaesthetist before stopping any of your medications.

At Preadmission, the nurses will need to know the details of your current prescription and non-prescription medications including the name of the drug, the form, the strength, the dose and frequency you are taking them. The nurses will also need to know of any previous drug allergies or reactions you may have had in the past.

Please ensure that you bring all your original packets of medications into hospital so we can accurately identify your current medicines. If you use a medication delivery system such as a dosette box or a Webster pack, the delivery device may not be appropriate for hospital use. The Pharmacy Department in the hospital, will only dispense medications that are new or when you have completely run out of stock. You will be charged at the same rate as you would be in the community.

Clinical Pharmacists are available to you at no extra cost and will visit you each day while you are in hospital. They will ensure you are using your medication in a safe and effective manner and can provide assistance with any medication related enquiry you may have.

When you are discharged home, your Clinical Pharmacist can prepare a list of your current medications for you; provide information to you about your medications and arrange supply of medications including Webster packs from your community pharmacy if needed. Once at home, if you have any queries regarding your medications, please contact the Pharmacy Department at St John of God Subiaco Hospital, on 9382 6324.

## The night before surgery

You will see your anaesthetist before your operation where he will discuss the type of anaesthetic and pain relief you will have..

Continue to take your normal medications unless your surgeon or anaesthetist has advised otherwise. If you are taking WARFARIN, PLAVIX, DABIGATRAN, PRASUGRAL, ASPRIN (or any anti-coagulation medication) or any anti-inflammatory medication, please check with your surgeon or anaesthetist if and when you should stop taking these.

If you take diabetic medications, please ask the anaesthetist what to take the morning of the operation.

You will be required to stop eating and drinking before your surgery. Some patients are allowed water for up to 4 hours before the operation (please check with your surgeon or anaesthetist regarding these times). Please ensure that you are not wearing lipstick, perfume, nail polish or makeup. All jewellery MUST be removed

To prepare your skin for surgery, you will need a shower using antiseptic soap on the evening before and morning of your surgery. The hair on your chest, legs and arms will be clipped by a nurse.

## Day of surgery

You will be required to shower again with antiseptic soap. Do not apply any deodorant, talc or cosmetics. You will be given a gown to wear after showering and paper pants, along with a paper cap for theatre.

You will be required to stop eating and drinking before your surgery. This will depend on the time of your operation and also the instructions from your surgeon or anaesthetist. While you are fasting you will receive nothing by mouth except for your prescribed medications and a small amount of water. You will be given a premedication (normally a tablet) and after this is given you must remain in bed as it will make you feel drowsy. Shortly after this you will be given an injection (if prescribed by the anaesthetist) and an oxygen mask will be applied to your face. You will also be attached to a cardiac monitoring device.

If you need anything while you are waiting, please ring your call bell for assistance, to prevent any risk of falling following your premedication.

You will be transported straight to theatre and taken to the anaesthetic room where the anaesthetist will insert an intravenous line and give you the medication to help you relax and fall asleep. Following this you will have no memory of events until you wake up in the Intensive Care Unit.

Family members and friends may arrive before the operation and stay with you up until the time you are taken to surgery. Give all valuables to your family to take home with them, because you will not return to the same room after your surgery.

You will need to pack your belongings (eg: toiletries; medications) and the nurse will send them to ICU.

## After Surgery

Following surgery you will be transferred to the Intensive Care Unit (ICU) and you will have various lines that the anaesthetist will have inserted while you are asleep. These lines will be attached to equipment that will be delivering your medications to you. You will also be attached to a heart monitor.

Because the ICU is a busy place, you can expect bright lights and a great deal of activity during the day and night. Staff will, however, try to ensure that you get as much rest as possible.

Many of the sounds you will hear are made by monitors and different types of equipment. Your medications, including those for pain control, will be given through intravenous (IV) lines at controlled rates using pumps.

## Breathing tube

After your surgery a tube will be in your mouth which is attached to a ventilator to assist with your breathing immediately post operative and until the team are happy with your progress.

This tube passes down your throat and into your windpipe. You will not be able to talk while you have this tube in. You will also have continuous sedation through your intravenous line to keep you comfortable while this is in place. This tube will be removed when the effects of the anaesthetic have worn off and you are able to breathe adequately by yourself.

The secretions normally cleared by coughing will be removed by the nurse using a small suction catheter. This is uncomfortable but only lasts a few seconds. After the tube is removed an oxygen mask will be used until it is no longer necessary.

Soon after your breathing tube is removed, you should begin using your incentive spirometer. This is a small device to help expand your lungs and the physio/nurse will show you how to use it.

The physio will also give you other breathing and coughing exercises to perform. You should continue these exercises every hour while you are awake. This helps to prevent a post operative chest infection.

Often patients report having a hoarse or sore throat after removal of the tube, but this will subside.

## Heart Monitor

Wires and sticky dots will be placed on your skin and attached to a cardiac monitor so that your heart rate and rhythm can be monitored constantly. Once you are on the ward this will continue to be monitored by a small portable telemetry box that transmits via radio waves to a central monitor. This allows you to be mobile within the ward area.

## Pacing Wires

Often small wires are taped to your chest called pacing wires. These are attached to a pacemaker box if needed to regulate or support your heart rate.

The wires are usually removed 3-5 days post operatively.

It is expected that you will spend 2 nights in ICU and after this you will be transferred to the ward.

## Intravenous Lines

Initially you will have intravenous lines in your upper chest, possibly the neck and both arms. These allow staff to give you fluids and medications that are necessary for your recovery and also to record your blood pressure and obtain blood samples.

Most of these lines will be removed before you leave the Intensive Care Unit.

## Naso-Gastric Tube

This tube is placed in your nose and passes down into your stomach to keep it empty.

Once the breathing tube is removed and your stomach is ready for fluids, it will be removed. This usually takes place the day after your operation.

## Drainage Tubes

Drainage tubes will come from your upper abdomen/chest to help drain off the fluid that normally accumulates after the operation.

They are usually removed on the first or second day after your operation.

## Urinary Catheter

A tube (urinary catheter) will be inserted into the bladder through the urethra to drain urine and allow the staff to monitor your output during and after the operation.

Although the catheter may be draining effectively, sometimes patients get the sensation that they need to pass urine. This is a normal sensation.

The catheter will generally be removed prior to your transfer to the ward.

## Emotional Wellbeing

There may be times post operative that you have feelings of apprehension and fear.

This is quite normal and don't hesitate to speak to your nurse about this. If you are feeling tired and do not want to receive visitors or need to restrict them, please also speak to your nurse.

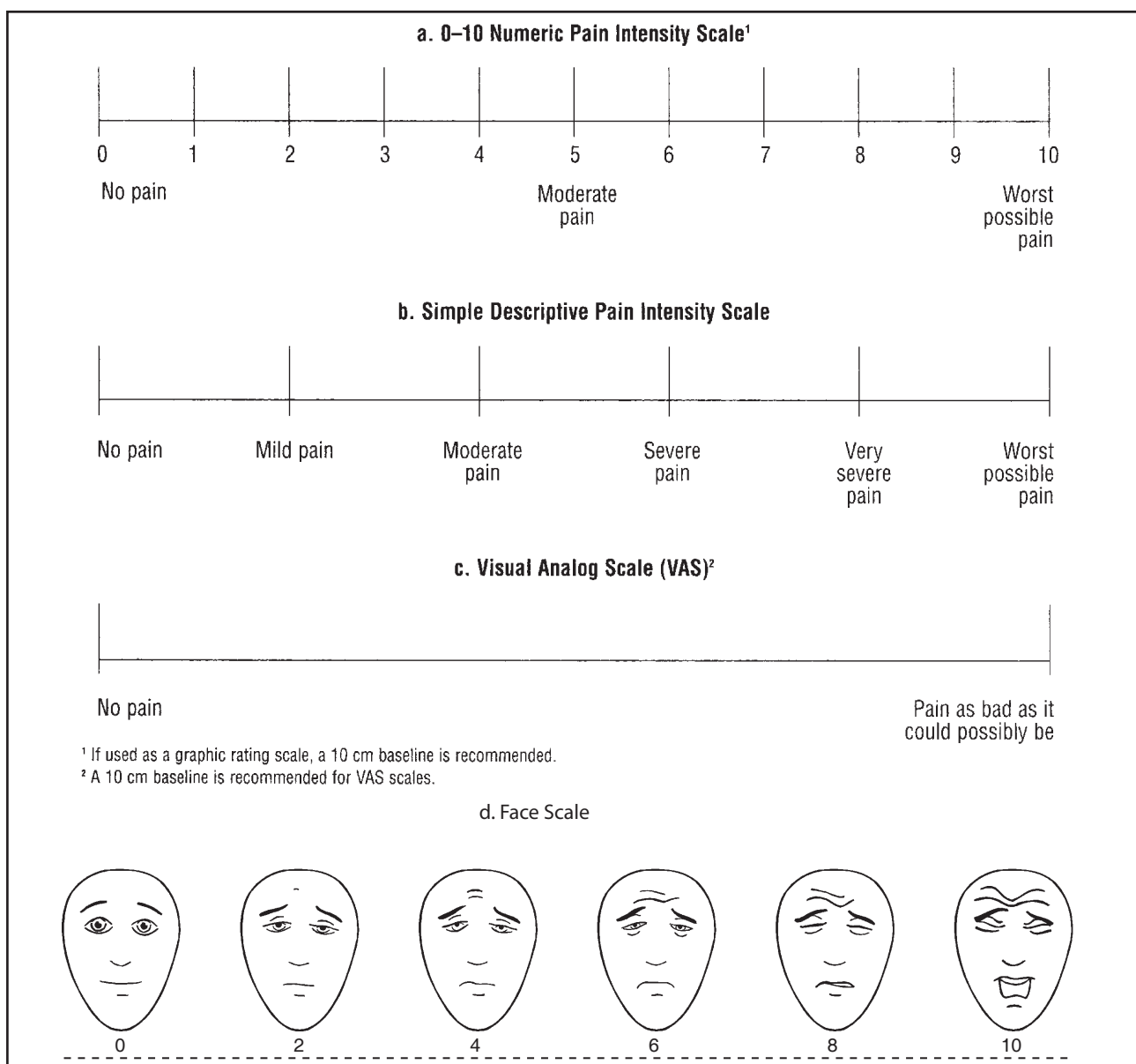
Rest is an important part of your recovery

## Pain Management

Controlling Pain: A Guide for Patients is a St John of God Subiaco Hospital pamphlet available for your information. Please ask for a copy.

Although all patients are concerned about the pain they will experience, pain after surgery is not as severe as most patients anticipate. To control your pain, you will be given medication that is injected, given orally or by suppository. While you are in the ICU, pain medications will be given to you as ordered by the doctor. While doses are calculated to keep you as comfortable as possible, if the medications affect your breathing and/or blood pressure, your physician may decrease the amount of pain medications given to you.

As everyone experiences pain differently it is necessary for you to let us know where and how bad your pain is. You will be asked to rate your pain on a scale of 0-10 (refer figure 7) both at rest and on deep breathing, coughing and movement. This will help us assess your needs and give you the appropriate medicines to control the pain.



Pain Scale (Figure 7)

a-c: Pain Assessment and Management: An Organisational Approach. (2000)  
d: Paediatric Pain Sourcebook (2007)

Effective pain control is very important for your recovery and to allow you to carry out your necessary physiotherapy to get you back on your feet.

Pain relief medication will be ordered by your surgeon or anaesthetist and should be taken until the discomfort of the operation begins to decrease. A combination of different medications is often needed to achieve this. If the pain medication gives you any unpleasant side effects such as nausea, vomiting or itching, please inform your nurse so that we can treat this. Advice on your pain medication is available from your surgeon, anaesthetist, nurse and pharmacist.

## Wound Care

You will have a suture line on your chest and possibly arm/leg. This depends on the type of surgery you have had and in the case of Coronary Artery Grafts, the suture line will depend on where the surgeon has removed the vein to use as a graft. The nurses will look after this while you are in hospital and advise you accordingly.

## Eating and drinking

An important part of healing is eating healthy foods. After surgery, you may have poor appetite and food may taste different. If this happens, try to eat smaller, more frequent meals and choose cold foods. If you have trouble eating or choosing what food to eat, ask to speak to one of our dietitians for advice.

## Elimination

It is important that you have your bowels open before the operation.

Constipation is not unusual post operative and is a side effect of most pain medications. Lack of movement is also a contributing factor. A high fibre diet or mild laxative will usually be effective. The nurse will be asking you if you have had your bowels open and will take action as necessary to ensure this is avoided as much as possible and that you are comfortable.

## Pressure Care

After your surgery, your mobility in bed is greatly reduced. As such, you have an increased risk of developing a pressure ulcer. A Pressure Ulcer is an area of skin that has been damaged due to unrelieved pressure.

Anyone who is confined to bed, unable to move, has loss of feeling or poor nutrition is at risk of developing a pressure ulcer. Prolonged pressure to a bony area (e.g: hips, coccyx, heels or elbow) is the most common cause of pressure ulcers.

The most important thing for you to do after your surgery, to relieve any pressure you may have is by keeping active and by frequently changing your position when you are lying or sitting. You may require the use of special equipment such as cushions, heel elevators or air mattresses; while you are in hospital to reduce pressure in particular areas.

Let your nurse know if you have any red or sore areas; broken or blistered skin or if you have had a pressure ulcer in the past. Eating a well balanced diet will also help to provide necessary vitamins and nutrients after your surgery to promote healing and keep your skin healthy

## Falls Risk

At St John of God Hospital, Subiaco, we are committed to your safety and reducing your risk of falling.

After your surgery your risk of falling is increased due to reduced mobility, effects of anaesthetic, strong pain medication and unfamiliar surroundings. There are several things you can do to reduce your risk of falling.

Please bring in to hospital any equipment you would normally use, such as glasses, hearing aids and non slip footwear. Also remember any mobility aids such as walking sticks or frames, crutches or a wheelchair.

It is important for you to use your call bell when you require assistance, especially when getting out of bed for the first time (or within the first 24 hours of your operation) and make sure it is within easy reach. Please wait for the nursing staff to assist you.

Make sure you take your time when getting up after sitting or lying down. When walking; ensure you wear non-slip footwear at all times.

## Mobility and activity

At St John of God Subiaco Hospital, we are committed to the safety of our patients and our caregivers. Therefore we support a "minimal lift" approach to assisting with patient mobility.

If a patient needs assistance to move within their bed, a slide sheet will be used. This is a polyester sheet that ensures a safer, more comfortable move for patients and caregivers.

While lying in bed, moving and changing position will help improve blood flow in your legs and loosen secretions in your lungs.

This allows you to be able to cough and clear your chest easier. You can move your feet, wiggle your toes and point your toes up toward your head and then down toward the foot of the bed.

Your nurse will help you change positions by turning you from one side to another, while you are in the ICU. You will not harm your breast bone by lying on your side.

The first 24-36 hours in ICU you will spend mainly in bed but as you get better you may be sat out of bed for short periods. You should be able to increase your activity once you are relocated to the ward area.

Begin by sitting in a chair and slowly increase your activity until you are taking several walks a day. The physiotherapist will also visit daily and advise on a regime for you.



## Exercises after the operation

These exercises help to remove the secretions produced from the lung lining after a general anaesthetic and which, if left in the lungs, can lead to pneumonia.

### 1. Deep Breathing Exercises

Take 5 deep breaths into your tummy every hour and then huff and cough to clear any phlegm from your lungs.

Use your incentive spirometer and take 5 breaths every hour

Demonstrate gentle chest and shoulder stretches

### 2. Leg Exercises

The following exercises increase the blood circulation and assist in preventing clots forming in the legs and chest.

Leg exercises keep the leg muscles strong and prepare your operated leg for controlled walking.

#### (a) Ankle Exercises

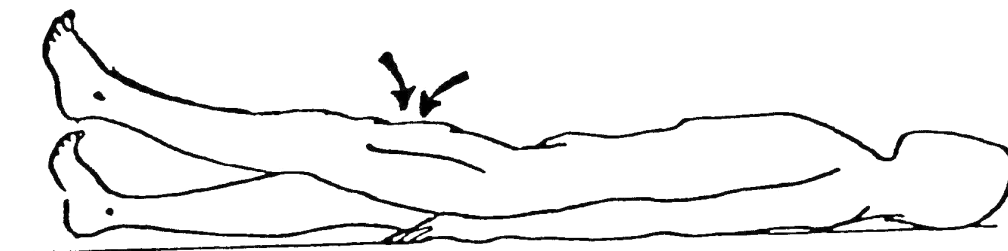
(i) Move feet up and down at the ankles. Repeat 10 times every hour.

(ii) Move feet together in circles. Repeat 10 times every hour.



#### (b) Quadriceps Exercises

Press the back of your knees against the bed. Your heels should lift off the bed at the same time. Repeat 10 times every hour.



### (c) Gluteal Exercises

Tighten your buttocks together, hold for 5 seconds and relax. Repeat 10 times every hour.



### (d) Straight Leg Raising

Lift the leg off the bed, keeping knee straight. Lift as far as is comfortable. This is important because it will gently stretch the nerve roots. Tighten your quadriceps muscles (see below), pull your toes upwards and lift your leg as far off the bed as is comfortable. Repeat 10 times every hour.



## Getting into and out of bed

- Bend your knees and cross your arms over your chest.
- Roll like a log right over on to your side- hips, knees and shoulders all at the SAME time
- Do not sit right on the edge of the bed.
- Allow your lower legs to swing down over the edge of the bed
- At the same time; your upper body should come up until you are sitting
- You will need to continue this method when you are discharged home
- To stand up, keep your feet well back underneath you, and then use your hands to push down on the bed.

## Progress

- Gentle walking up and down stairs before discharge
- Increase activity initially, by sitting out of bed for short periods of time
- With the help of the physiotherapist, you will gradually increase gentle walking each day

## Stairs

- Gentle walking up and down stairs with the physio before discharge

## Physiotherapy post CAG / Valve Replacement Surgery

As well as breathing exercises, you need to start stretching exercises to prevent stiffness when you go home. These need to be done twice daily and are to be done SLOWLY.

### 1. Extension in Sitting

Begin sitting tall, with your back and neck straight, shoulders back slightly. Gently take your neck backwards, looking up towards the ceiling until you feel a mild to moderate stretch pain-free. Repeat 5 times.



### 2. Rotation in Sitting (Right)

Begin sitting with your back and neck straight and your shoulders back slightly. Turn your head looking over one shoulder until you feel a mild to moderate stretch pain-free. Keep your neck straight and don't allow your head to poke forwards during the movement. Repeat 5 times to each side



### 3. Rotation in Sitting (Left)

Begin sitting tall, with your arms across your chest. Keeping your legs still, gently rotate to one side until you feel a mild to moderate stretch that is pain free. Repeat 10 times to each side.



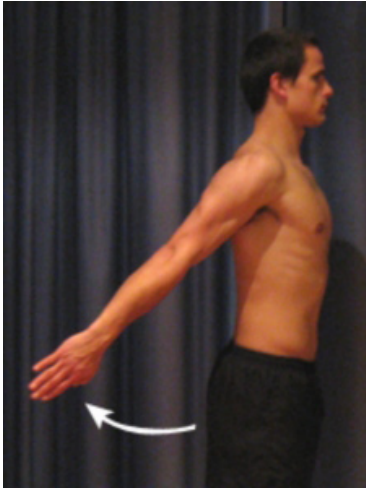
### 4. Side Bend in Sitting

Begin sitting tall, back straight, hands behind your head or neck. Gently bend to one side, moving your elbow towards your hip until you feel a mild to moderate stretch pain-free. Make sure you do not lean forwards. Repeat 5 times on each side



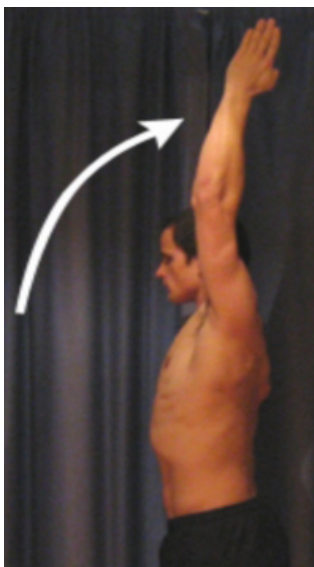
## 5. Shoulder Extension

Begin standing tall, with your neck and back straight. Gently take your arm backwards until you feel a mild to moderate stretch pain free. Repeat 5 times



## 6. Shoulder Flexion

Begin standing tall with your back and neck straight. Gently raise your arm forwards and up until you feel a mild to moderate stretch pain free. Repeat 5 times



## Activity Programme

It is important that you continue your exercises as instructed by the physiotherapist.

In addition, walking is one of the best forms of exercise and this is something that you can build on as you recover and start to feel better. Walk at a pace which makes you breathe deeper but you are still able to talk to someone.

DO NOT walk if you feel unwell or if the weather is inclement.

DO NOT go up hills

DO NOT take your dog!!

DO NOT push a heavy shopping trolley

Walk for several minutes and gradually build up the time to 30 mins ; only progressing a few minutes as you feel able over the next 6 weeks

The distance is NOT important

The following is also a list of guidelines for resuming other activities.

Cooking light meals	..... 2 weeks
Sewing	..... 2 weeks
Washing dishes	..... 2-4 weeks
Exercise bike	..... 3 weeks
Short shopping excursions (do not lift more than 5kgs)	..... 3-4 weeks
Ironing	..... 4 weeks
Sweeping	..... 4-6 weeks
Making the bed	..... 4-6 weeks
Office work	..... 4-6 weeks
Driving	..... 4-6 weeks
Light digging in the garden	..... 6 weeks
Lawn Bowls	..... 6-7 weeks
Housework	..... 6-8 weeks
Vacuuming	..... 8-10 weeks
Lawn mowing	..... 10-12 weeks

Car washing	.....10-12 weeks
Swimming	.....12 weeks
Heavy lifting	.....12 weeks
Wood chopping	.....12 weeks
Golf (full swing)	.....12 weeks
Fishing from a boat	.....12 weeks
Jogging	.....12 weeks
Squash and tennis	..... only under medical advice

Sexual relations may be resumed within two weeks after discharge from hospital. However, if it causes pain or exhaustion it may be advisable to refrain for longer.

Do not hesitate to contact your doctor if it becomes a concern.

Talk openly with your partner also so that you both feel comfortable with your sexual relationship.

## Post Discharge Cardiac Rehabilitation

Prior to discharge, your physiotherapist or Cardiac nurse educator will speak to you about continuing your cardiac rehabilitation at home.

A cardiac fitness programme can be developed for you after you are discharged from hospital. Community physiotherapy services provide more gentle programmes at various centres in the metropolitan area.

If you live in the country, ask your physiotherapist for a home programme.

Some options available to you are:

Sportsmed Physiotherapy : 93829000

Community physiotherapy - A referral from your Thoracare physiotherapist will be needed to attend any sessions

A home programme can be developed for you by physiotherapist if none of the above programmes are suitable



## Discharge from Hospital

On discharge, the nurse will check your wound(s) and will advise you about caring for them at home.

Each surgeon has their own preferences and you will be advised what to do. Most incisions are closed with internal stitches which will dissolve of their own accord.

You will be given an adequate amount of medications until you see your GP for your follow up appointment.

You will also be given information regarding follow up appointments with your doctors.

You will be given a form to have an x-ray before you see your surgeon.

## Acknowledgements

Nurse Manager Ward 41, St John of God Subiaco Hosptial

Nurse Manager ICU/CCU, St John of God Subiaco Hosptial

Lisa DiToro; Cardiothoracic Clinical Nurse, St John of God Subiaco Hosptial

Mary Seymour, Cardiothoracic Physiotherapist, Thoracare

CN Clinical Projects, St John of God Subiaco Hosptial

## References

Cardiothoracic surgery - [www.cts.usc.edu](http://www.cts.usc.edu)

The Patient Education Institute - [www.X-Plain.com](http://www.X-Plain.com)

[http://en.wikipedia.org/wiki/Atrial\\_septal\\_defect](http://en.wikipedia.org/wiki/Atrial_septal_defect)

[http://en.wikipedia.org/wiki/Ventricular\\_septal\\_defect](http://en.wikipedia.org/wiki/Ventricular_septal_defect)

<http://www.heartpoint.com/congasd.html>

Physio Advisor.com - <http://www.physioadvisor.com.au>





ST JOHN OF GOD  
Subiaco Hospital

## Cardiac Surgery

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### A Care Path for Patients

Welcome to St John of God Hospital. We will endeavour to make your stay with us as comfortable as possible. While you are a patient here you will be on a care path, this ensures we keep you informed of what will happen during your hospital stay and helps us to deliver quality care.

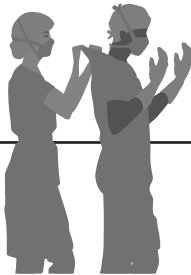


Excellence


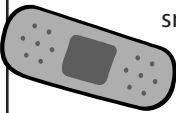



Justice

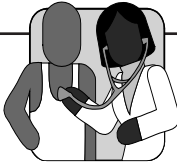
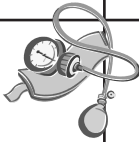


Respect

Compassion

Hospitality

	PreAdmission/Admission	Day of surgery
CONSULTS & REFERRALS	Prior to admission you will see your doctor, anaesthetist and physiotherapist	
TESTS & INVESTIGATIONS	If ordered by your doctor: Blood test Chest x-ray Heart rhythm test (ECG)	
OBSERVATIONS & ASSESSMENTS	 Height, weight, blood pressure, pulse & temperature will be recorded	After surgery your blood pressure, pulse, temperature, breathing & wound drains will be checked frequently. You will have a breathing tube attached to a breathing machine to help you breathe
TREATMENTS & MEDICATIONS	At Preadmission you will be measured for support stockings. On admission, the nurse will shave your chest and leg(s). Take your normal medications unless the doctor has informed you otherwise.	Before surgery medication will be given to help you relax. You must stay in bed following this medication. You will have oxygen and be connected to the cardiac monitor after this medication
PAIN MANAGEMENT	Your anaesthetist will discuss the type of pain relief you will have & your admission nurse will review this with you.	After surgery regular pain medication will be given via a drip
HYGIENE	You should shower the night prior to surgery & the morning of surgery with liquid(Chlorhexidine) soap. Do not use talc, deodorant or perfume. Please ALL remove nail polish & jewellery.	After your surgery you will have a wash in bed.
ACTIVITY, MOBILITY & SAFETY	The physiotherapist will explain how to perform deep breathing and coughing exercises and the use of the trillow will be explained.	 After surgery, the nurse will roll you from side to side regularly to relieve pressure on your skin. You will be encouraged to commence your deep breathing exercises.
NUTRITION & HYDRATION	Nothing to eat or drink 6 hours before the operation or as directed by your anaesthetist.	
ELIMINATION	The nurse will ask you to provide a urine sample for testing on admission	You will have a tube (catheter) into your bladder and a wound drain. These will be checked regularly.
INDIVIDUAL / CULTURAL NEEDS	Pastoral services are available for your spiritual, religious & emotional needs. Please ask your nurse.	
EDUCATION & DISCHARGE PLANNING	The nurse will explain your operation & what to expect during your hospital stay. Please ask the nurse any questions that may be worrying you. Managing at home after discharge will be discussed.	

Day 1 After surgery	Day 2 After surgery	Day 3 After surgery
<p>Your doctor &amp; physiotherapist will visit. You may also be visited by your anaesthetist.</p>	<p>Your doctor &amp; physiotherapist will visit.</p>	<p>Your doctor &amp; physiotherapist will visit.</p>
 <p>A blood test will be taken today</p>	<p>A chest x-ray and a blood test will be required today</p>	<p>Any tests will be ordered by your doctor</p>
<p>Blood pressure, pulse, temperature &amp; breathing will be checked regularly. You will have an oxygen via a mask after the breathing tube has been removed.</p>	<p>Blood pressure, pulse, temperature &amp; breathing will be checked regularly. You will be weighed Daily</p>	<p>Blood pressure, pulse, temperature &amp; breathing will be checked regularly. You will be weighed Daily</p>
<p>You will continue to be attached to a cardiac monitor You will have your dressings done daily</p>	 <p>Your chest drains and smaller drains may be removed today</p>	<p>The dressings to the wounds will be changed as required. Your CVC in your upper chest may be removed today</p>
<p>Regular pain medication will continue. The pain management nurse may visit</p>	<p>The IV pain relief will be removed as directed by your doctor &amp; tablets or injections given for pain relief</p>	<p>Regular pain medications will be provided</p>
<p>The nurse will assist you with a wash in bed</p>	 <p>The nurse will assist you with showering</p>	<p>The nurse will assist you with showering</p>
<p>The nurse and physiotherapist will assist you to stand &amp; will teach you leg exercises. Continue your deep breathing exercises. and continue to use your trifold</p>	<p>The nurse and the physio will assist you to sit out of bed and start mobilising. Continue your deep breathing exercises. and continue to use your trifold</p>	<p>You will commence walking short distances 3-4 times during the day. Continue your deep breathing exercises. and continue to use your trifold</p>
 <p>You will be given clear fluids and a light diet when the breathing tube is out</p>	<p>You may start a light diet</p>	<p>Light diet</p> 
<p>You will still have a tube (catheter) into your bladder and a wound drain. These will be checked regularly.</p>	<p>The tube into your bladder will be removed as directed by your doctor. The nurse will ask if you have had your bowels open</p>	<p>The nurse will ask if you have had your bowels open</p>
	<p>You will be transferred to the Ward today. Cardiac monitoring will continue as ordered by your doctor</p>	<p>Dress in your own clothes.</p>

	Day 4 After surgery	Day 5 After surgery
CONSULTS & REFERRALS	Your doctor & physiotherapist may visit	Your doctor & physiotherapist may visit
TESTS & INVESTIGATIONS	Any tests will be ordered by your doctor	
OBSERVATIONS & ASSESSMENTS	Blood pressure, pulse, temperature & breathing will be checked regularly. You will be weighed Daily 	Blood pressure, pulse, temperature & breathing will be checked regularly. You will be weighed Daily
TREATMENTS & MEDICATIONS	Your pacing wires may be removed today. You will still be connected to the heart monitor	You will still be connected to the heart monitor
PAIN MANAGEMENT	Regular pain medication will be provided	Regular pain medication will be provided
HYGIENE	The nurse will provide some assistance with showering if needed Dress in normal day clothes	Self care Dress in normal day clothes
ACTIVITY & MOBILITY & SAFETY	Your walking regime will be determined by your physiotherapist. Continue your deep breathing exercises and continue to use your triflow	Your walking regime will be determined by your physiotherapist. Continue your deep breathing exercises and continue to use your triflow You will climb the stairs today with your physiotherapist
NUTRITION & HYDRATION	 Normal diet	Normal diet
ELIMINATION	The nurse will ask you if you have had your bowel open and may give you medications if needed	The nurse will ask if you have had your bowels open
INDIVIDUAL / CULTURAL NEEDS	If you have any concerns about managing at home, please discuss with your nurse & information can be provided on the hire of equipment for when you return home.	
EDUCATION AND DISCHARGE PLANNING	The nurse will confirm your discharge arrangements	Arrangements will be made for the removal of your wound clips. You will need to make arrangements for transport home

## Day 6 Discharge



Your physiotherapist may visit  
You will see your doctor about 6 weeks after  
discharge

Any tests that you will need after discharge will be  
explained to you by your doctor



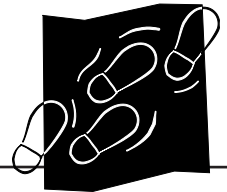
Blood pressure, pulse,  
temperature & breathing will be checked regularly.  
You will be weighed Daily

The pharmacist will speak to you about the medications  
that you will be taking home on discharge.  
Your wounds and dressings will be checked prior to  
discharge



Continue to take regular pain  
medications after you go home as prescribed by your  
doctor

Self care  
Dress in normal day clothes



Continue your deep breathing  
exercises and continue to use your trifflo  
after you go home



Normal diet

The nurse will ask if you have had your bowels open.  
Continue with walking & drink plenty of water to prevent  
constipation.



The nurse will explain how to care for your  
wound & prevent infection.

You will be discharged by 10am with xrays, medications & follow-up  
appointment.  
Contact your doctor if you experience any fever, severe pain, swelling or  
infection.



St John of God Subiaco Hospital is located on Salvado Road, just west of the Mitchell Freeway Vincent and Powis Street exits.



A DIVISION OF ST JOHN OF GOD HEALTH CARE

12 Salvado Road Subiaco WA 6008  
Tel: 61 8 9382 6111 Fax: 61 8 9381 7180  
[www.sjog.org.au](http://www.sjog.org.au) Email: [info.subiaco@sjog.org.au](mailto:info.subiaco@sjog.org.au)

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Published September 2012