ST GEORGE’S
HOSPITAL

A TRADITION OF EXCELLENCE

Before and after your heart surgery

A guide for patients having coronary artery bypass, heart valve or other heart surgeries

stgeorges.org.nz

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Table of contents

Please:
- Read this booklet carefully before your surgery
- Bring it with you when you come to hospital for your surgery

Your name: ____________________

Introduction

Learning that you or your loved one needs heart surgery can be difficult. You may have many questions and this booklet can help as it explains what you can expect before and after heart surgery. We encourage you and your family to read it.

There is a lot of information contained in this booklet, some of which you may not need right now. Take your time to read the sections that are important for you to know at each stage.

We understand that you may feel anxious and concerned about your upcoming surgery. We recognise that some patients may have been waiting a considerable length of time on the waiting list, or even had their surgery postponed or cancelled before. Others may have had only a short time to come to terms with their diagnosis and plan for surgery. We hope that this booklet answers some of your questions and provides you with an understanding of the plan for your care during and after surgery. We will also spend time talking through this information with you and your family.

Whilst waiting for your surgery it is important to contact your GP should any new symptoms arise. In the event of chest pain that is not relieved by your usual medications, call an ambulance – 111.

IMPORTANT: The information in this booklet is provided by the health care team and is intended to support and guide you through the process only. It does not replace the advice or directions given to you by your surgeon.

Getting ready for surgery

Once you have seen your surgeon, or their team, you will be given information about coming to St Georges Hospital for your surgery.

Private patients will be phoned by a nurse from the Christchurch Heart and Lung Surgeons' rooms, who will ask you questions about your health, and any previous hospital stays. At this time the nurse will provide you with information about the pre-op clinic, your stay in hospital and preparations for going home.

Public health sector patients will receive this information from the staff at Christchurch Hospital.

Follow your surgeon's instructions about when to stop taking blood thinning medications e.g. Clopidogrel [Plavix®], Aspirin® – you should have this information from your clinic appointment. If you are unsure please contact the cardiac secretary.

Warfarin and **Dabigatran** must be stopped. You will be given individual instructions regarding blood tests and precautions for this.

Blood thinner medication: ______________________________

Take last dose on: ______________________________

After discharge you will need a support person with you full time for two weeks.

The main entrance for St George's Hospital is located off Heaton Street near Papanui Road. We have a parking building onsite. The reception is located on the ground floor.

Preadmission clinic

This clinic is held the day before your surgery. Check in time is 12:00 midday and you will need to allow up to 7 hours. Please come to reception on the ground floor. From reception you will be escorted to the Ward 4 (specialises in cardiothoracic surgery).

During your preadmission clinic visit you will be seen by some of the members of our team, including:

- Your surgeon ____
- Your anaesthetist ____
- The perfusionist (if available). This is the person who specialises in the heart lung bypass equipment
- The intensivist
- A member from the physiotherapy team
- Nursing staff – who will provide education and information on your journey in the hospital and take you on a visit to ICU
- The phlebotomists to take a blood test (if required)

Patients who are first on the list for surgery the following day will stay the night in hospital. Other patients will be able to go home and will return on the day of surgery, at the time specified by the preadmission nurse.

You will be given instructions regarding the last time to eat and drink by the preadmission nurse and the anaesthetist.

Preparing for your hospital stay

Use the following checklist to ensure that you have everything you need to be ready for your surgery and recovery.

Please bring:

- This booklet
- **All your medications in their original boxes and a list of all your medications from your pharmacy or GP**
- Comfortable loose clothing to wear in hospital e.g. tracksuit pants, shorts, tee shirts or open front shirts
- Bra – without an underwire
- Night wear and underwear
- Slippers or comfortable foot wear
- Toiletries
- Reading material
- Any other equipment you use for your health – diabetic testing equipment, sleep apnoea machine, walking frames etc.
- Your next of kin's contact details

You must remove all jewellery, especially rings, before your admission. If you are unable to remove them you will need to see a jeweller to have them professionally removed.

Please remove all nail polish.

Please do not shave any surgical areas yourself at home. This can be a risk for infection and needs to be done as close to the time of surgery as possible.

Please leave all your valuables at home – anything you bring in is at your own risk.

Free WIFI is available at St George's Hospital.

On the morning of surgery

Surgery starts between 7.30am and 8am. If you are first on the operating list this is when you can expect to be taken to theatre. If your surgery is later in the day it is more difficult to give you an exact time; however, nursing staff will do their best to keep you informed. You may wish to have a support person with you on the morning of your operation, please let the nursing staff know so that we can facilitate this for you.

To help you get ready, nursing staff will shave your legs, your chest and occasionally your arms (please do not do this at home). After this, you will be given a special surgical shower gel to wash yourself from head to toe (this includes your hair).

When advised by the theatre team, the nursing staff will give you a pre-med; this is a medication to help you feel relaxed. Following this medication you will need to wait on your bed. You will be kept warm with a warming blanket and given oxygen through nasal prongs.

You are taken to theatre on your bed and your family can accompany you to the doors of theatre if they wish.

You will be in theatre for at least 4-6 hours. Once the surgery is completed you will be taken to our Intensive Care Unit (ICU).

The surgeon will call your family when your operation is over, and they can return to visit after a minimum of an hour.

This time is needed to get you settled in; to be seen by the intensivist and to have blood tests and a chest X-ray taken.

After surgery in ICU (intensive care unit)

In this area your care will be coordinated by an intensivist (a physician who has special expertise in intensive care), your surgeon, nurses and the physiotherapist.

ICU visiting and phone calls

We recognise and understand the stress of waiting for your family member to come out of cardiac theatre, so we will endeavour to facilitate visiting opportunities. There are times when you may be asked to leave the ICU, such as when your family member needs to be assessed, while other patients are being admitted to ICU and while nursing handover takes place.

The doors into the ICU are generally kept closed. When you would like to come in to visit please use the intercom at the door outside ICU, or ask one of the ward nurses (Ward 4) to assist you.

When you first enter the ICU we ask you to use alcohol hand wash, which is mounted on the wall in bottles, to clean your hands. This helps stop the spread of germs.

Similarly, if you are unwell, please speak to a nurse prior to visiting so that they can advise if it is safe for you to come in to visit.

Generally we only encourage two visitors at a time per patient, however this is at the discretion of the nurse at the bedside.

We welcome phone calls to the ICU but ask that the family's spokesperson be the primary contact. This spokesperson may call the nurses' station on 03 375 6011 for patient updates

ICU equipment

You will be connected to specialised medical equipment to monitor your blood pressure, heart rate and heart pressures. These machines and the ventilator can beep and make swishing sounds. The nurse and intensivist will use these machines to continuously watch your vital signs (temperature, pulse, respirations and blood pressure).

Ventilator

Initially in ICU you will be given medication to keep you asleep, and will be attached to a ventilator (breathing machine) by a breathing tube that passes through your mouth and down your windpipe. It will be removed once you are awake and breathing on your own. Supplementary oxygen will then be given to you via a mask or nasal prongs.

Food and fluid

After the breathing tube is removed you will be allowed to drink small amounts of water, this will be increased as you tolerate it.

You will begin to eat the day after surgery.

Drains

You may have two or three tubes placed in your chest during surgery. These drain any unwanted blood, air and fluid from around your heart and lungs. These will be removed once the drainage has stopped.

If you are having coronary artery bypass surgery you may have a leg wound and a small drain. This drain is removed when it is no longer required.

Pacing wires

Sometimes thin wires are inserted during surgery to act as a temporary pacemaker if your heart rate needs to be increased. Usually this is only a short term measure and the wires are removed on day three following surgery.

Very occasionally patients may need a permanent pacemaker and this procedure would be done under local anaesthetic at Christchurch Hospital.

Urinary catheter

A catheter will be put into your bladder during surgery to measure your urine output. You may still feel a sensation of having to urinate. It is generally taken out one to two days after your operation.

Arterial line

You will have a thin tube in the artery in your wrist, called an arterial line, to monitor your blood pressure, and for blood testing. This is generally removed the day after your surgery.

Medications

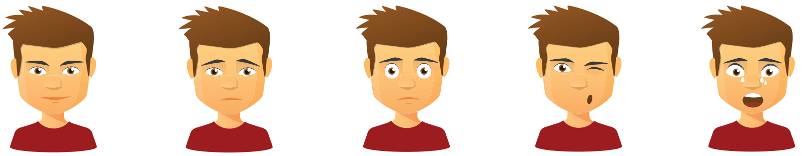
You will have an intravenous tube in the side of your neck and in one of your arms, these are used to administer medications and fluids.

You may require insulin even if you do not have a history of diabetes, as the stress of surgery may make your blood glucose levels increase.

Pain

Your pain will be assessed and managed, even when you are asleep, with intravenous and oral pain medications. Once you are awake we ask that you rate your pain on a scale of 1 to 5, this helps us to gauge the effectiveness of the medication we are giving.

Pain Scale



1 *Comfortable*
2 *Mild discomfort*
3 *Moderate discomfort*
4 *Severe pain*
5 *Worst pain imaginable*

Length of stay

You will remain in the ICU until you have been reviewed by the intensivist and a plan has been made for you to transfer to the ward. You are usually in ICU less than 24 hours, but the time may vary depending on your needs and progress.

ICU Open Hours

ICU is open from Wednesday to Friday 3pm. If you continue to need ICU level care a discussion will be had with you and your family regarding transfer to Christchurch Hospital ICU.

Back to the cardiothoracic ward – Ward 4

Once you are ready to move out of ICU, the nurses assist you to walk back to your room. Once there, your heart rhythm and rate will be monitored continuously. We can view this both in your room and at the nurses' station. The bedside monitor resembles a TV. The cables are long enough to enable you to get out of bed to the chair with help from a nurse. Usually this monitoring continues until day three after your surgery.

Visiting

We recommend that only family and close friends visit you while you are in Ward 4. This is for two reasons. Firstly, patients are often fatigued following this surgery and find it hard to concentrate and socialise. Secondly, a number of activities and consultations need to take place during this time and these need to take priority to enable a smooth recovery.

We also have a strict NO VISITING period between 1pm and 3pm each day to allow patients to sleep and rest.

Visiting finishes at 8pm in the evening.

We welcome phone calls to the nurses' station but ask that the family's spokesperson be the primary contact. This spokesperson may call the nurses' station on 3756 160 for patient updates.

Routine in Ward 4

Early morning and breakfast

You will be woken by the morning nurses at around 7.30am.

We weigh you each day. Often in the early stages after cardiac surgery you can gain weight, this is usually related to fluid you have been given in theatre and ICU. We may give you medication to help you get rid of this excess fluid.

We also take observations and recordings of your blood pressure, pulse, temperature and oxygen saturations.

We encourage you to sit in your chair for breakfast.

Medication

You will have your medication dispensed with your breakfast. The medication you need may be different to what you were taking when you came to into hospital.

The intensivist and surgeon will assess your medications daily.

Showering

Usually you will be assisted with your first shower by the nursing staff. Some people need only supervision whilst others may require more help. Independence with showering is encouraged over the next few days and you should be showering independently when you go home.

Blood tests

These are taken daily by the staff from the Southern Community Laboratories and are reported by fax to the ward within a couple of hours of being taken.

Consultations

You will be visited daily by the intensivist while they are resident in the hospital. The surgeon will also visit you and review your care with the staff and the intensivist.

Wound care

Your dressing will be reviewed daily, although these are not usually removed until 10 to 21days following surgery. The wounds are covered with waterproof dressings to allow you to shower.

TED stockings

These are worn by some patients to help reduce swelling & also to prevent blood pooling & clotting in the legs.

Physiotherapist

A member from the physiotherapy team will visit you each day and advance your exercises and walking. They will take you to walk on the stairs in preparation for discharge when they feel you are ready.

Lunch

This is usually served at 12 midday in your chair.

Rest period

At 1pm you will be assisted to a comfortable place for the rest time, some people like to rest on the bed while others find the lazy boy more comfortable. You will be woken from rest time at 3pm and given afternoon tea. A shift change for nursing staff occurs at this time.

Education for discharge

Your education and discharge planning takes place in the afternoon. The nurses like to involve your support person in this, so a convenient time should be made to ensure that they can attend. Towards the end of this booklet you will find a section on discharge education and planning, the nurses will discuss this information with you.

Dinner

This is served at 6pm and also served to you in your chair. Family can purchase a meal (at a charge) by ordering through our main reception by 4pm on the day it is required and it will arrive on the meal trolley at the same time as your meal.

Observations are recorded throughout the day, comfort levels are assessed regularly and pain relief provided as required (and prescribed).

Activity

Being active is the key to recovery. You will be encouraged to walk a minimum of four times each day.

Movement helps to:

- Speed up your recovery
- Facilitate independence
- Re-inflate your lungs
- Stimulate your circulation
- Increase strength
- Improve mood
- Reduce complications
- Alleviate constipation

We will support you by:

- Encouraging and helping you to get up and around
- Encouraging independent walks when you are able
- Helping you to sit out of bed, particularly for meals
- Helping you to balance activity with rest
- Providing regular physiotherapy sessions

Sleeping and tiredness

Fatigue is the number one complaint following cardiac surgery.

Patients can feel exhausted because the body is using energy to recover, deal with pain and to heal.

Sleeping patterns can be altered by the effects of anaesthesia and medications, discomfort, noise disruption and changes to your usual routine.

Vivid dreams and nightmares are a common complaint after cardiac surgery. Some people do not experience them at all, but you should let us know if they are troubling you.

We can offer advice and help you to:

- Balance activity with rest
- Encourage rest times
- Limit interruptions at night and help you to feel warm and comfortable
- Offer pain relief and sleeping tablets to support sleep

Pain

Everyone has some discomfort and everyone experiences this differently.

Pain can be related to:

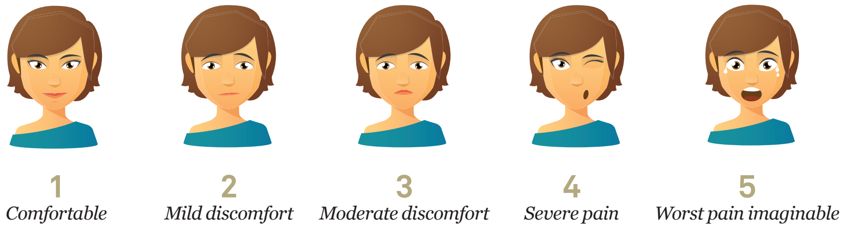
- Wound site and sternum (breastbone) healing
- Muscle and ligament stretching
- Chest drains
- Throat discomfort from the breathing tube
- Leg discomfort from the leg wound

Effective pain management not only helps you to feel more comfortable, it also helps you to recover faster.

We will support you by:

- Assessing your pain by asking questions. We use a pain scale like the one in this picture

Pain Scale



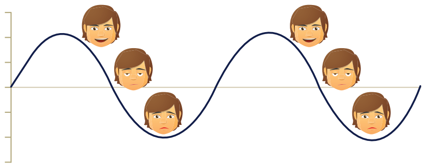
- Listening to your concerns
- Providing information about pain and pain relief medications
- Offering pain relief and strategies for pain management such as: walks, music, warmth and visualisation techniques
- Providing you with a cough/chest pillow to support your chest wound with movement, coughing and sneezing

Emotional ups and downs

These are a normal part of your recovery. We recognise that you will have feelings of extreme tiredness, irritability, sadness and frustration – these can be disconcerting and distressing for both you and your support people.

We will support you by:

- Encouraging you to share your thoughts
- Offering reassurance that this is normal and expected
- Encouraging you to wear your day clothes and maintaining your usual activities (routine)
- Helping to manage rest and sleep
- Encouraging you to exercise



Appetite and digestion

Most patients experience a loss of appetite and some people struggle with feelings of nausea or vomiting.

Normal bowel patterns can be altered in the short term and this is related to the surgery, medications, change in eating habits and reduction in food and fluid intake. Most patients do not move their bowels until day 3 or 4 after surgery.

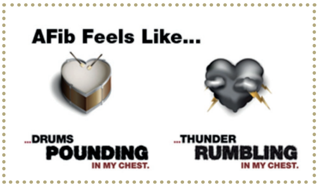
We will support you by:

- Actively treating any nausea or vomiting so please let us know if you are feeling unwell
- Encouraging fluids and light diet
- Getting you up and moving
- Offering laxatives to assist with bowel movements

Atrial fibrillation (AF or AFib)

AF is a common electrical heart rhythm disorder which causes an irregular heartbeat.

AF occurs because of irritation and swelling around the heart after handling in surgery. This affects up to 40% of patients.



Some patients with AF don't experience any symptoms; others feel more fatigued and unwell. Some patients describe sensations such as pounding, rumbling or racing.

This is most common on days 1 to 3 after surgery.

We will support you by

- Monitoring your heart rate and rhythm
- Giving medications to help reduce heart rate and restore normal rhythm
- Providing reassurance that this is common, and most often a temporary condition
- Providing education about how to recognise AF, and what to do if this occurs at home.

Going home

Goals for discharge:

To go home you need to demonstrate that you will be safe

- **Your surgeon has assessed you and determines that you are safe to go home.**
- **You are able to walk around the ward independently.**
- **You are able to shower and dress yourself.**
- **You have completed the physiotherapy programme, including the supervised stair climb.**
- **You, and your support person, have discussed discharge education with nursing staff.**
- **You are able to use the phone book, and the phone, to make your GP appointment.**
- **Fulltime support person is available for two weeks.**

We will support you by:

- Encouraging you and facilitating independence.
- Providing education and information for discharge.
- Organising discharge blood tests, chest X-ray and ECG.
- Organising medications and a 'Yellow Card' to explain what each medication is used for, when it is to be taken, and how long it is needed for.

Following discharge:

- We will arrange for the district nurses to see you in your home for a wellness check.
- We suggest you make an appointment to see your GP within the week of discharge.
- Follow up cardiologist and cardiac surgeon appointments will be mailed to you.
- We suggest you attend a cardiac rehab programme.
- The surgeon's rooms will send you, and your GP, a discharge letter after your discharge from hospital.

Caring for yourself at home

Convalescence

It is understandable if you experience some anxiety when it is time to go home, as this is a big step for you and your family.

On the day of discharge, plan activities so that you can get plenty of rest as the excitement of going home can be very tiring.

Recovery takes 8-12 weeks. For some it may take longer. **DO NOT** hurry this convalescence period. Listen to your body and recover at your own pace. Plan each day so that you achieve a balance between rest and activity, remembering that some days will feel better than others.

Mood variations

As previously discussed, feelings of depression, irritability, sadness and frustration often occur, both in hospital and at home.

This may last for up to 1-2 months. However, if you feel your mood is consistently low please discuss this with your GP.

These feelings can be managed by:

- Maintaining your usual daily activities.
- Planning some different activities each day.
- Talking about your feelings with your close family or friends.
- Getting back into normal routines at home as soon as possible, building your activities from where you left off in hospital. Get up at your usual hour, shower and dress in day clothes.

Remember that optimism and positive thinking give you a big boost.

Concentration and memory

Lack of sleep often impairs concentration, as does worry, anxiety and the trauma of the operation. You may find it hard to read a book, watch television, or have a conversation without your mind wandering. You may also find that you are forgetful or your memory is poor. These responses are normal and will improve with time.

Decision making

Wait until you have completely recovered before you make decisions about your long-term future. Sometimes people may make big decisions about their lives, such as not resuming work or abandoning other social or pleasurable activities, which is not always necessary.

Ideas to manage your convalescence

- Continue with your rest period until you are fully recovered
- Try to cut down overcrowded schedules
- Plan and space activities
- Make time for fun and relaxation
- Remember it's OK to ask for help
- Resist planning to do more than you can handle
- Learn to say "NO"

Visitors

Visitors mean well, but can be tiring and slow your recovery (as can a lot of phone calls). Let friends and family know that rest is an important part of your recovery. Do not be afraid to excuse yourself from visitors when you feel tired and in need of a rest.

People may not realise how tired you are until you tell them.

Sleep

It can take time to get back into your normal sleeping routine. Often there is a pattern of shallow sleeping and easy waking which gradually improves. If sleeping difficulties are caused by pain and discomfort remember to use pain relief (as prescribed) to control this. Your doctor may prescribe sleeping tablets if this continues to be a problem.

Vivid dreams and nightmares are common while in hospital, however they generally stop after a couple of weeks.

Rest

Right now your body treats all activity as work.

- Routines like brushing hair, shaving and showering can all be very tiring, therefore adequate rest periods are essential to your recovery.
- Try to get 8 hours sleep a night, avoid having late nights and trying to catch up the next day.
- Avoid excessive sitting / sleeping as this will result in increased body discomfort and a reduction in blood circulation.
- Plan one day at a time.

Loss of appetite

It may take time to regain your appetite. Small frequent snacks may be easier to manage than large meals to begin with, and try to drink plenty of fluids.

Some people may experience a loss of taste. This is usually temporary and will also improve.

Constipation

If constipation continues to be a problem for you after discharge, these suggestions may help alleviate the problem.

- Make sure that your diet includes
    - bran
    - grains
    - plenty of water
    - fruit and vegetables (kiwifruit and prunes are good!)
- Exercise regularly
- Seek advice from your GP if you continue to have problems

Chest sensations

Pain and discomfort in the chest, shoulders, back and near the front of the neck are common and normal in the weeks and/or months following your heart operation.

The pain and discomfort near the centre of the chest is mainly due to the healing of the sternum (breast bone). Other muscle and joint discomfort can be due to muscles and ligaments being stretched during the operation. Too much, or too little, activity, and sleeping in one position can also aggravate this.

Shoulder, neck and trunk exercises will help to maintain joint movement, and muscle strength. You will have started these exercises while in hospital and it is recommended that you continue them for at least three to six months. This will help reduce 'aches and pains' and assist in your return to activities.

Some people feel burning or loss of sensation in the front of the chest. This may last for weeks or months. It is particularly common following internal mammary artery grafting.

Your breastbone has been cut and firmly wired together – each week the bone becomes more stable. However, it takes 10-12 weeks for the chest to completely heal.

All of these things are common and will slowly improve. Discomfort can be eased with regular pain relieving medication.

Pain management

Managing your pain is essential for a successful recovery.

We suggest that pain relief is taken regularly as directed in your yellow medication card.

As you recover, you may want to start dropping doses. The early morning and bedtime doses are particularly important to set you up for morning activity, and help you comfortably settle for the night.

Heartbeat

It is normal to be more aware of your heartbeat, especially when you are lying down. If you have had a valve replacement your heart may 'tick'.

If you feel as though your heart is racing or thumping this may go away by itself with rest, however, if it doesn't and has lasted more than 20 minutes–call an ambulance or seek help from your GP. Chest discomfort, dizziness, sweatiness and shortness of breath may be associated with this.

Breathlessness

Because you are not particularly fit when you first go home, small tasks may make you puff. This will improve as time passes and as you gradually increase your activity level. If you find you are becoming increasingly short of breath, or are breathless at rest, you should consult your GP.

Leg soreness and swelling

You can reduce swelling by keeping your leg elevated when sitting for the first few weeks at home, or until usual activities are resumed. **If you have been wearing TED stockings in hospital please continue to wear them for 7 days after discharge. You will need assistance to put these on and take them off.**

It is okay to bend your leg as it is a good idea to 'stretch' the scar so that it doesn't stiffen up. Avoid standing for long periods. If you notice any sudden leg pain or swelling, notify your GP.

Care of wounds

It is advisable to shower rather than bathe in the first four weeks after surgery, or until your wounds are completely healed.

Leave all wounds intact for 10 / 21days after your surgery (as advised by nursing staff).

Often the district nurses remove these dressings, or this may be done at your GP practice.

District nurses will also remove the chest drain sutures 5-7 days after surgery.

No further dressing should be required.

Watch and report any signs of redness, ooze, swelling or increased discomfort along the suture line (to your GP).

Wash wound(s) gently and pat dry with a clean towel. Powders and creams should not be applied to the wounds.

Avoid hot spas or saunas until wounds are fully healed.

Blurred vision

Blurring of vision is also common. The cause of this is mixed and uncertain. However, after a few weeks or months, your vision usually returns to normal. Do not get your glasses adjusted in the early months of your recovery.

Return to work

This will vary from individual to individual, and on the type of work that you do. Light sedentary-type activities can begin much earlier than heavy physical tasks. Do not begin immediately with a full 8 hour day.

Most employers will allow you to return to work on a graduated basis. Talk with the cardiologist at your follow-up appointment as to the best time for you to return to work. This will probably be between 8-12 weeks after your surgery.

Driving

You should not resume driving your car until 5-6 weeks after your surgery. Remember that during your recovery your reaction time and concentration will be slowed due to weakness, fatigue or medication. Your neck and shoulders may be stiff for a few weeks after surgery and this may restrict your ability to drive safely. **If you don't feel well, don't drive.**

You must wear a seatbelt to protect your sternum. If this is uncomfortable try placing a small pillow or piece of foam between your chest and the seatbelt.

Sexual activity

There's no reason why patients who have had cardiac surgery can't resume usual sexual activity as soon as they feel ready to do so. Talk with your doctor if you have any concerns.

Returning to exercise and activities

- Progress at your **own** rate.
- Listen to your body.
- Gradually resume your daily activities taking note of how you are feeling, your energy levels, concentration, stress levels and physical ability. These all improve over time.
- Try small amounts of various activities initially rather than trying to achieve all at once.

Cardiac rehabilitation

Cardiac rehabilitation is about giving you the knowledge to move forward and manage your heart disease knowing that you are making all the best decisions for you, your post operative recovery and your future heart health.

Classes are held by the local DHB cardiac rehabilitation nurses with talks by cardiologists, dietitians, pharmacists, physiotherapists and social workers. They are usually run over six weeks and each session is different. Generally you will find that other people attending will be at a similar stage of recovery as you. It is strongly encouraged that you attend with your support person as there will be opportunities for them to learn more about heart disease as well.

Following on from cardiac rehabilitation classes there are also community run classes available for you on an ongoing basis. These are exercise based and also offer support.

Information regarding these groups are available at the cardiac rehabilitation classes.

Eating for better health

A healthy diet plays an important role in your recovery, the maintenance of good health and management of disease. Most people know that they need to eat a healthy diet, but are unsure how to do so. These dietary guidelines have been developed to help you choose a healthy diet and reduce risk of heart disease.

- Eat a wide variety of nutritious foods.
- Eat plenty of breads and cereals (preferably wholegrain), vegetables (including peas and beans) and fruits.
- Eat a diet low in fat, and in particular in saturated fat (meat and butter fats).
- Maintain a healthy body weight by balancing physical activity and food intake.
- If you drink alcohol, limit your intake to 1-2 standard drinks per day.
- Eat only a moderate amount of sugars and foods containing added sugars.
- Choose low-salt foods and use salt sparingly.

Follow these guidelines to improve or maintain your health and prevent disease. More information is readily available from the National Heart Foundation.

Enjoy a wide variety of nutritious foods. Selecting a variety of nutritious foods will ensure that you meet all your nutritional requirements. Following the healthy diet pyramid, choosing plenty of foods from the bottom level, moderate amounts for the middle level and minimise use of foods in the top level.

When to seek help

- If you experience increased shortness of breath after activity has stopped.
- If you develop flu-like symptoms.
- If you have a racing, irregular or thumping heart beat that makes you feel unwell or lasts more than twenty minutes.
- If you experience chest discomfort that feels similar to the pain you had before your surgery.
- Any signs of redness, swelling or ooze around the wounds.
- Pain in chest, neck or shoulder that is worse as you breathe in.

Call or visit the GP or phone for an ambulance, depending on the severity of your symptoms.

My surgery was performed on: ____________________

My wound dressing will remain until: ____________________

My drain stitches will be removed on: ____________________

My GP is: ____________________ Phone number: ____________________

The phone number for after hours is: ____________________

Ambulance phone: ____________________

Appendix 1
Protection against infection – valve replacement surgery

It is very important to protect yourself against infection, especially if you have had valve replacement surgery. The replacement valve is at risk of becoming infected – causing a condition called *bacterial endocarditis*. Bacterial endocarditis occurs when bacteria passes through the blood stream and settles on the valve. This can cause damage to the heart valve.

Make sure that you see your dentist for regular checkups. Bacteria can enter the bloodstream through cavities in the teeth and through gum infections.

You must report to your family doctor or cardiologist if you have:
- Infected cuts
- Boils
- Sore throat and heavy colds
- Infections in the mouth
- Burning upon passing urine
- Fever / sweats – especially at night
- General feeling of being unwell
- Swelling in the feet, legs or hands
- Diarrhoea

By doing so, you can help protect your valve against infection.

Appendix 2
Warfarin

Warfarin is an anticoagulant that is taken to reduce the formation of blood clots. It works by lengthening the time it takes your blood to clot. After valve surgery this is given to reduce the risk of blood clots forming on, or around, the new valve. Sometimes warfarin is also given if a person has an irregular heartbeat.

Depending on the type of valve you have, some patients may need warfarin for a short time only while others may need it lifelong.

Too much warfarin can lead to bleeding and too little warfarin can lead to clotting. This is why blood is tested frequently in the initial phases of commencing this drug. This blood test is called an INR and it determines the length of time blood takes to clot. Your warfarin dose is prescribed once your INR is known. The dose may be different each day initially.

Your doctor will determine a target INR range for you. Testing is done daily in hospital and on discharge. Once your INR is in the desired range your GP will determine a testing regime for you.

You will be given a red patient handbook for warfarin. This has space to write your INR results and to record the amount of warfarin you need to take. This book has patient information at the back – nursing staff will talk you through this as part of your education for discharge

The process for managing warfarin at home

- The INR blood test will be taken daily by the lab nurse at your home.
- Blood results will be faxed to your GP.
- Phone your GP practice to ascertain the process for obtaining INR results and warfarin doses. Some GP practices like patients to phone in at a given time, whereas others phone patients with this information.
- Write this in the red book.
- Take your warfarin at a set time each day. In hospital this is given at 5pm, at home is may be easier to remember to take it at teatime or bedtime.
- Blood testing will be daily until your GP tells you otherwise.

Potential problems

If you have not had a blood test taken by the lab nurse by mid afternoon please contact the GP.

If you have not had a phone call from the GP practice nurse by 4pm call the practice and ask.

If you miss a dose refer to the back of the red warfarin book for instructions

☐ Patient has a ‘red book’ and education booklet on warfarin

☐ Explanation given on how warfarin works

☐ Explanation given on what INR is and target range

☐ Management for INR and warfarin on discharge explained

☐ Coagu Check education given

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Issue: 2017

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