
Health
Northern Sydney
Local Health District

# You and Your Heart

**An Education Booklet for Patients, Families and Friends**

Royal North Shore & Ryde Health Service

C/o Executive Offices

Royal North Shore Hospital,
St Leonards,

NSW 2065.

# “You and Your Heart”

Provides general information about your condition and should be used in conjunction with specific medical advice from your cardiologist, cardiac surgeon or rehabilitation team.

You will be able to take “You and Your Heart” home with you when you leave. It's important that it remains with you while you are in hospital. Your health care team will use the booklet with you throughout your hospital stay, so even though we know it is interesting to read, please ask your family and friends not to remove it until you go home.

# Foreword

The Department of Cardiology in partnership with Heart Research Australia (HROz) is here to help you through this period of your heart illness. Our team of cardiologists, nurses and allied health professionals will ensure your management includes treatment recommended by the latest research.

A cardiac event can be an unsettling experience. This booklet coordinated by the North Shore Cardiovascular Education Centre (NSCEC) provides useful information about the heart's function and the various investigations and treatments that are available to aid full recovery and resumption of a normal life.

The World Health Organisation has recommended that rehabilitation programs be available to all patients with heart disease. Thus, patients who have had a recent cardiac event or cardiac surgery should have a cardiac rehabilitation program available to them.

A vital part of rehabilitation is education of patients after a cardiac event. This booklet, which we call "The Red Book" is an excellent educational tool, which is available to all cardiac patients at Royal North Shore Hospital (RNSH) or North Shore Private Hospital (NSP). A hospital stay often feels overwhelming, with many unfamiliar experiences and much information to be absorbed. I would recommend that you thumb through the table of contents of the Red Book, find what seems applicable to you, and scan through the very readable text and explanations. Glance at it also when you are at home and have questions, and show it to your family. It should be used in conjunction with a cardiac rehabilitation program. Such a program is offered by the North Shore Cardiovascular Education Centre (NSCEC) at the Royal North Shore Hospital. Early discharge from hospital after interventional treatment of heart attack increases the need and value of such a program. We pride ourselves on the high quality of the rehabilitation program, and will aim to tailor it to your individual needs. We offer a combination of face-to-face and telehealth services.

Secondary prevention refers to prevention of a subsequent cardiac event after you have had a first event. This is a vital consideration for each person. You should regard your current cardiac event as a "teachable moment" and an opportunity to make appropriate lifestyle changes. Use the rehabilitation team and your doctors to answer any questions, address any concerns you have and alleviate any stress you may feel. You will be on a combination of medication, each of which works in a slightly different way to help and protect your heart, like a recipe with different ingredients. Always be in contact with your doctor if you are concerned about any possible side effects, and don't stop medication without their advice. If you understand why you are on the medication, it makes it easier to continue taking them.

I hope this booklet will be widely used by patients and their families as a resource to lead them into discussion with their health care team to enable them to return to an active life.

**Heart Research Australia raises funds for research into the treatment and prevention of heart disease. Support from Heart Research Australia has facilitated treatments which many of you will received during and after your hospital stay, the establishment of 2 Academic Chairs of Cardiology, and the novel projects and career development of junior researchers.**

**Heart Research Australia and the Cardiology team of the North Shore Campus invite you to register with our foundation at www.heartresearch.com.au so that you can be kept up to date with research findings regarding your condition.**

Professor Geoffrey H Tofler
Medical Director, North Shore Cardiovascular Education Centre (NSCEC
Professor of Preventative Cardiology, University of Sydney
Senior Staff Cardiologist, Royal North Shore and North Shore Private Hospitals.

# Welcome To
# Royal North Shore Hospital

Royal North Shore Hospital (RNSH) is the major teaching hospital of the University of Sydney in the Northern Sydney Local Health District (NSLHD) and a considerable amount of medical and scientific research takes place on the hospital campus.

During your stay with us, you will be looked after by a large health care team consisting of doctors, nurses, specialists and allied health professionals.

This booklet **"You and Your Heart"** has been prepared by your health care team to provide you with all of the necessary information about heart disease, hospitalisation and going home. It should be kept with you in hospital along with any other information sheets you may be given.

**Remember, it is normal to have questions about your condition. Please ask staff about any concerns you have.**

# Contents

**Fact Sheets**

The following fact sheets are also available:

1. Automatic Implantable Cardioverter Defibrillator (AICD)
2. Angiogram
3. Atrial fibrillation
4. Ballon Aortic Valvuloplasty (BAVI)
5. Electrophysiological Study (EPS)
6. Pulmonary Vein Isolation (PVI)
7. Pericarditis
8. Permanent Pacemaker Insertion
9. Takotsubo Syndrome
10. Patent Foramen Ovale (PFO) Closure
11. Transcatheter Aortic Valve Implantation (TAVI)

# Your Health Care Team

You will have many health professionals available to help you throughout your stay in hospital. They are there to look after you, talk to you about your condition and provide you with any support you may need.

## Doctors

This team will include your cardiologist, registrar and resident doctors as well as other specialists if required. These doctors are happy to answer any questions or concerns you may have about your condition.

## Nurses

The nursing staff will care for you during your stay. Most of your contact will be through the nursing staff.

## Dietitian

The dietitian is also available to you individually for further information and advice regarding an eating plan. Please ask your nurse for details.

## Occupational Therapist

The occupational therapist will advise you on the type of activity you can do after your discharge, including returning to work and home duties.

## Pharmacist

The pharmacist will explain your medications and answer any questions you may have.

## Social Worker

The social worker is available to you and your family for information, support and referrals regarding personal, family and financial issues. The social worker can provide information and referrals for practical support at home during your recovery.

## Discharge Planning

The discharge planning nurse is available to assist you in planning for any nursing needs you may have following your discharge from hospital.

## Cardiac Rehabilitation

Your cardiac rehabilitation team comprised of cardiac nurses and exercise physiologists will provide you with information about cardiac rehabilitation programs available to you in your local area after you go home.

## Chaplains/Pastoral Care

Chaplains and pastoral care staff are available to spend time with you and are happy to contact any religious person with whom you would like to speak.

## Ward Clerk

The ward clerk will show you to your room, organise your television and make your follow-up appointments before discharge.

Some members of your health care team will visit you automatically, some you will only see if you request them. Please ask your nurse or the ward clerk if you would like to see any of the health care team.

# Social And Emotional Impact Of Heart Disease

The identification of a heart condition is a major event in your life and may have a significant effect on you socially, physically and emotionally. This information is intended to help you understand, anticipate and manage the social and emotional effects of heart disease.

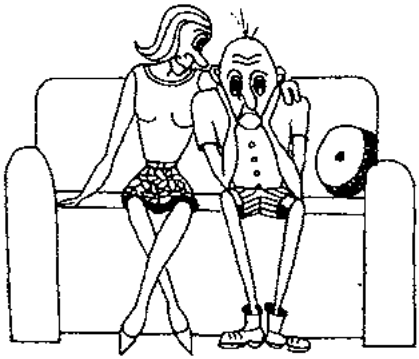
## Initial Identification Of A Heart Condition

When people identify they have a heart condition they often experience a crisis point in their life. This may have happened to you. You may have felt a sense of loss and grief. Your emotional reaction to your diagnosis may have taken you by surprise but rest assured, your reactions are normal and understanding them will help you and those close to you manage them.

You may have experienced many feelings as you and your family faced the discovery of a heart condition. Some of these may have been:

- Loss of control of your life
- Confusion due to family role changes
- Anxiety and stress regarding your future
- Fear of change of lifestyle
- Fear of resuming physical and sexual activity
- Anxiety regarding work commitments
- Fear of slow recovery

Many of the above can result in anxiety, stress, helplessness and depression. These are all normal reactions to a crisis and the hospital staff understand that you and your family require support and respect.



## The Hospital Experience

You may feel very alone with your fears. The confusion of being in a new environment may add to this.

It is important that you try to accept the support that can be provided by family, friends and hospital staff. Remember, it is a basic human need to be needed and supported. If you have difficulty "getting in touch" with your feelings, ask to speak to the social worker or nurse.

## Once At Home

Returning home after a stay in hospital can be a frightening experience as professional help is no longer at hand. Rest assured, you will not be sent home until the medical and nursing staff are sure you can manage without assistance.

The following are some suggestions that you and your family may find helpful when dealing with the effects of your heart condition.

- Recognise your emotional reactions and behavioural changes as a normal part of your recovery.
- Don't fight your feelings or deny your behaviour. This may lead to depression due to bottled up unresolved emotions. Try to express your feelings to yourself and others. It will help you to realise what you are dealing with and enable others to understand and respond to you.
- It is much more helpful for you if your family and friends remain consistent in their attitude and responses rather than changing to match your mood swings and emotional state. Family and friends can help you to feel a lot more secure if they continue to relate to you in the same way as they always have. This will give you greater security and less change with which to cope.
- Partners and other family members can best help by allowing you to express the way you feel and acknowledge your feelings.
- Be fair to yourself. Set realistic goals for your recovery. You cannot be expected to know how to cope with a situation as new as this. Additional professional help is available from the social worker.

## Practical Considerations During And After Hospital Admission

- When you are admitted to hospital you may need to arrange for others to do some of the things you would normally do for yourself. Most can be taken care of by family and friends. Sometimes local community services can help.
- You may also need a little extra help from family and friends and perhaps community services once you are at home.
- If you require a period of inpatient reconditioning and convalescence on discharge from hospital and you have private health insurance you may want to spend some time in a private hospital. Other alternatives are also available.
- If you live outside the city there may be some added difficulties regarding transport, accommodation and finances. We are well aware of these difficulties and will work with you regarding these matters. Certain country residents may be eligible for reimbursement of some travel and accommodation costs through IPTAAS. Please let the social worker or nurse know if you have travelled more than 100kms to the hospital.
- If you are concerned regarding returning to work or taking leave please discuss this with your doctor, social worker or occupational therapist.

For further information, please do not hesitate to contact the social worker, chaplain or nurse.

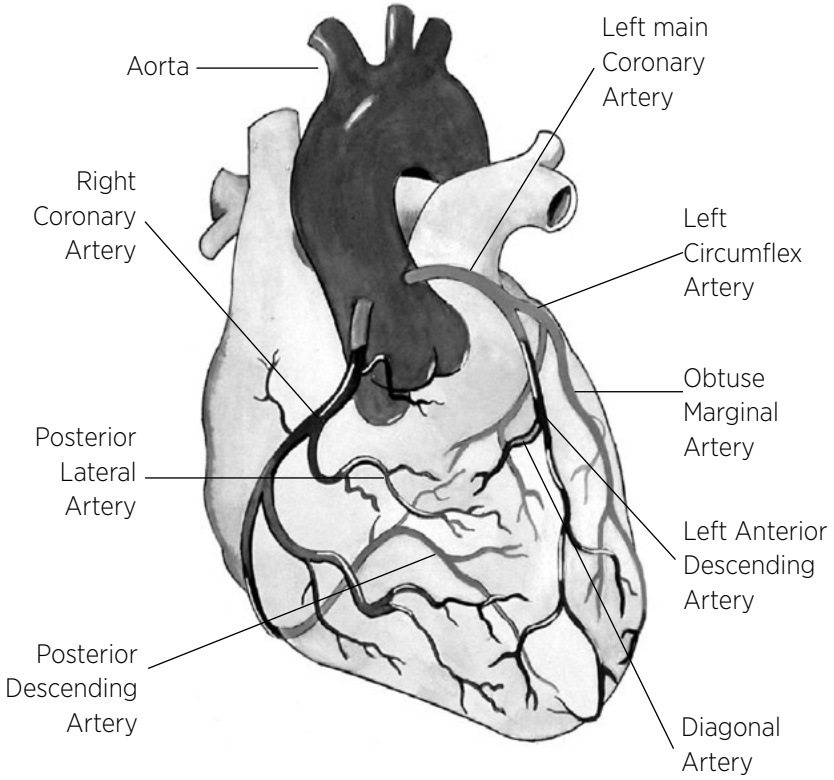
# How The Heart Works

## The Heart

The heart pumps to deliver blood, carrying oxygen and other nutrients to the organs and cells of the body. Your heart is about the size of your clenched fist and is a hollow organ situated in the middle of your chest located directly behind your breast bone.

Your heart is made of muscle. This muscle is supplied with blood by arteries called the **coronary arteries**. These arteries are designed to feed oxygen and other nutrients to the heart muscle.

*Diagram 1. The coronary arteries of the heart.*



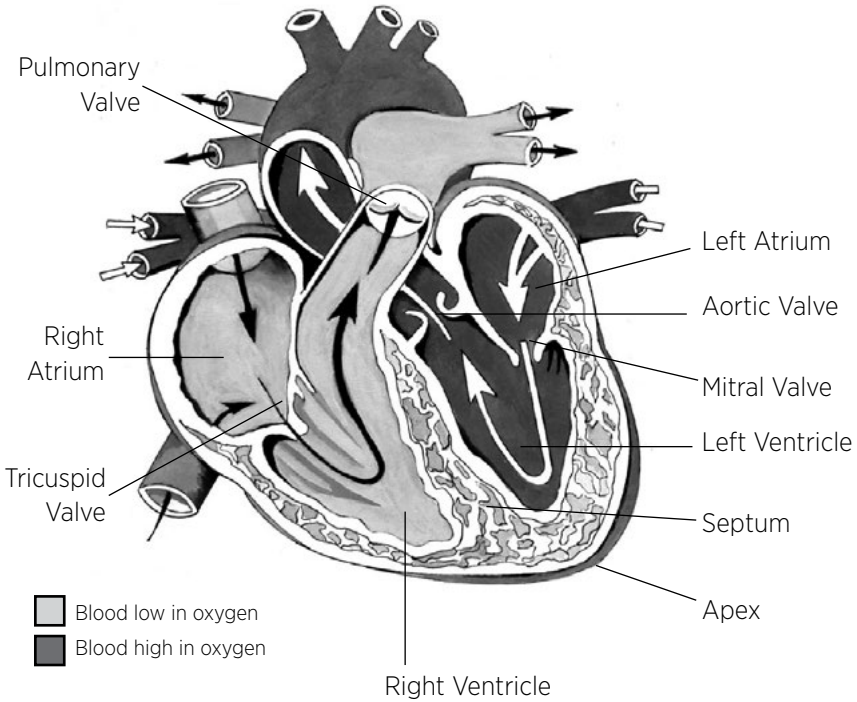
Inside the heart, there are four chambers - two smaller chambers at the top, Atria, and two larger chambers at the bottom, **Ventricles**. The wall between the right and left sides is called the **Septum**.

The blood that has circulated through the body is pumped into the **Right Atrium**, the blood then passes through the **Tricuspid Valve** into the **Right Ventricle**.

The **Right Ventricle** pumps the blood through the **Pulmonary Valve** to the lungs to receive a fresh supply of oxygen. The blood returns to the heart via the **Left Atrium**. It then passes through the Mitral Valve into the **Left Ventricle**.

The **Left Ventricle** then pumps the blood through the **Aortic Valve** into the **Aorta** which takes the blood rich with oxygen to the rest of the body.

*Diagram 2. Blood flow through the heart.*

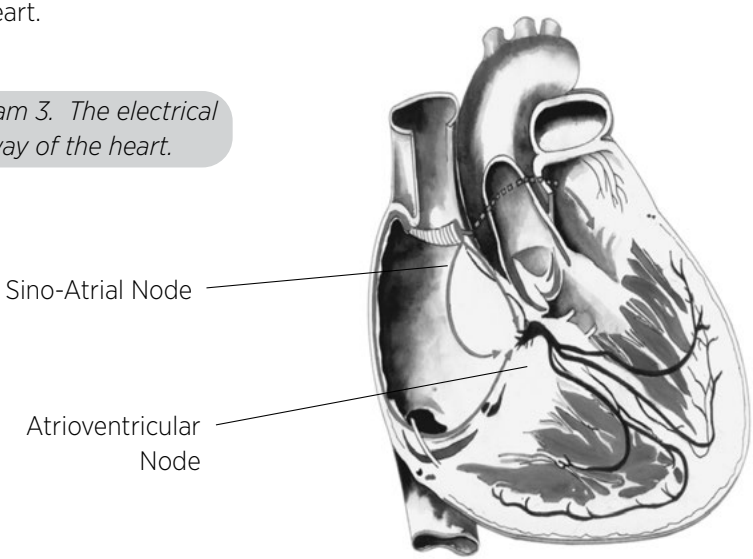


## Electrical Conduction

To achieve its pumping action the heart is equipped with a specialised area that acts as the natural pacemaker. The natural pacemaker is called the **Sino-Atrial (SA) Node** and is located in the right upper chamber of the heart.

The SA Node puts out an electrical signal or pulse that is first carried through the atria of the heart to a node called the **Atrioventricular (AV) Node** and then through the ventricles of the heart.

*Diagram 3. The electrical pathway of the heart.*




The electrical impulses delivered by the heart's natural pacemaker triggers the heart's muscle cells to cause the heart muscle to contract in a regular rhythm. Through this two part sequence, the heart maintains a rhythmic contraction.

The heart beats at a rate of approximately 60 to 100 beats per minute at rest. This rate does vary depending on the level of activity.

For example, during exercise the rate will increase to provide the body (especially muscles) with the increased blood supply required. To cope with this change of demand, the SA Node will automatically speed up, thus increasing the heart rate and delivering more blood to the body.

# What Can Go Wrong With The Heart?

## Arrhythmias

Arrhythmias occur when the heart stops beating in a regular rhythm or beats too fast or too slow. This happens when there is a malfunction in some part of the heart's electrical system. As explained previously, this system transfers electrical impulses around the heart causing the heart muscle to contract (i.e. heartbeat). Arrhythmias can be felt in different ways. Some of the feelings associated with arrhythmias include:

- Skipping a heartbeat
- Occasional extra heartbeats and
- Rapid heartbeat or pounding in the chest.

Some arrhythmias are not serious and may occur in healthy hearts. Other arrhythmias may need medical treatment. Common terms associated with arrhythmia are:

- **Tachycardia** is when your heart beats too quickly, usually more than 100 beats per minute.
- **Bradycardia** is when the heart beats too slowly, usually less than 50 beats per minute.
- **Atrial Fibrillation (AF)** is a common disturbance of the electrical system in the heart. It is an abnormal heart rhythm originating in the atria (top chambers of the heart). Instead of the impulse travelling in an orderly fashion through the heart, many impulses begin and spread through the atria causing a rapid and disorganised heartbeat.

Your doctor will explain your particular arrhythmia to you in more detail including its cause and treatment and answer any questions you may have.

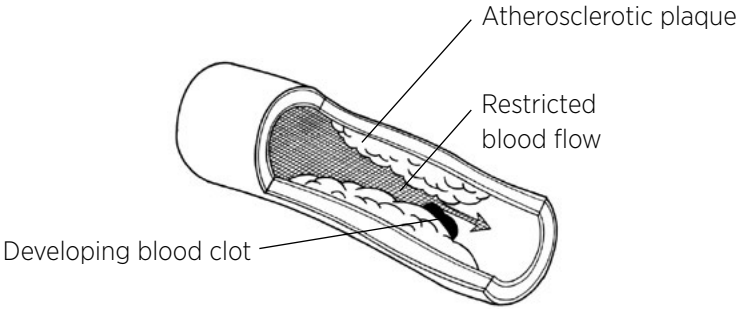
**For more information on pacemakers or implantable cardioverter defibrillators (ICD's), additional factsheets are available on request.**

## Coronary Artery Disease

Coronary artery disease is the narrowing of the blood vessels (coronary arteries) that supply oxygen and other nutrients to the heart muscle. The disease causing the narrowing or blockage is called atherosclerosis and is caused by the long term build-up of substances such as cholesterol. This is often called a plaque or lesion.

Often people live for many years with atherosclerosis increasing and have no symptoms or indication that the coronary artery disease is progressing.

*Diagram 4. Formation of atherosclerosis in a coronary artery.*




The build-up of these blockages is caused by a number of factors acting on their own or in combination. These factors are called risk factors. Some risk factors are modifiable, which means that you can do something to reduce your risk of further developing atherosclerosis. The other risk factors are non-modifiable risk factors, meaning that you are unable to change these as risk factors.

Please refer to section 'Long Term Lifestyle Changes' for more detail on risk factors.

If the doctor suspects that you may have coronary artery disease, a number of tests may be performed to help the doctor make a diagnosis.

See page 26 for the "Tests and Procedures" section of this book.

**Coronary artery disease does not go away, so it is treated according to how bad the symptoms are, as well as where and how serious the blockages are.** The various treatments available to you are detailed in the "Tests and Procedures" section (page 26) of this booklet.

Your doctors will discuss your options and advise the type of treatment that best suits your condition and will explain your particular treatment to you. Remember, any treatment should complement changes you make to your lifestyle in order to reduce your risk factors.

## Angina

Angina is a symptom that you may experience if your heart is not getting enough blood and oxygen as it requires. This may be caused by a narrowing of the coronary arteries. Each person may have very different symptoms so it is important that you know and recognise your symptoms.

### Common Symptoms

- Dull pain, tightness or heaviness in the centre of your chest
- A squeezing or choking sensation
- Shortness of breath
- Difficulty in breathing
- Pain in shoulders and/or arms
- Discomfort into your neck or jaw

### Less Common Symptoms

- Pain through from the chest to the back
- Sweating
- Fainting
- Can be mistaken for heartburn

Many people live very successful and full lives even though they have angina. You can achieve this by following these steps:

## Always

- Know what brings on your angina
- Learn how to manage an angina attack
- Live a healthy lifestyle
- Take the medications prescribed by your doctor

**If you experience angina during physical activity, slow down, stop and use angina medications if necessary. (See page 23 for the administration of anginine). If angina does not subside after 10 minutes treat it as a heart attack and ring 000 for an ambulance. They will decide whether you should go to hospital.**

If you are having to reduce your activity to avoid angina attacks, you must report this to your local doctor.

**NB: See action plan, page 23**

## Heart Attack

If the narrowing in the artery becomes completely blocked, the heart muscle beyond the blockage is starved of vital oxygen and a heart attack (myocardial infarction or coronary occlusion) will result.

The symptoms of a heart attack can be similar to those for angina, with the addition of any or all of the following:

- Feeling sick in the stomach
- Sweating
- Dull pain, chest tightness or discomfort that becomes more severe and does not go away
- Fainting
- Jaw and neck pain
- Severe pain (often described as "crushing")

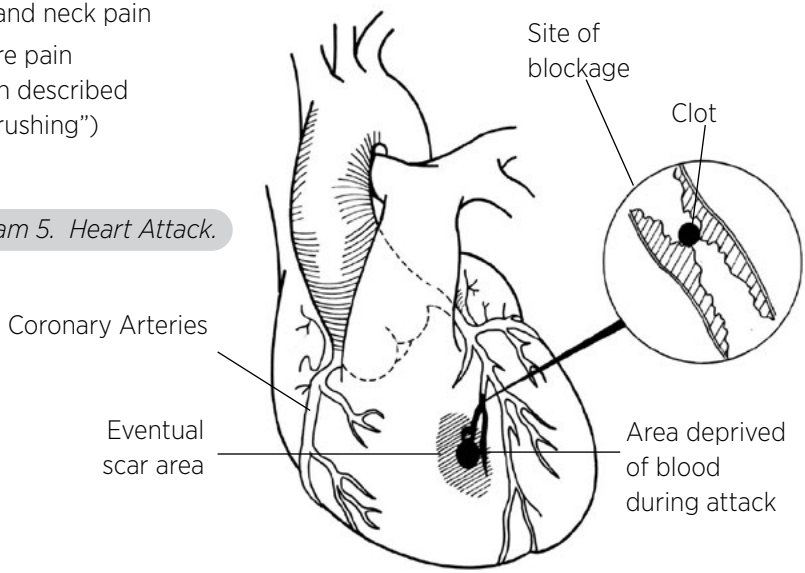
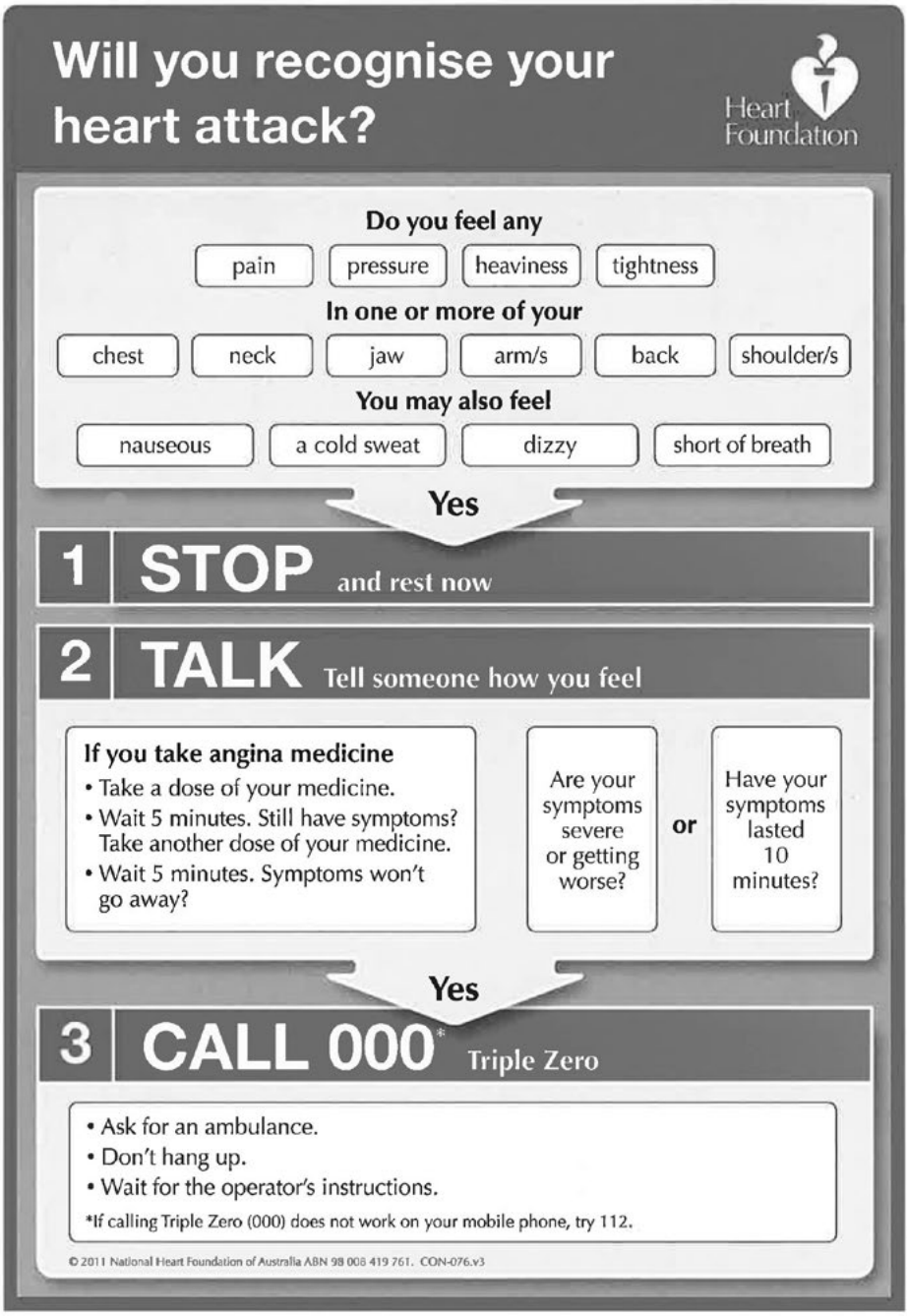



*Diagram 5. Heart Attack.*

If you have coronary artery disease and if you experience any of these symptoms that do not go away within 10-15 minutes, it is possible that you may be having a heart attack. **An ambulance should be called immediately.**

**Remember, the quicker you get to the hospital the sooner you can receive treatment to re-open the blocked artery that is causing the heart attack. This helps to prevent / reduce permanent damage to your heart muscle.**


Will you recognise your heart attack?
Heart Foundation
Do you feel any
pain
pressure
heaviness
tightness
In one or more of your
chest
neck
jaw
arm/s
back
shoulder/s
You may also feel
nauseous
a cold sweat
dizzy
short of breath
Yes
1 STOP and rest now
2 TALK Tell someone how you feel
If you take angina medicine
• Take a dose of your medicine.
• Wait 5 minutes. Still have symptoms? Take another dose of your medicine.
• Wait 5 minutes. Symptoms won't go away?
Are your symptoms severe or getting worse?
or
Have your symptoms lasted 10 minutes?
Yes
3 CALL 000* Triple Zero
• Ask for an ambulance.
• Don't hang up.
• Wait for the operator's instructions.
*If calling Triple Zero (000) does not work on your mobile phone, try 112.
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## Do you know how to do cardiopulmonary resuscitation (CPR)?

Cardiac arrest is the condition in which the heart stops beating. Performing CPR on someone who has suffered a cardiac arrest can save their life.

CPR involves chest compressions, and where possible ventilation (breaths). This helps to circulate oxygen and prevent damage to the brain and other organs until help arrives.

The NSW Ambulance service recommends that everyone should learn CPR. To find a certified CPR training course in your area search online for "Certified CPR Training" or visit the NSW Ambulance service website for more information.

**www.ambulance.nsw.gov.au/Community-Info/First-Aid/CPR.html**

The following CPR chart is a guide to be used in emergency situations and does not replace certified training.

This chart is reprinted with kind permission of the NSW Ambulance service.

# CPR Chart

Cardio Pulmonary Resuscitation

NSW Ambulance

## IN AN EMERGENCY REMEMBER YOUR DRSABCD

### Dangers?

**Check for danger** e.g. electrical cords, petrol or other hazards

### Responsive?

**Is the patient unresponsive and not breathing normally?**

### SEND FOR HELP!

> Shout for assistance
> Get someone to **dial Triple Zero (000) immediately**
> Ask for **AMBULANCE**


### Open Airway

> Gently tilt head back and lift chin (not for infants)
> Remove foreign matter from mouth (and nose of baby)

### Normal Breathing?

> Look, listen and feel for breathing
> **If normal breathing is present** leave or place patient on their side
> **If normal breathing is absent, commence CPR 30 compressions to 2 breaths at 100-120 compressions/min**

### Start CPR

**CHILD & ADULT:**

> Place heel of hand on the lower half of the sternum in the centre of the chest
> Compress sternum one third the depth of the chest **30 times** at a rate of 100-120 compressions per minute
> **Continue with 30 compressions to 2 breaths**
> Interruptions to chest compressions must be minimised

**INFANT:**

> Position 2 fingers on lower half of the sternum
> Depress sternum approximately **one third the depth of the chest**
> **Continue with 30 compressions to 2 breaths**

### Attach Defibrillator

Attach Automated External Defibrillator (AED) as soon as available and follow prompts.

**CONTINUE CPR UNTIL PARAMEDICS ARRIVE OR RESPONSIVENESS OR NORMAL BREATHING RETURNS**

**Beware of rescuer fatigue, if help is available swap rescuers every two minutes**

This chart is not a substitute for attending a first aid course. LEARN CPR NOW!

This CPR chart is provided free of charge and must not be sold. The chart is available to download from the Ambulance website at: www.ambulance.nsw.gov.au.

For enquiries about this chart:
NSW Ambulance
Locked Bag 105
Rozelle, NSW 2039
Tel: (02) 9320 7777

This chart conforms to the Australian Resuscitation Council's guidelines on effective CPR as at January 2016. For more information visit: www.resus.org.au

# Tests And Procedures

This section contains information on tests and procedures that you may undergo before or during your stay in hospital. Please read only about the tests that are relevant to you. Your doctor will provide you with the results and more information following the various tests you have undergone.

## Chest X-Ray

An x-ray of the chest is useful to detect lung disorders (eg. chest infections) and is also helpful for detecting signs of heart disease. If you are having heart surgery, a chest x-ray is routinely performed beforehand and is often referred to during surgery.

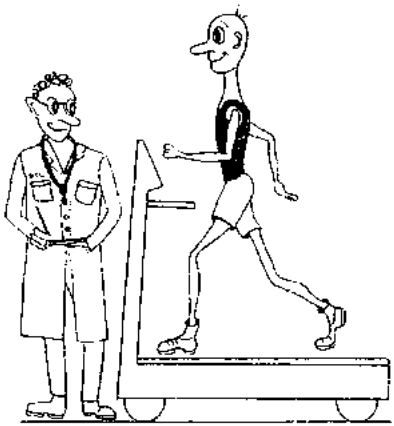
## Electrocardiogram (ECG)

An ECG is used to detect abnormal heart rhythms as well as sick or damaged heart muscle. The ECG is a simple, painless and common investigation, which takes about 5 minutes. You can eat and drink as normal prior to this test. During the ECG, electrodes will be placed on your chest, wrists and ankles. These electrodes will record the electrical activity of the heart. The ECG produces a "picture of the heartbeat" showing how the electrical pathway is working.

## Echocardiogram (Echo)

This is a painless and very useful test on the heart. Echocardiography uses ultrasound (sound waves) to create a picture of your heart. This test is performed for a variety of reasons such as: to evaluate heart sounds, heart size and to assess how well the heart and valves are functioning.

## Exercise Stress Test



Exercise stress testing is used to evaluate how well your heart copes with the extra demands placed on it during exercise, whereas a routine ECG is done with the heart at rest.

### Stress Echocardiogram

Occasionally the exercise test is combined with an echocardiogram to provide added information on heart function when performing exercise.

## Sestamibi Heart Scan

### Stress Sestamibi Heart Scan (with or without Persantin)

This test is performed to assess blood flow to the heart muscle. The scan is performed in two parts - at rest (part 1) and during stress (part 2). The "Stress" (exercise) component increases your heart rate and the coronary blood vessels then dilate, increasing the blood flow and oxygen to the heart muscle. If you are unable to exercise on a treadmill the doctor may use a drug called Persantin, which has a similar effect and opens up the coronary arteries as if you were exercising.

### Part 1 - "Rest"

When you arrive in the department a small cannula will be inserted into a vein in your arm. You will be given an injection of a small dose of a radioactive compound called **Sestamibi**. After 45 to 60 minutes you will have scans or pictures taken of your resting heart.

### Part 2 - "Stress"

Approximately one to two hours after the resting scans have been taken you will either complete the treadmill test or the drug **Persantin** will be given via the cannula in your arm. During this time you will be carefully monitored. Near the end of the "stress" test another small dose of the radioactive compound **Sestamibi** will be given to you through your cannula and approximately 45 minutes later more scans are taken of your heart. The total time of the test is approximately 4 to 5 hours.

## Cardiac Magnetic Resonance Imaging (Cardiac MRI)

Cardiac MRI is a non-invasive medical test that helps to evaluate and diagnose conditions related to your heart, including coronary artery disease, damaged muscle caused by a heart attack, heart failure, heart valve problems or conditions that may affect your heart muscle. MRI uses radio waves, magnets and a computer to create images of your heart and major blood vessels. Sometimes the doctor may inject a contrast agent (such as gadolinium) into a vein during the procedure to help highlight the heart and blood vessels on the MRI images. During a Cardiac MRI you will be asked to lie on your back on a table that slides into the MRI machine. If you have any concerns about your ability to lie flat or worry about being in a confined space speak to the medical staff prior to the procedure as they might be able to give you medicine to make you more comfortable. Cardiac MRI usually takes between 30 to 90 minutes depending on how many pictures are needed.

You will be asked to complete a screening form prior to undergoing a Cardiac MRI because some implanted medical devices (eg: an implanted pacemaker or defibrillator, cochlear/ear implants) may require special precautions or mean that an MRI would not be safe. Talk to your doctor about any concerns or questions you may have in this regard.

## Computerised Tomography (CT) Coronary Angiogram (CTCA)

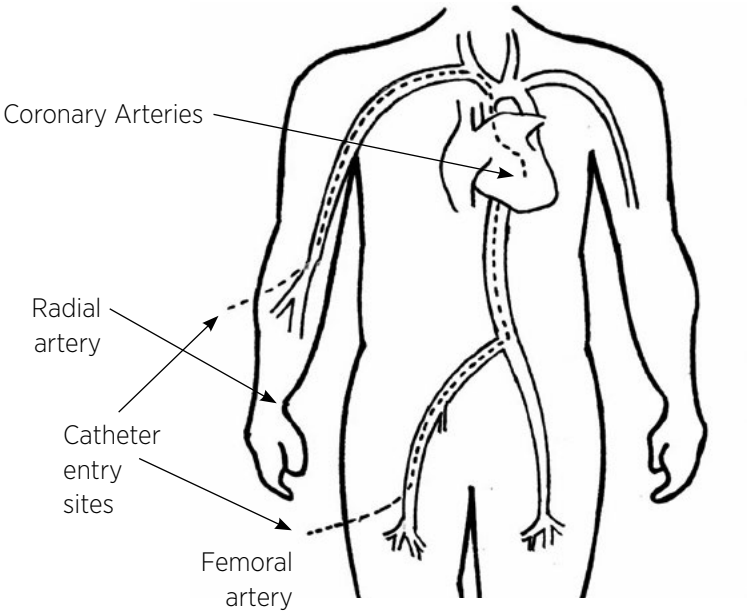
A CT coronary angiogram is a special test that looks at the coronary arteries that supply your heart muscle with blood. It is primarily used to evaluate your coronary arteries for coronary artery disease. During a CT coronary angiogram contrast dye is injected via a vein in your arm or hand, (similar to having a blood sample taken); the CT scanner then uses x-rays and computers to take multiple pictures (in cross-section) of your heart and the coronary blood supply. CT angiogram does not replace conventional cardiac catheterisation and may not be suitable for all patients. Your doctor will discuss with you which test may be more appropriate for you based on your current diagnosis and individual needs.

## Coronary Angiogram

A coronary angiogram is used to determine if your coronary arteries are narrowed or blocked. The procedure is performed with the guidance of X-ray,

using wires and small flexible catheters which are inserted into your arteries. Once the catheter is in place a small amount of x- ray dye is injected through these catheters and pictures are taken of your coronary arteries. The doctor performing the procedure may access your arteries via your groin (femoral artery) or wrist (radial artery). It is performed in the cardiac catheter laboratory by a cardiologist, specialised nurses and technicians. The procedure takes about 40mins. You will be awake during the procedure but may be given a light sedative if required. Depending on the results of the angiogram, in some cases your Specialist may advise a further intervention such as an angioplasty (ballooning of a narrowed artery) or a stent procedure.

*Diagram 6. The path of the catheter during angiogram using the femoral or radial artery.*



## Coronary Angioplasty and Stent Procedure

**Angioplasty and stenting can sometimes be used instead of surgery to open up a narrowed or blocked artery**

***Angioplasty*** is a procedure that is used to widen a narrowed coronary artery by inflating a balloon-tipped catheter to open a blocked artery.

*Diagram 7. The balloon catheter is inserted into the narrowed coronary artery.*

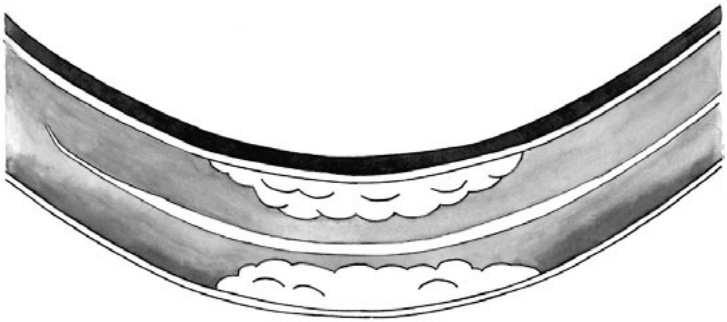


*Diagram 8. The balloon dilation catheter compresses the obstructing plaque against the artery wall allowing greater blood flow to the artery.*

***A Coronary Stent*** is a small metal meshwork that is inserted into a coronary artery using a balloon catheter after the initial angioplasty. This stent acts as a "scaffold" to hold the coronary artery open. The aim is to improve blood flow to the heart muscle, relieve the symptoms of coronary artery disease (angina) as well as making it less likely that the blockage will return. More than one stent can be placed in one or more coronary arteries depending on your particular needs.

An angioplasty/stent procedure is performed in a very similar way to an angiogram (see the angiogram section). If a blockage is identified following the angiogram, a balloon-tipped catheter is then passed through a sheath (small tube) in your groin or arm and guided into the artery. At the site of the narrowing, the balloon catheter is then inflated, compressing the plaque, opening up the artery and improving blood flow to the heart muscle. You may experience some pressure in your chest when the balloon is inflated but this is normal and will go away quickly. Following the removal of the balloon catheter, a stent which is mounted on the end of another balloon catheter is positioned at the site of the narrowing or blockage. The balloon catheter is then inflated; this allows the stent to expand and be implanted in the vessel. The balloon catheter is then deflated and removed. The stent stays in the artery for life.

This procedure may also be done in an emergency situation such as during an episode of angina or during a heart attack.

**You can be reassured that your stent cannot dislodge or move**

*Diagram 9. The stent is mounted on a balloon catheter.*

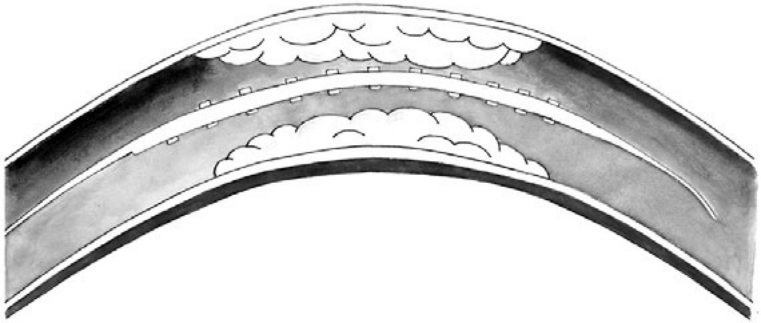


*Diagram 10. The balloon is inflated and the stent is expanded and implanted in the coronary artery.*

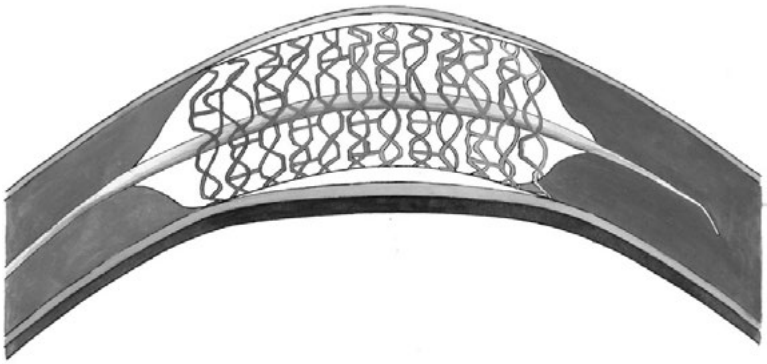
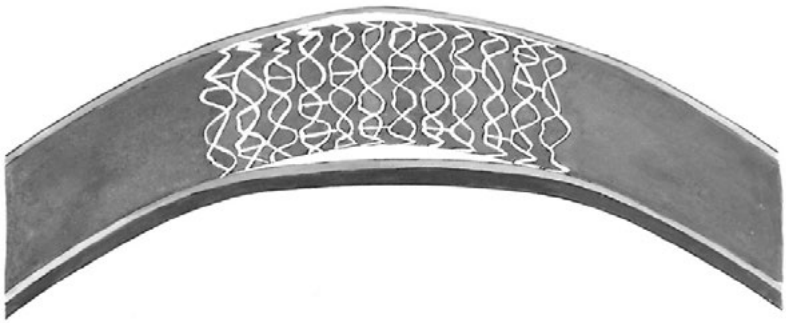


*Diagram 11. The balloon and catheter are removed leaving the stent in the artery.*



# Recovery

Once the procedure is completed the catheter is removed and pressure is applied to the area where it was inserted. If your procedure was performed through the groin (femoral artery) you will remain on bedrest for approximately 4 hours. This is to manage the puncture site in your groin and reduce the risk of bleeding. If your procedure was through the wrist (radial artery) you are able to mobilise sooner.

**Hospital stay can vary depending on your particular circumstances, average length of stay is one to two days, however in certain situations you may be discharged 4-6 hours after your procedure.**

When you are discharged you will be instructed to take certain medications. These will include: anti-platelet medication (blood thinning agents), for example:

- **Aspirin**
- **Clopidogrel**
- **Prasugrel**
- **Ticagrelor**
- **Warfarin or Dabigatran – sometimes used**

NB: These medications all prevent blood clots from sticking to the surface of the stent and causing a blockage. It is very important that you follow the medication regime.

**Do not stop taking any of the prescribed medications unless instructed to do so by the cardiologist who implanted the stent.**

## Wound Care After Discharge

If you have had an angiogram, angioplasty or stent it is important you take care of your wound to prevent infection or unnecessary bleeding. Once you are home it is important that you observe the puncture site on a daily basis. The area may be sore and bruised and there may be a soft lump at the site. This is all normal.

**Angio-Seal Device:** A lump in your groin may be due to an Angio-Seal device used to close the puncture site instead of applying manual pressure or a pressure device to stop the bleeding. This small device is made of absorbable components: a small collagen sponge and an anchor connected by a suture. The angio-seal device is completely absorbed in 60-90 days. If you receive one of these devices, you will be given a Patient Information Card which you should keep with you for 90 days.

### Care of your wound: wrist or groin

- A dressing will be applied immediately after the procedure; this can be removed the following day
- If the doctor uses the radial approach you may have a pressure device/band around your wrist; the dressing and the band should be removed the following day
- Gently clean and pat dry as usual each day in the shower; wipe the puncture site with the betadine swab for the next 2 days after your shower.
- **Avoid touching the site with your hands as this can be a source of infection**

**It is important that you monitor the bruising and swelling, as an increase in size MAY indicate new bleeding into the tissue around the puncture site.**

## If bleeding occurs - what should I do?

If bleeding occurs from your puncture site in the arm or groin you should lay flat and apply firm downward pressure with your fingertips approximately 2cm above the puncture site for at least 5 minutes. If bleeding is brisk or does not stop within 15 mins you should go to your local emergency department.

## Recovery – in the first week:

- Avoid lifting anything that weighs more than **5kg**
- No vigorous activity for the next **2-3 weeks**
- Avoid public pools and spas until the puncture site has healed
- ***You should not drive for 48 hours (as per RMS guidelines 2016) NB If your doctor has told you that you have had a recent heart attack then driving is not advised for 2 weeks. Check with your doctor if you have any questions in this regard***

## Contact your local doctor if you experience any of the following:

- The bruise is increasing in size
- The lump is larger or harder
- You have increased pain, particularly at rest
- Pins and needles or numbness of the affected limb
- Redness or heat around the site

## In the case of an emergency you should call 000 or go to the emergency department at your local hospital.

## Discharge Checklist

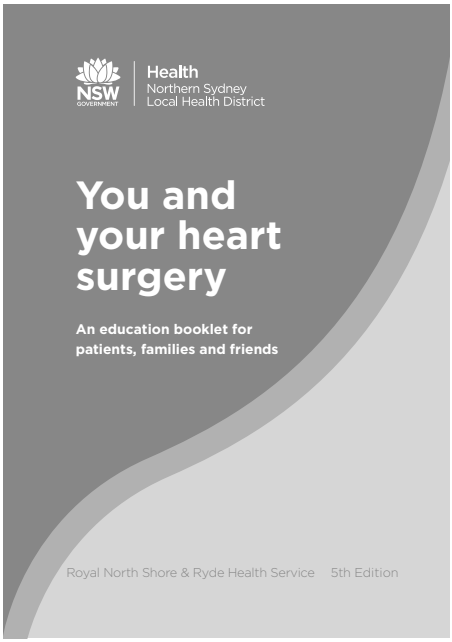
- ❏ ***Follow-up*** with your local doctor **1-2 days** after discharge from hospital – take a copy of your discharge letter or angio report with you on your first visit
- ❏ Ensure your groin or wrist wound remains clean and dry – see wound care information (page 34)
- ❏ ***Take your medications*** as prescribed
- ❏ **If you have diabetes** and you are currently taking medications for diabetes, **please check with your doctor when you should resume taking your medication**
- ❏ Discuss with your doctor any questions you may have with regards to ***return to work or driving*** – RMS guidelines apply
- ❏ ***CHEST PAIN/ANGINA*** – If you feel unwell, experience chest pain or symptoms of angina after discharge, please ring your doctor or go to the emergency department at your local hospital
- ❏ ***If you develop any numbness, weakness or speech difficulties overnight you should return to the Emergency Department at your local hospital or to RNSH***
- ❏ **A cardiac rehabilitation specialist nurse will either see you in hospital or ring you soon after discharge to individualise your return to work/ activity guidelines, or answer any questions you may have**
- ❏ If you have any other questions following your discharge home, contact your local doctor or local Cardiac Rehabilitation team (contact numbers can be found at the back for this booklet)

# Heart Surgery

Heart surgery may need to be performed when:

- You need coronary artery bypass grafting to restore blood flow to the heart
- A heart valve needs repair or replacement
- You require the repair of the heart muscle between your atrium or ventricles of the heart or
- You have a heart aneurysm that needs repairing

**Detailed information about heart surgery and recovery issues are supplied in a separate booklet titled:**




## "YOU AND YOUR HEART SURGERY"

A thorough explanation will also be given about all aspects of your surgery and recovery by the individual team members.

# Heart Medications

This section contains information on the most commonly prescribed medications, however it does not contain all of the available information about medications used to treat heart disease. If you have further queries or concerns about your medications ask your doctor or pharmacist. Always take your medications as prescribed by your doctor.

Many different medications are used to treat heart disease, all of which belong to a few main groups. Although the medications may be similar, within each group there are differences that may make a medication more suitable for some people. This enables your doctor to choose a medication that will suit you.

All medications have a “generic” name and a “brand” name. There may be several different brand names of the same medication therefore it is very important that you know the generic name as well as the strength of your medications.

In order to simplify your medications, some pharmaceutical companies create combined products to try and reduce the number of tablets you may need to take.

It is important to take your medications at the same time each day. Many medications can interact with other drugs, over the counter medications, alternate medicines, and herbal supplements. It is therefore important to check with your doctor or pharmacist before starting anything new.

To reduce the risk of medication errors between your G.P. and your specialist, you can help by keeping an up to date list of all your medications, including their dose and the frequency with which you take them. Visit the NPS Medicine Wise website for some information on creating your own “medicines list”, or ask your local pharmacist to help you create one.

# Blood Pressure Lowering Medications

## ACE Inhibitors

Angiotensin converting enzyme (ACE) inhibitors are very effective in treating heart failure, lowering blood pressure and can also benefit patients who have had a heart attack. They open up (dilate) your blood vessels helping your heart to pump more efficiently.

| Generic name | Brand name examples |
|---|---|
| Captopril | Acenorm, Capoten |
| Enalapril | Auspril, Enahexal, Renitec |
| Fosinopril | Monopril, Fosinopril, Monace |
| Lisinopril | Fibsol, Prinivil, Zestril |
| Perindopril (arginine) | Coversyl |
| Perindopril (erbumine) | Perindo, Indopril, GenRx |
| Quinapril | Accupril, Acquin, Aquinafil |
| Ramipril | Ramace, Tritace, Tryzan |
| Trandolapril | Gopten, Tranalpha |

**Note: Some of the above medications can also be found in combination products. Perindopril arginine 2.5mg is equivalent to perindopril erbumine 2mg.**

**Side effects and adverse reactions:**

- Light-headedness or dizziness may occur if your blood pressure is too low. If affected, get up slowly from your chair or bed.
- Dry cough, headache, nausea and vomiting.
- High potassium level in the blood.
- Swollen face, lips, mouth or throat, or difficulty in breathing (seek immediate help from a doctor)

## Angiotensin-2 Receptor Blockers (ARBs)

These medications have a similar action to the ACE inhibitors. They are usually better tolerated and usually used only if you are unable to tolerate an ACE inhibitor. These medications allow blood vessels to relax, thus lowering your blood pressure.

| Generic name | Brand name examples |
|---|---|
| Candesartan | Atacand, Adesan |
| Eprosartan | Teveten |
| Irbesartan | Avapro, Karvea, Abisart, Irbestat |
| Losartan | Cozavan, Cozaar |
| Olmesartan | Olemetec |
| Telmisartan | Micardis, Pritor |
| Valsartan | Diovan |

**Note: Some of the above medications can also be found in combination products.**

**Side effects and adverse reactions:**

- Light-headedness or dizziness may occur if your blood pressure is too low. If affected, get up slowly from your chair or bed.
- Headache
- High potassium level in the blood.
- Skin rash or itchiness, aching muscles or joints, not caused by exercise (seek immediate help from a doctor)
- Yellowing of the skin and / or eyes (seek immediate help from a doctor)

## Anti-Arrhythmic Medications

Anti-arrhythmic drugs are used to control the rhythm of the heart. Other medications that also act as anti-arrythmics can be found under beta-blockers (e.g. sotalol), and some of the calcium channel blocker medications (e.g. diltiazem and verapamil).

### Digoxin

Not only is digoxin an anti-arrhythmic, but it can also improve the function of the heart in heart failure.

| Generic name | Brand name examples |
|---|---|
| Digoxin | Lanoxin, Sigmaxin |

**Side effects and adverse reactions:**

- Loss of appetite, nausea, vomiting, diarrhoea, and tiredness.
- Visual disturbances or confusion (seek immediately help from a doctor)

**Other information:**

- Avoid taking antacids, e.g. Mylanta® or laxatives, e.g. Metamucil® within 2 hours of taking your digoxin tablets, since the absorption of digoxin into your body may be reduced.
- Take digoxin with or after food to reduce the chance of nausea.
- Your doctor may order a blood test to check your digoxin level, kidney function and potassium levels. If the digoxin level is too high it can mean that you are more likely to experience side effects and you may need a dose adjustment.

Remember to withhold the dose of digoxin on the day of the blood test (for more accurate results) – you may need to check with your doctor to obtain an earlier blood test time to avoid missing the dose.

### Amiodarone

| Generic name | Brand name examples |
|---|---|
| Amiodarone | Aratac, Cordarone X, Rithmik |

**Side effects and adverse reactions:**

- Headache, nausea, vomiting, sleep disturbances, taste disturbances (metallic), numbness or tingling in fingers or toes, visual disturbances, and increased sensitivity to the sun.
- You will need to have regular thyroid, eye, and lung function tests
- Avoid grapefruit juice whilst taking amiodarone.
- Shortness of breath, cough or flu-like symptoms, weakness in walking, muscle cramps, loss of balance, disturbances in heartbeat. (seek immediate help from a doctor)

### Flecainide

| Generic name | Brand name examples |
|---|---|
| Flecainide | Flecatab, Tambocor |

**Side effects and adverse reactions**

- Palpitations, fatigue, chest pain, abdominal pain, constipation, rash, tremor, nervousness and numbness on the body.
- Sore throat, flu-like illness, fatigue or anaemia within a few weeks of starting medication. (seek immediate help from a doctor)

## Anticoagulant Medications

Anticoagulant medications work by inhibiting blood clotting factors in order to prevent clots from forming in the body. Patients with atrial fibrillation/flutter may be on an anticoagulant in order to prevent a clot from forming in their heart. Patients with artificial heart valve may also be on an anticoagulant to prevent clots from forming on the valve.

Anticoagulants can also break down clots which have already formed, for example in the legs where it is known as a DVT (deep vein thrombosis), or in the lungs where it is known as a PE (Pulmonary embolism). If clots are left untreated they can travel to the brain and cause a stroke.

The main side effects of these medications include bleeding and bruising, and if you notice any severe bruising or bleeding (e.g. blood in urine/faeces, or coughing up of blood), notify a doctor straight away.

Many medications can interact with anticoagulants, so before starting anything new, be sure to check with your pharmacist or doctor first. Avoid taking non-steroidal anti-inflammatory drugs like **ibuprofen** or **diclofenac** for pain. **Paracetamol** is the preferred choice for pain in people who are taking anti-coagulants. Remind other doctors and your dentist that you take **warfarin**, they will advise you about ceasing **warfarin** temporarily prior to any elective surgery or procedures.

There are a number of different types of anticoagulant medications. The original and most well-known is warfarin, however in the past couple of decades, another 3 have come on the market in Australia. These are known as **Novel Oral Anticoagulants (NOACs)**.

## Warfarin

| Generic name | Brand name examples |
|---|---|
| Warfarin | Coumadin, Marevan (NOT interchangeable) |

**Note: If you usually take Marevan® please notify your doctor or nurse during any hospital admissions.**

**Side effects and adverse reactions**

- Increased risk of bleeding/bruising
- Coughing up blood, blood in urine/faeces, severe bruising/bleeding (seek immediate help from a doctor)

**Other information:**

- The **INR** (International Normalised Ratio) is a measure of how long it takes your blood to clot. You will need regular blood tests to measure your **INR** so your doctor can tell you what dose of warfarin to take. This dose may constantly change.
- Be aware that many medications and some foods can change the **INR** or clotting time. Ask your doctor or pharmacist if in doubt.
- Limit alcohol where possible.

## Other Anticoagulant Agents - NOAC's (Novel Oral Anticoagulants)

Many of the general precautions outlined for warfarin above also apply to these agents; however as opposed to warfarin these agents do not require routine blood tests (INR) to guide dose adjustment.

| Generic name | Brand name examples |
|---|---|
| Dabigatran | Pradaxa |
| Rivaroxaban | Xarelto |
| Apixaban | Eliquis |

**Side effects and adverse reactions**

- Increased risk of bleeding/bruising, diarrhoea, nausea, vomting
- Severe bruising or bleeding, coughing up of blood, blood in urine/faeces (seek immediate help from a doctor)

## Antiplatelet medications

Platelets are small blood cells which are important in helping the blood clot. Antiplatelet medications prevent clots from forming by making the surface of the platelet less sticky.

### Aspirin

| Generic name | Brand name examples |
|---|---|
| Aspirin | Astrix, Cartia, Cardiprin |

**Side effects and adverse reactions:**

- Stomach irritation and discomfort, wheezing and difficulty breathing, increased risk of bleeding.
- Coughing up blood, blood in urine/faeces, severe bruising/bleeding (seek immediate help from a doctor)

**Other information:**

- Aspirin should be taken with food to prevent stomach irritation
- Effervescent tablets should be dispersed in water before taking

## Other Antiplatelet Agents

Other antiplatelet agents are usually taken in addition to aspirin, they prevent blood clots in patients who have had a heart attack or have unstable angina, or from forming on newly implanted stents.

Clopidogrel may also be used in strokes and heart disease in patients who are allergic to or intolerant of aspirin.

| Generic name | Brand name examples |
|---|---|
| Clopidogrel | Plavix, Iscover, Piax |
| Prasugrel | Effient |
| Ticagrelor | Brilinta |

**Note: Clopidogrel also comes as a combination product with aspirin: CoPlavix (aspirin 100mg + clopidogrel 75mg)**

- After a stent, patients are usually put onto two anti-platelet agents. Usually, aspirin is continued lifelong, whereas the second anti-platelet (for example, clopidogrel, or ticagrelor), is usually only continued for about 12 months, as this is the period in which you are most likely to get a clot on your stent.
- Do not stop taking any of these medications without first consulting your cardiologist

Side effects and adverse reactions:

- Bleeding/bruising, indigestion, stomach pain, nausea, vomiting, diarrhoea, skin rash, shortness of breath, headache

**Alert (your doctor) if you experience:**

- Any sign of infection such as sore throat, fever and chills.
- Prolonged or abnormal bleeding or bruising occurs.
- Signs of jaundice; e.g. yellow eyes or skin, dark urine or light coloured stools.

## Beta Blockers

Beta blockers block the effects of adrenaline on your heart and blood vessels, reducing your heart's work. Beta blockers have a protective effect after a heart attack, and are also useful in preventing attacks of angina. They control blood pressure and heart rate. Some beta blockers can be used in heart failure to help the heart work more effectively.

| Generic name | Brand name examples |
|---|---|
| Atenolol | Noten, Tenormin, Tensig |
| Bisoprolol | Bicor, Bispro |
| Carvedilol | Dilatrend |
| Labetalol | Presolol, Trandate |
| Metorpolol (tartrate) | Betaloc, Minax |
| Metoprolol (succinate) | Toprol XL (controlled release) |
| Nebivolol | Nebilet |
| Oxprenolol | Corbeton |
| Pindolol | Barbloc, Visken |
| Propranolol | Inderal, Deralin |
| Sotalol | Sotacor, Solavert |

**Side effects and adverse reactions:**

- Tiredness when exercising, low blood pressure, dizziness, drowsiness, stomach upsets, nausea and vomiting, slow heartbeat, impotence (inability to maintain an erection), decreased concentration, cold hands or feet, nightmares, hallucinations, and sleeplessness.
- Very slow heart rate, cold hands and feet, breathing difficulties, visual disturbances (seek immediate help from a doctor)

## Calcium Channel Blockers

Calcium channel blockers open up your blood vessels, resulting in an increase of blood supply to the heart and reducing the work the heart has to do to pump blood around the body.

Calcium channel blockers can be used to lower blood pressure and to prevent angina.

| Generic name | Brand name examples |
|---|---|
| Amlodipine | Norvasc, Amlo, Nordip |
| Felodipine ER | Plendil ER, Felodur ER |
| Lercanidipine | Zanidip, Lercan, Zircol |
| Nifedipine | Adalat, Adefin, Nyefax |
| Nifedipine XL | Adalat Oros, Adefin XL |
| Diltiazem | Cardizem, Vasocardol |
| Diltiazem CD | Cardizem CD, Vasocardol CD |
| Verapamil | Anpec, Isoptin |
| Verapamil SR | Cordilox SR, Isoptin SR, Veracaps SR |

**Side effects and adverse reactions:**

- Low blood pressure causing dizziness, light-headedness or faintness, headache, flushing, constipation especially with diltiazem and verapamil.
- Muscle cramps, slow heart rate, swelling of the ankles, shortness of breath (seek immediate help from a doctor)

## Cholesterol (Lipid) Lowering Agents

'Blood lipids' is the name given to all the fatty substances in the blood, including cholesterol and triglycerides. The overall aim of diet and drug treatment is to lower the amount of cholesterol in the blood. These medications should be taken in conjunction with a low fat diet.

### Statins (HMG-CoA reductase inhibitors)

| Generic name | Brand name examples |
|---|---|
| Atorvastatin | Lipitor, Trovas, Lorstat |
| Fluvastatin | Lescol, Vastin |
| Pravastatin | Pravachol, Lipostat |
| Rosuvastatin | Crestor, Cavstat |
| Simvastatin | Lipex, Zocor, Simvar |

Statins not only lower bad cholesterol, but it also increases the level of good cholesterol. Statins can also reduce inflammation in the blood vessels and stabilise fatty plaques within the vessels. Grapefruit juice should be avoided as it can increase statin levels in the blood.

**Side effects and adverse reactions:**

- Constipation, diarrhoea, wind, stomach upset, nausea, headache, dizziness, inflammation of the liver.
- Muscle aches, tenderness or pain, unusual tiredness, fever (seek immediate help from a doctor)

### Other medications used to reduce blood lipids:

- Ezetimibe (Ezetrol)
- Nicotinic Acid
- Fibrates (fenofibrate and gemfibrozil)
- Cholestyramine

## Diuretics - Fluid Tablets

Diuretics cause your kidneys to remove excess water and salt from your body into your urine. This can reduce swelling and water retention (e.g. in your legs or in your lungs) often caused by heart disease, and can also be used to lower blood pressure.

| Generic name | Brand name examples |
|---|---|
| Amiloride | Kaluril |
| Amiloride + Hydrochlorothiazide | Moduretic |
| Bumetanide | Burinex |
| Chlorthalidone | Hygroton |
| Eplerenone | Inspra |
| Ethacrynic acid | Edecrin |
| Frusemide | Lasix, Urex, Uremide, Frusid |
| Hydrochlorothiazide | Dithiazide |
| Indapamide | Dapa-tabs, Natrilix, Insig |
| Spironolactone | Aldactone, Spiractin |
| Triamterene + Hydrochlorothiazide | Hydrene |

**How to take these medications:**

- If you are taking a diuretic twice daily and are affected by frequent urination during the night, take the second dose in the afternoon (before 2pm) rather than in the evening or at night.
- Weigh yourself regularly and report any rapid loss or increase in weight to your doctor.

**Side effects and adverse reactions:**

- Frequent need to pass urine, dry mouth, thirst, light-headedness, dizziness.
- Weakness, tiredness, drowsiness, muscle cramps, pains, gout, or a fast heartbeat (seek immediate help from a doctor)

## Nitrates

**You must not take sildenafil (Viagra®), Tadalafil (Cialis®), or vardenafil (Levitra®) if you are taking any nitrate medication. It may lead to a severe drop in your blood pressure, which may be difficult to treat.**

Nitrates are called vasodilators. They dilate (open up) blood vessels, including the ones carrying blood and oxygen to your heart. They are very useful in relieving angina pain. Some preparations are used on an "as required" basis to control angina pain; other preparations are used regularly and deliver a continuous supply of drug over a longer period (e.g. patches and sustained release tablets).

### Short Acting Nitrates:

**Note: It is best to take these medications whilst seated as they reduce blood pressure which can sometimes cause dizziness and fainting.**

| Generic name | Brand name examples |
|---|---|
| Glyceryl Trinitrate (GTN) (600 micrograms) | Anginine, Lycinate Tablets |
| Glyceryl Trinitrate Spray (400 micrograms) | Nitrolingual Pump Spray |

**How to take this medication**

- Use only when necessary for chest pain.
- After sitting down, place half to one tablet of Anginine®/Lycinate® under your tongue (or in the pouch of your cheek) and allow to dissolve, or use one spray of Nitrolingual Pump Spray® under your tongue.
- If after 5 minutes the pain is not relieved, place another tablet or spray another puff under the tongue. **If the pain continues after using up to 3 tablets or 3 sprays within 15 minutes, RING 000 FOR AN AMBULANCE.**
- After angina has been relieved, you may spit out or swallow what is left of the tablet to avoid adverse effects such as headaches.
- Write the date you opened your bottle of Anginine®/Lycinate® tablets on the bottle. Discard any remaining tablets after 3 months and obtain a fresh supply

### Long Acting Nitrates:

| Generic name | Brand name examples |
|---|---|
| Isosorbide mononitrate SR tablets | Duride, Imdur, Monodur |
| Glyceryl Trinitrate Patches | Nitrodur, Transiderm Nitro |

**How to take this medication**

- Do not cut the isosorbide mononitrate 120mg tablets – only the 60mg tablets may be halved.
- Apply the patches to the chest (best place) or upper arms. Avoid hairy areas because the patches do not stick well. Put your patch on a new position each day to prevent skin irritation.
- Do not leave the patch on all the time. Usually patches are applied for no more than 12 hours per 24-hour day. Otherwise the body becomes tolerant to the medication and it doesn't work as well.

**Side effects and adverse reactions:**

- Headache (usually last 1-2 weeks after starting treatment). If affected, using paracetamol can be effective.
- Light-headedness, dizziness. If affected, get up slowly from your chair or bed.

**Other medications used to treat angina:**

- Ivabradine
- Nicorandil
- Perhexiline

## Where Can I Get More Help On My Medication?

### While in hospital:

- Your pharmacist
- Your doctor

### When you get home:

- Your local community pharmacist
- Your GP
- NPS medication line: **1300 888 763**, or website **www.nps.org.au**

# Long Term Lifestyle Changes

The following section contains information about long term changes you may need to make to your lifestyle to help control your risk factors for heart disease. This information should be used along with any extra information you may be given by members of your health care team.

Lifestyle (that is the way that you live) has an important role to play in reducing your risk factors for heart disease. This section contains information on lifestyle related risk factors and what you can do to make positive changes and reduce your risk. This information should be used as a guide along with any lifestyle advice provided by your healthcare team.

When you attend your local cardiac rehab program you will receive further education regarding lifestyle changes. Should you have any questions related to the information in this section please ask your healthcare team.

## Risk Factors for Heart Disease

Risk factors are attributes or elements that contribute to the likelihood of developing a condition. The risk factors that may increase your likelihood of developing heart disease include:

### Risk factors you can NOT change

- A family history of heart disease
- Increasing age
- Gender (male)

### Risk factors that you can change

- Smoking
- High blood pressure
- Physical inactivity
- Overweight
- Abnormal blood cholesterol

### Other factors

- Diabetes
- Stress / depression

# Eating for a Healthy Heart

## Why do I need to follow a healthy diet?

Healthy eating and drinking is an important part of looking after your heart. Eating a healthy diet provides you with energy and can help reduce the risk of heart disease by maintaining your weight, blood and cholesterol levels.

## What should I eat to help keep my heart healthy?

Eating a well-balanced diet is recommended to promote heart health. To achieve a well-balanced diet, the ***Australian Dietary Guidelines*** and ***Australian Guide to Healthy Eating*** provide advice on the amounts and types of foods to consume. More specifically, the Australian Dietary Guidelines recommends that you:

- Achieve and maintain a healthy weight
- Eat plenty of vegetables, and some fruit
- Choose wholegrain and high fibre bread/cereals/rice/pasta/noodles
- Aim for a diet low in saturated fat through choosing lean meats or meat alternatives (such as eggs, tofu, nuts, legumes) and reduced fat dairy or alternatives (such as cheese, yoghurt, soy and nut milks)
- Drink plenty of water, limit your alcohol consumption
- Limit your intake of foods containing saturated fat and added salt

We will discuss these topics and ideas to help you eat a heart healthy diet in more detail over the following pages.

## Five Key Food Groups

The guidelines include enjoying a wide variety of nutritious food from five key food groups, see ***Table 1***.

*Table 1. Australian Guide to Healthy Eating for Adults*

| FOOD GROUP | RECOMMENDED SERVES/DAY | STANDARD SERVE SIZES 1 SERVE = |
|---|---|---|
| **Bread, cereals , rice, pasta, noodles** | 4-6 serves / day | • 1 slice of bread<br>• ½ medium bread roll<br>• ½ cup cooked rice or pasta or noodles<br>• ½ cup porridge<br>• 2/3 cup cereal flakes |
| **Vegetables** | 5 serves/day | • ½ cup cooked vegetables (75g)<br>• ½ cup cooked dried or canned beans, peas, lentils<br>• 1 cup green leafy or raw salad vegetables<br>• ½ medium potato or starchy vegetable |
| **Fruit** | 2 serves/day | • 1 medium piece (150g) of fruit (apple, banana, orange)<br>• 2 small pieces (150g) fruit (apricot, kiwifruit, plums)<br>• 1 cup diced or canned fruit (150g)<br>• 125 ml 100% fruit juice |
| **Milk, yoghurt, cheese** | 2-4 serves/day | • 1 cup (250ml) milk<br>• 2 slices (40g) cheese<br>• 1 carton (200g) yoghurt<br>• 1 cup (250ml) custard |
| **Meat, fish, poultry, eggs, nuts, legumes** | 1-3 serves/day | • 65g cooked lean meat e.g. ½ cup lean mince, 2 small chops, 2 slices roast meat<br>• 80g cooked poultry<br>• 80-120g cooked fish fillet<br>• ½ cup cooked dried beans, lentils, peas<br>• 2 small eggs<br>• 30g nuts, seeds and nut paste<br>• 170g tofu |

## Cholesterol

Cholesterol is a fatty substance that is carried around the body in the blood. The body produces most cholesterol in the liver, and it is found in some foods. High levels of blood cholesterol can contribute to the build-up of fatty deposits on the arterial wall, this is known as atherosclerosis.

Cholesterol is carried around the blood by carrier proteins called lipoproteins. The two main types of lipoprotein include:

- Low-density lipoprotein (LDL) cholesterol – is referred to as the 'bad cholesterol' because it carries cholesterol to the arterial walls. High levels of LDL can increase the risk of heart disease.
- High-density lipoprotein (HDL) cholesterol – is referred to as the 'good cholesterol' because it helps keep cholesterol from building up in the arteries. A healthy HDL can decrease the risk of heart disease.

## Dietary cholesterol

It was once believed that eating too many cholesterol-rich foods (e.g. eggs, offal, prawns) was the major dietary cause of high blood cholesterol. We now know that cholesterol in food only has a small effect on the level of cholesterol in the blood. You can include some cholesterol-rich foods, low in saturated fat, as part of a healthy balanced diet. The National Heart Foundation allows you to enjoy up to 6 eggs per week.

## Dietary Fat

Fats are an essential part of our diet and are important for good health. Fats are higher in energy (kilojoules) than any other nutrient and when eaten in large amounts, can contribute to weight gain.

There are different types of fats, with some fats being healthier than others. The main three types of dietary fat include:

## Saturated fats

Saturated fats are solid at room temperature and are mostly found in animal foods such as full cream dairy products, meats and chicken, fried take-away foods, packaged cakes and biscuits, butter and palm oil. A diet high in saturated fat increases your blood cholesterol, particularly increasing the 'bad' (LDL) cholesterol.

**What about coconut oil?**

Coconut oil is 92% saturated fat. There is convincing research to show that replacing saturated fats with unsaturated fats decreases LDL cholesterol. For this reason the National Heart Foundation recommends the use of unsaturated oils, such as olive oil, in preference to high saturated fat oils like coconut oil.

## Unsaturated fats

Unsaturated fats are liquid at room temperature and are mostly found in plant and seed oils, nuts, fish and avocado. Unsaturated fats help reduce the risk of heart disease by increasing the 'good' (HDL) cholesterol and lowering the 'bad' (LDL) cholesterol. There are two main types of unsaturated fats; polyunsaturated and monounsaturated fats. Please see Table 2 for more information.

## Trans fats

Trans fats increase the risk of heart disease by increasing the bad (LDL) cholesterol and lowering the good (HDL) cholesterol in our blood. Trans fat is an unsaturated fat that has been processed via food manufacturing and, as a result, behaves like a saturated fat. It is important to lower the amounts of trans fat in your diet to maintain a healthy heart.

## Replace unhealthy fats with healthy fats!

Replacing saturated and trans fat with unsaturated (polyunsaturated or monounsaturated) fats can reduce your risk of heart disease. See the ***Table 2*** for some examples of healthy and unhealthy fats.

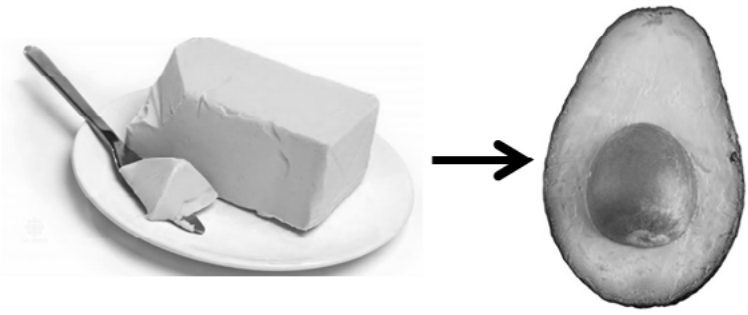


*Table 2: Types of Dietary Fat*

| Saturated fats | Polyunsaturated fats | Monounsaturated fats |
|---|---|---|
| • Full cream dairy products<br>• Meat products<br>• Luncheon meats<br>• Butter, lard, ghee<br>• Solid frying fat<br>• Copha, coconut cream/milk<br>• Fried foods<br>• Snack foods and takeaway foods<br>• Commercial biscuits and cakes<br>• Palm and coconut oil | • Sunflower seeds and oil<br>• Safflower oil<br>• Pumpkin seeds<br>• Soy products and oil<br>• Polyunsaturated margarines<br>• Tahini and sesame<br>• Walnuts and walnut oils<br>• Wheatgerm and wholegrains<br>• Fish<br>• Pine nuts<br>• Brazil nuts<br>• Linseed (flaxseed) | • Olive oil and olive margarine<br>• Canola oil and canola margarine<br>• Sunflower oil<br>• Mustard seed oils<br>• Avocado and avocado oils<br>• Peanuts and peanut butter<br>• Cashews<br>• Macadamia<br>• Almonds<br>• Pecans<br>• Hazelnuts |
| **How can I decrease my saturated fat intake?** | **How can I include polyunsaturated fats in my diet?** | **How can I include monounsaturated fats in my diet?** |
| • Choose lean cuts of meat and poultry<br>• Trim off visible fat and skin from meat<br>• Swap to low fat dairy foods e.g. skim milk, low fat cheese<br>• Use low fat cooking methods e.g. grilling, steaming, braising or microwaving<br>• Limit intake of commercial cakes, most biscuits, pies/ pastries, chocolates, fried food, takeaway and coconut products e.g. oil and milk | • Use polyunsaturated margarines or oils instead of butter<br>• Include 2-3 fish meals per week e.g. fresh, canned or frozen fish<br>• Go nuts! Sprinkle linseeds and walnuts on breakfast cereal, yoghurt or salad<br>• Use soy and linseed bread and crackers<br>• Use tahini as an alternative spread to butter | • Use monounsaturated margarines or oils instead of butter<br>• Use peanut or sesame oil in stir fries<br>• Use avocado in salads or on sandwiches in place of butter<br>• Have mixed nuts as a snack (in moderation!)<br>• Use nuts in stir fries or sprinkled on salads |

## Sodium (Salt)

Salt is sodium chloride. When we talk about cutting down on "salt" we really mean cutting down on sodium. Eating too much sodium over time can increase your risk of high blood pressure which is a major risk factor for heart disease. For a healthy heart, it's important not to eat too much salt.

Salt is found in almost every food we eat, but the amount of salt varies. Foods such as meat, vegetables and fruit have naturally occurring salt present in very small quantities. In food manufacturing, salt is used for flavouring and as a preservative. 75% of our salt intake comes from packaged and processed foods, bread, breakfast cereals and cereal products, processed meats, soups, sauces and spreads.

### How much salt should I eat?

To reduce blood pressure and lower the risk of heart disease, the Heart Foundation recommends adults eat less than 5g of salt (2000mg of sodium) a day.

That's less than a teaspoon a day. (NRVANZ)


### Tips to Reduce Salt Intake:

1. Taste before you shake
2. Gradually reduce the quantity of salt you add at the table. Your taste buds adjust in 6-8 weeks!
3. Use herbs and spices to add flavour to your meals. Try ground pepper, lemon/lime, vinegar, dried/fresh herbs.
4. Limit your intake of take away and fast foods to no more than once per week.
5. Look for 'salt reduced' or 'no added salt' products
6. Read ingredient lists/ nutrition information panel

   ***(see Table 3)***

   - Foods that contain <120mg per 100g is considered a low sodium food, <400-600mg per 100g is moderate and >600mg high in sodium.
   - Sodium/salt may appear as monosodium glutamate (MSG), sodium bicarbonate, baking powder or soda.

7. Reduce intake of highly salted foods including:
   - Smoked meats and fish
   - Delicatessen meats (e.g. ham, mortadella, processed chicken)
   - Cheese
   - Spreads such as Vegemite, Marmite, peanut butter
   - Salty snacks such as nuts and potato crisps
   - Condiments including gravy mixes
   - Canned foods

*Table 3: an example of a nutrition information food label. Note this food would not be classified as low in sodium as it has 215mg sodium/100g*

| Nutrition information | | |
|---|---|---|
| Servings per package – 16<br>Serving size – 30g (2/3 cup) | | |
| | Per serve | Per 100g |
| Energy | 432kJ | 1441kJ |
| Protein | 2.8g | 9.3g |
| Fat | | |
| Total | 0.4g | 1.2g |
| Saturated | 0.1g | 0.3g |
| Carbohydrate | | |
| Total sugars | 18.9g | 62.2g |
| Sugars | 3.5g | 11.8g |
| Fibre | 6.4g | 21.2g |
| Sodium | 65mg | 215mg |
| Cereals (76%) (wheat, oatbran, barley), psyllium husk (11%), sugar, rice, malt extract, honey, salt, vitamins. | | |

## Alcohol

Alcohol consumption can increase an individual's risk of cardiovascular disease. Drinking above the recommended guideline can lead to increased heart rate, high blood pressure, weakened heart muscle and irregular heartbeat which can lead to a heart attack or stroke.

**The National Health and Medical Research Council (NHMRC) alcohol guidelines include recommendations that:**

- Healthy men and women should drink no more than 2 standard drinks per day
- Aim for at least 2 alcohol free days per week
- Drink no more than 4 standard drinks on a single occasion to reduce the risk of alcohol-related injury arising from that occasion.
- A standard drink is 100mls of wine, 285mls regular beer and 30mls spirits.

To read the full guidelines and to find out how much a standard drink is, please review the NHMRC alcohol guidelines at

**www.nhmrc.gov.au/health-topics/alcohol-guidelines**

### Ways to reduce your alcohol intake?

- Make plans that include alcohol free nights
- Set limits for yourself and stick to them
- Start with non-alcoholic drinks and alternate with alcoholic drinks
- Drink slowly
- Eat before or while you are drinking
- If you participate in rounds of drinks try to include some non-alcoholic drinks

If you have a heart condition, talk to a medical practitioner for individual advice.

## Eating for Heart protection

Some additional nutrients in food can improve your heart health.

### Soluble fibre

Fibre is found in plant foods.

**The recommended daily intake of fibre is 25-30g / day**

Soluble fibre is a type of fibre which reduces cholesterol absorption and can decrease total and "bad" (LDL) cholesterol levels. Sources of soluble fibre include; fruit, vegetables, legumes, beans, oat, barley, psyllium husk, flaxseeds (linseeds).

**How to eat more soluble fibre:**

- Eat breakfast cereals that contain barley, wheat or oats
- Switch to wholemeal or multigrain breads and brown rice.
- Add oat/barley bran, flax seeds or psyllium husks to cereals, soups, casseroles, yoghurt, cakes, muffins and biscuits
- Include peas, chickpeas, lentils and beans in salads, casseroles and soups – can be a substitute for meat
- Eat fruit with the skin on rather than drinking fruit juice
- Snack on raw vegetable sticks with legume dips e.g. hummus

### Plant sterols

Plant sterols are a group of natural compounds found in plants that have a similar structure to cholesterol. This similarity allows them to compete for absorption in the small intestine and block the absorption of 'bad' (LDL) cholesterol. When eaten at the recommended amount (2-3g per day), plant sterols can reduce 'bad' (LDL) cholesterol levels in our blood by up to 9%.

**The recommended daily intake of plant sterols is 2-3g per day**

Plant sterols are found in a variety of plant foods including grains, vegetables, fruit, legumes, nuts and seeds, but only in very small quantities. You can also include products that have been fortified with plant sterols; such as margarine (e.g. Pro-Activ), low fat milk (e.g. Heart Active), low fat yoghurt (e.g. Pro Heart) and breakfast cereals (e.g. Weet-Bix Cholesterol Lowering), in your diet. 2-3

serves of plant sterol enriched foods per day will provide the recommended daily amount.

### Antioxidants

Antioxidants are naturally occurring molecules believed to fight against the action of free radicals which is thought to help prevent disease.

The Heart Foundation supports the consumption of fruit and vegetables, green or black tea and raw cocoa powder (when part of a healthy balanced diet) to provide the antioxidants beneficial for a healthy heart. **It is not recommended to consume chocolate, coffee and red wine or take anti-oxidant supplements for the prevention or treatment of heart disease.**

## Maintaining a healthy weight

Reaching and maintaining a healthy weight is one of the best things you can do for your health and wellbeing. An increase in weight also increases the risk for heart disease, high blood cholesterol, high blood pressure and other lifestyle related diseases and conditions. Maintaining a healthy weight has many benefits, including feeling good about yourself and having more energy to enjoy life.

### Body Mass Index (BMI)

BMI estimates your body mass based on your weight and height. A healthy weight is defined as having a BMI of between 18.5 and 25kg/m2. For those above the age of 65 years, a healthy BMI is between 22 and 27kg/m2.

You can work out your BMI by the following calculation below or using the BMI calculator on the National Heart Foundation of Australia website.

***Weight (kg) / Height (m2)***

NB: BMI is a useful measurement for most people over 18 years old however it does not take into account gender, age, ethnicity and body composition. We recommend you also check your waist circumference measurement, and other risk factors.

## Waist Circumference

A waist circumference of higher than 80 cm for women and 94 cm for men puts you at increased risk of heart disease. If your waist circumference is higher than this, you should aim to decrease your waist circumference by decreasing your weight.

## Tips to reduce your weight:

- Start small: losing as little as 10% of your current body weight can make a difference to your heart health
- Get planning: plan well balanced meals and get in the habit of packing a healthy snack.
- Portion control: try using an entree size plate at main meals to reduce your portion size.
- Eat more fruit and vegetables.
- Cut back on foods which are high in energy e.g. confectionary foods (cakes and lollies), take-away foods (burgers, hot chips, pizza) and alcohol.
- Swap it: try soda/mineral water with mint and lemon or green tea in place of regular juices and soft drinks.
- Start moving everyday: walking is good for nearly everyone; you may also like to try swimming, aqua-aerobics or cycling. For more information on the most suitable exercise for you, see the "Exercise and Physical Activity" section in this booklet.

RNSH offers a Dietetic outpatient nutrition clinic for people who reside in the lower north shore local government area or who are currently being cared for by a RNSH medical specialist. The dietitian can assist you to learn more about making heart healthy food choices.

Please phone the **Department of Nutrition on (02) 9463 1666** if you would like to make an appointment (please note: you will be required to bring a referral letter from your GP or Cardiologist to your first appointment).

The Cardiac rehabilitation program at RNSH includes Cardiac Lifestyle information sessions on Eating for A Healthy Heart. Please see the Cardiac Rehabilitation section of this booklet for details or phone 9463 1164 for more information.

Alternatively you may wish to contact your local hospital which can advise you of the services in your area

# Returning to Activity Guidelines

## Introduction

It is important to read the guidelines below before returning to certain activities. Please be aware that everyone is different and recovery varies from person to person. Returning to certain activities depends on your age, previous activity level, the severity of your heart condition and your speed of recovery. The following guidelines relate to returning to daily activities such as household chores, work, travel and incidental activities such as walking up stairs. Information with regards to returning to driving, sexual activity, wound care, exercise and sport are covered in different sections of this book.

## Knowing when to stop

If at any time during your physical activity you experience the following symptoms, STOP and REST. Follow the normal routine for managing angina and if symptoms persist for 10 minutes, ring 000 for an ambulance.

- Central chest-pain, tightness or pressure that may radiate to your jaw, neck or arms
- Shortness of breath
- Dizziness, fainting
- Blurry vision
- Excessive fatigue
- Nausea
- Excessive sweating

Please note: These are general guidelines only and must not replace specific advice given to you by your Doctor relating to your particular circumstances. If you are unsure or have any other questions, please contact your doctor or cardiac rehabilitation team.

***For the following guidelines:***

***Please refer only to the section that is relevant to you and your condition.***

## Returning to Activity after a Stent Procedure

You may safely return to light activity following the insertion of a stent. You are also advised to follow the walking program which can be found in the section "Exercise and Physical Activity."

### Activities you should generally avoid for about 1 month

- ***Sudden or heavy exertion***
  Eg. running for a bus, lifting furniture, heavy wheelbarrowing, vacuuming, polishing the car
- ***Heavy lifting, straining, pushing or pulling***
  Eg. child, carrying shopping bags, garbage, boat, luggage
- ***Strenuous Exercise***
  Eg. sport, running, high intensity recreational activity, high intensity gym, high intensity aerobics and dancing activities
- ***Heavy manual work***
  Eg. building, loading a truck, fencing, labouring, mechanics

### Returning to Normal Daily Activities

Generally following the insertion of a stent, you may resume your normal daily activities quite quickly such as light housework, (eg. washing dishes), short walks and office duties. When resuming these activities, it is important to listen to your body and if needed, take things a little easier for the first couple of days.

### Return to Work

Returning to work is dependent on the type of work you do. Discuss medical clearance to return to work with your doctor.

### Walking up and down stairs

If you are used to walking up flights of stairs you may continue to do this, providing that you feel comfortable to do so.

### Driving

See the "Driving" section for more information.

## Returning To Activity After A Heart Attack With Or Without A Stent

To assist your heart to heal, it is important you make a gradual return to your previous home, leisure and work duties. You should initially avoid putting excessive workload on your heart. Recommendations vary from person to person but generally there are some activities you should avoid for **one full month** after discharge.

### Activities you should generally avoid for about 1 month

- ***Sudden or heavy exertion***
  Eg. running for a bus, lifting furniture, heavy wheelbarrowing, vacuuming, polishing the car
- ***Heavy lifting, straining, pushing or pulling***
  Eg. child, carrying shopping bags, garbage, boat, luggage
- ***Strenuous Exercise***
  Eg. sport, running, high intensity recreational activity, high intensity gym, high intensity aerobics and dancing activities
- ***Heavy manual work duties***
  Eg. building, loading a truck, fencing, labouring, mechanics

### Do

- Work at a comfortable steady pace
- Take regular rest breaks throughout the day
- Break up strenuous jobs into stages, eg. pegging the clothes on the line, divide loads and take lighter trips if necessary
- Use efficient methods – use good posture for lifting, carry loads close to the body. Use trolleys / wheels rather than lifting
- Start a gentle walking program. See the "Exercise and Physical Activity" section" in this book.

### Public Transport and Air Travel

Bus and train travel can be stressful. You may want to arrange alternatives for your first few weeks at home and avoid peak hour traffic. **International air travel** is restricted for a minimum of 14 days after your heart attack. **Domestic travel** is possible but it is important to **consult your doctor before embarking on any air travel.**

## Work

Returning to work is dependent on the type of work you do. Discuss medical clearance to return to work with your doctor.

## Walking

Walking is the safest form of exercise for the first few weeks. Please refer to the "Exercise and Physical Activity" section for your walking program.

## Sport

Before resuming sport, discuss it with your cardiologist and/or cardiac rehabilitation team. A gradual progression is important. The National Heart Foundation recommends returning to activities such as swimming, cycling, tennis, golf and bowls after approximately 6 weeks.

## Sex

Sex may be resumed approximately 2 weeks after discharge. Please see the section on "Returning to Sexual Activity".

## Driving

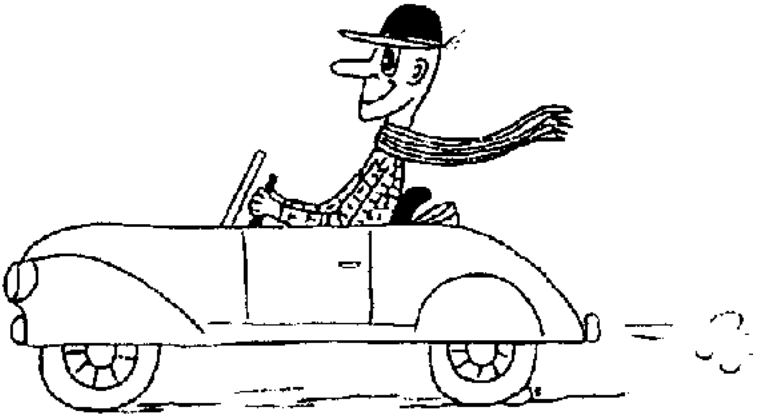
Please see the "Driving" section in this book.

## Driving Guidelines

Cardiovascular conditions may affect the ability to drive safely due to sudden incapacity such as from a heart attack or arrhythmia. They may also affect concentration and the ability to control a vehicle due to the onset of chest pain, palpitations or breathlessness.

The following are guidelines for resuming driving after a cardiac event. These are guidelines only, and are made assuming your condition is stable and well controlled.

**Always consult your GP before you resume driving.** If you drive before the recommended time you may find that your insurance policy will not cover you in the case of an accident. You are responsible for notifying the Roads and Maritime Services (RMS) if your cardiologist has advised you not to drive.



**Minimum non-driving periods:**

| CONDITION | PRIVATE VEHICLE DRIVERS | COMMERCIAL VEHICLE DRIVERS |
|---|---|---|
| Heart Attack | 2 weeks | 4 weeks |
| Angioplasty and / or Stent | 2 days | 4 weeks |
| Cardiac Arrest | 6 months | 6 months |
| Implantable Cardioverter Defibrillator (ICD) insertion | 6 months after cardiac arrest | Not applicable* |
| Generator change of ICD | 2 weeks | Not applicable* |
| ICD therapy associated with symptoms of haemodynamic compromise | 4 weeks | Not applicable* |
| Cardiac pacemaker | 2 weeks | 4 weeks |
| Syncope (due to cardiovascular causes) | 4 weeks | 3 months |

*Persons with ICD are not eligible to hold a commercial vehicle licence.

Table 1 adapted from 'Assessing Fitness to Drive: medical standards for licensing and clinical management guidelines' as amended up to August 2017. A joint publication of the National Transport Commission and Austroads, printed with kind permission of Austroads Inc.

**Always speak to your doctor regarding returning to driving for private or commercial use. Medical clearance is required.**

## Returning To Sexual Activity

Returning to sexual activity and / or masturbation is an important part of most people's recovery. You will know when the time is right for you, usually when you are able to tolerate moderate intensity activity. The risk of having a heart attack during sexual activity is very low, particularly among people who exercise regularly.

Normal responses to sexual activity include increased heart rate and breathing rate. If you are a person who sometimes experiences chest pain on exertion, you may benefit from using your Anginine spray or tablet before starting sexual activity. (see the "heart medications" section). Consult your doctor first.

It is essential that you discuss any issues and concerns that you may have regarding returning to sexual activity with your partner. A familiar partner, comfortable surroundings and a comfortable position will help to reduce anxiety as well as the amount of physical effort required.

Foreplay gradually prepares your heart for increased activity. Adopt positions that do not restrict breathing or require prolonged muscular support. If you are tired or tense, leave it until you are more relaxed. Wait an hour after meals.

If you experience any chest pain or discomfort, stop and rest. Follow information on page 23 "Will you recognize your heart attack?". If your symptoms continue for longer than 10 minutes and are not relieved by Anginine, seek immediate medical attention.

If you are still worried or have any questions, speak to your GP or the cardiac rehabilitation team.

## Treatment For Erectile Dysfunction (eg Viagra)

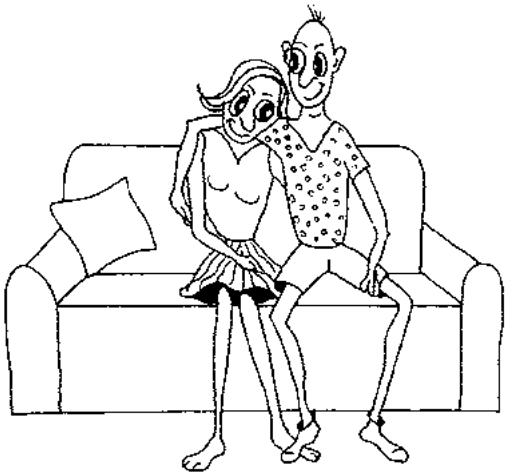
Erectile dysfunction is defined as the inability to obtain and maintain an erection adequate to permit satisfactory sexual performance. There are certain products on the market to help to overcome this problem.

If you are experiencing erectile dysfunction, **PLEASE DISCUSS treatment options with your doctor before taking any medications such as Viagra** or natural remedies as they may interact with your heart medications.

**This combination could be dangerous or even life threatening.**

### Do not use Viagra if you:

- **Take any form of nitrates**
- Suffer from angina or have had a recent heart attack or stroke
- Suffer from heart failure
- Have high blood pressure that is not well controlled or requires complicated multi-drug therapy



## Exercise and Physical Activity

Exercise is an essential part of an effective recovery after a cardiac event. Regular exercise will improve the efficiency of the heart muscle and blood circulation, as well as improve muscle strength and promote healing.

Your allied health team will discuss your exercise program with you before you leave hospital. Your exercise program consists of two stages

- Convalescence stage (0-6 weeks)
- Maintenance stage (7 weeks onwards)

### Convalescence Stage (0 - 6 weeks)

This begins once you are discharged from hospital and may last for up to 6 weeks. At this stage you should commence a walking program. It is also advised that you start a cardiac rehabilitation exercise program at your nearest hospital or health care centre soon after discharge from hospital. See the 'cardiac rehabilitation' section of this booklet for details.

## Suggested Walking Program

The following walking program is a guide only. Each individual will progress at their own rate.

**Depending on your previous level of fitness, you may progress more quickly by starting the program at stage 2 or 3. Please do so with the guidance of your local doctor and/or cardiac rehabilitation team.**

| Stage | Time | Times/Day | Intensity |
|---|---|---|---|
| 1 | 5 – 10 mins | 2 | light |
| 2 | 10 - 15 mins | 2 | light |
| 3 | 15 - 20 mins | 1 | light/ mod |
| 4 | 20 - 25 mins | 1 | light / mod |
| 5 | 25 - 30 mins | 1 | moderate |
| 6 | 30 - 35 mins | 1 | moderate |
| 7 | 35- 45 mins | 1 | moderate |

**Exercise should never feel uncomfortable, painful or produce unusual symptoms or severe symptoms of angina. If it does, cool down, stop and see your local doctor before continuing with your exercise program.**

## Intensity – how hard should I exercise

When you are walking, it is important that you consider how hard you are working (your level of intensity). Level of intensity varies from person to person - what is easy for some may be difficult for others.

A simple "talk test" will help you to gauge how hard you are working. Breathing heavily, or a slight huff & puff, is a normal response to exercise and is to be expected, however you should not be exercising so hard that you cannot easily carry a conversation.

For the first 4 weeks you should exercise at a light to moderate intensity, gradually increasing to a moderate intensity from 4 weeks onwards. **You should not be exercising at a strong to very strong intensity.** You may determine your intensity using a Rating of Perceived Exertion (RPE) scale.

## Rating of Perceived Exertion Scale (RPE)

*Table 4. Rating of Perceived Exertion Scale (RPE)*

| RPE | Perceived effort | Feels like |
|---|---|---|
| **0** | Nothing at all | |
| **0.5** | Extremely weak | Just noticeable |
| **1** | Very weak | |
| **2** | Weak / light | An aerobic activity that does not cause a noticeable change in breathing rate |
| **3** | **Moderate** | **An aerobic activity that is able to be conducted whilst maintaining a conversation uninterrupted.**<br>**An intensity that may last between 30 and 60 minutes** |
| **4** | **Somewhat strong** | |
| **5** | **Strong / heavy** | **An aerobic activity in which a conversation cannot be maintained uninterrupted. An intensity that may last up to 30 minutes** |
| **6** | | |
| **7** | Very strong | An intensity that generally cannot be sustained for longer than 10 mins |
| **8** | Very strong | |
| **9** | Very very strong | |
| **10** | Maximal | The absolute maximum effort you could possibly reach |

Adapted from Borg G., Borg's Perceived Exertion and Position statement on physical activity and exercise intensity terminology 2009)

Initially you should aim for an RPE of 2-3, progressing to a 3-4 as your exercise tolerance improves.

You should not exercise at an RPE of 6 or higher in the first six weeks after your heart attack or procedure. Resuming higher intensity or more vigorous exercise at a later stage should only be attempted if you have clearance to do so from your doctor.

Some people like to use heart rate as a means of measuring how hard they are working. It is important to remember that some cardiac medications slow the heartbeat, meaning heart rate will not provide a true indication of how hard you are working.

### Warm Up and Cool Down

A warm up is an essential part of an exercise routine. By gradually increasing activity you increase blood flow to your heart and muscles, allowing them to slowly adjust to the extra demands being placed on them by exercise.

A warm up should be of 5 - 10 minutes duration and should begin with gentle repetitions of the exercises you will be doing, e.g. slow walking and arm movements.

Following your exercise or activity, you should spend 10 - 15 minutes cooling down. This prevents pooling of blood in your limbs, a sudden drop in blood pressure, increases the return of blood to the heart, speeds your rate of recovery and decreases the chance of stiff, sore muscles and cramps.

A cool down should consist of gradually slowing the activity and keeping limbs moving until your breathing rate has returned to normal. Slow comfortable stretches, focusing on those muscles involved in the exercise should be included.

## Stretching

Regular stretching will improve muscle flexibility, joint range of motion, help prevent muscle soreness after exercise and reduce the risk of injury. When stretching remember:

- The best time to stretch is after exercise when the muscle is warm and receptive to the stretch
- Each stretch should be held for 20-30 seconds
- All stretches should be slow and static (Do not bounce)
- Make sure you stretch all major body parts
- All stretches should be comfortable (not painful)

Ensure you are breathing normally while holding a stretch (do not hold your breath)

## Long term maintenance exercise - 'Exercise for life'

After the convalescence stage you will have noticed an improvement in your fitness and exercise tolerance. By now you will have established an exercise routine and be achieving daily exercise. Be sure to vary your activities as you become more comfortable exercising and your fitness improves. Variety is often important to ensure you remain motivated and continue to challenge yourself.

Your exercise program should be something you enjoy and will maintain as an important part of your lifestyle, **for the rest of your life**.

Australian Physical Activity Guidelines recommend:

- ***aerobic exercises*** such as walking, swimming, cycling, exercise classes, at a moderate intensity for minimum of 30minutes, on most if not all days of the week
- ***strength exercises*** such as light weights / elastic resistance, 2-3 times per week
- ***Be active*** most, preferably all, days of the week
- ***Reduce sitting time*** – minimise the amount of time spent in prolonged sitting and break up long periods of sitting wherever possible
- ***Increase incidental activity*** wherever possible. Be as active as you can in your daily activities. Doing any physical activity is better than doing none at all

(For more information on the 'Australian physical activity and sedentary behaviour guidelines' visit the website www.health.gov.au)

## Recreational Activities

Many people are eager to return to their previous sports and activities (e.g. golf, swimming and tennis). It is very important to return to sport slowly, initially in a non-competitive setting where you can stop if required. A warm up and cool down is essential.

If you are concerned about when it is appropriate for you to return to your recreational activities you should check with your doctor, an exercise physiologist or your cardiac rehab team.

Gradually progress your sport or activity as you feel comfortable. For most people we suggest starting recreational activities at the beginning of the seventh week home.

Recreational activities are great supplements to your exercise program.

It is important that you remember that some recreational activities often do not exercise you at an intensity that will improve your aerobic fitness, although they will keep you active and mobile (e.g. golf).

Alternatively, some activities require a reasonable amount of fitness to be done safely (e.g. singles tennis, kayaking). **Remember, get fit to do your recreational activities, don't use your recreational activities to keep fit!**

### Tips for Exercising Safely

- Drink plenty of water before, during and after exercise
- Avoid exercising immediately after meals
- Wear loose comfortable clothing of breathable fabrics
- Wear supportive shoes
- Avoid exercising in extremes of temperature or in strong winds
- Do not exercise when feeling unwell with a fever or bad cold
- Avoid caffeine immediately before and after exercise
- If you have diabetes: know your blood glucose levels (BGL) and do not exercise if it is low, always carry a fast acting carbohydrate (e.g. a juice box) in case your BGL drops low while exercising
- If exercising in a remote location (e.g. bushwalking) always take someone with you, and never swim alone

- If you feel unwell while exercising (e.g. become light headed) slow down/ decrease intensity, if symptoms do not subside, stop exercising and see your GP
- Always carry anginine or ventolin (if prescribed)
- If you experience angina (chest pain)
  - Decrease intensity/cease level of activity
  - use angina medication (e.g. anginine) if appropriate. If symptoms do not subside or you feel unwell, call 000
  - if symptoms persist for more than a few minutes, stop all activity
  - see your GP as soon as possible or report to your local emergency department

For more information on managing your angina appropriately see the chest pain management plan in the "What can go wrong with the heart" chapter of this book.

## Managing Stress and wellbeing

Understanding stress and how to manage it is often of importance to those with heart disease. The events surrounding admission to hospital and the resulting changes and disruptions to daily work and family routines are often traumatic.

For some people, the diagnosis of a heart condition or living with ongoing health problems may be a continual strain. While stress on its own has not been shown to cause heart disease, stress can accelerate the progress if you already have underlying coronary artery disease; i.e. it is a secondary risk factor.

### What is Stress?

Stress is a demand or pressure placed on someone, making them feel tense, unhappy or uncomfortable. This demand or pressure is often called the stressor. Exams, conflict with others, meeting deadlines, moving house and health problems are all examples of situations that many people find stressful.

### Positive Stress

Stress can be positive. It can help you achieve what you want to do. It brings anticipation and excitement into your life as with a holiday or family celebration. It helps you to grow and change, to avoid danger, and to strive for a goal.

### Negative Stress

Stress can also be negative, this is when we must utilise stress management skills. When stressors are large, occur frequently, last a long time or when you have been overstressed for sometime, you may notice effects such as nervousness, headaches or insomnia.  It is important you act to manage stress effectively.

### What Can You Do?

Many different techniques can be utilised to manage stress effectively. Many of us have already developed our own ways of dealing with stress - such as taking a bath, exercising, listening to music, or learning how to say “no”. Management of stress and the use of relaxation strategies are vital in ensuring good mental health and adjustment to the stresses and strains we face in life.

## Management of Stress

There are three possible approaches to dealing with stress:

### Addressing the cause of the stressful event

- Reorganise your time or environment better so a stressful situation does not arise, e.g. saying "no", adding/subtracting from your routine or lifestyle.
- Brainstorm and problem solve possible solutions or ways to deal with the problem causing you stress.

### Adjusting the way you see a stressful situation / event

Sometimes, it is not possible to eliminate a stressful situation. This is when you may need to alter the way you see and respond to the problem, ultimately reaching some equilibrium in time.

Some of the strategies below may be helpful - they may need practice.

- Ask yourself, "does it matter?"
- Avoid blaming or labelling yourself
- Avoid "must" and "should" thoughts
- Talk it out with someone trusted
- Get counselling to help you recover from a loss or trauma
- Write it out
- Distance it - will it matter in 10 years?
- Laugh it off - smile frequently, use humour to ease your tension
- Avoid focusing on possible threats in a situation - think positively
- Avoid competitiveness
- Accept yourself. Nobody is perfect!

## Using Relaxation Strategies

Sometimes you simply need "time out" from a stress. A relaxation strategy may help.

Remember, they are not going to remove the stress or problem but simply give you some time out to relax. Relaxation strategies are a personal thing - what suits you may not suit someone else. They also need practice.

Listening to music, laughter, hobbies, relaxation techniques, meditation, massage and time out for yourself are all popular relaxation strategies.

***"Slow Down!"***

## Relaxation Techniques

These techniques are quick and simple and can be done just about anywhere to help cope with specific stressful situations:

### Breathing

- Tell yourself mentally to "relax" on the out breath
- Lengthen the "out" breath, then relax
- Slow, deep, rhythmic breathing

### Progressive Muscular Relaxation

While progressing to each part of the body (usually starting at the feet) introduce tension to the muscles, then relax until your whole body is relaxed.

### Visual Imagery

Visualise a personally relaxing and pleasant scene, e.g. floating on a cloud, lying on a tropical beach.

- Relaxation techniques require practice
- Relaxation techniques may be guided by special resources to talk you through
- It may be trial and error to find a relaxation technique that suits you

### Finding help for relaxation and stress management

- Explore smartphone apps, web based resources or podcasts- use search words such as "calm", "wellbeing", "meditation"
- Consult your public library or local bookstore for books, DVDs, or audio CDs
- Consult your local Community Health Centre for courses on stress management, assertiveness, and communication skills
- Discuss with your GP, counsellor, cardiac rehab team or other healthcare providers
- Use trusted friends, mentors, and peer support groups
- Utilise professionals / work resources / courses
- Utilise trusted friends, mentors, and peer support groups

## Quit smoking for a healthy heart

Tobacco smoking can cause long term damage not only to the heart and vascular system, but other vital organs as well. Smoking is a major risk factor for many chronic health conditions including coronary heart disease, stroke, peripheral vascular disease, and various cancers.

The benefits of quitting smoking are many and your body will begin to feel benefits within 20 minutes with a decrease in heart rate.

To explore the benefits of quitting, as well as possibilities for getting ready to quit, and supportive quitting resources, visit:

***www.health.nsw.gov.au/tobacco***

For further information or support:

- Speak to your GP, or healthcare team
- Speak to your cardiac rehab team
- Contact Quitline on 13 QUIT ( 13 78 48) – a free telephone service connecting you to professional support and customised quit help
- For interactive tools and support networks Visit iCanQuit.com.au

***QUIT line: 13QUIT***

***13 78 48***

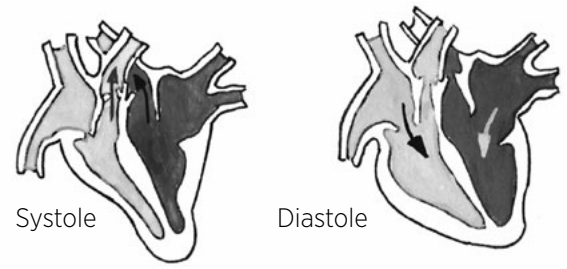
# High Blood Pressure

## What is Blood Pressure?

Blood pressure (BP) is the pressure of the blood in the arteries as the heart pumps blood around the body. Blood needs to be pumped by the heart under pressure in the arteries in order to reach all parts of the body. Refer to the "How the Heart works" chapter of this book for more information regarding circulation/blood flow.

## How is Blood Pressure Measured?

*Diagram 12.. The heart during systole and diastole.*




Blood pressure is recorded as two numbers e.g. 120/70 mmHg.

- **Systolic** is the highest number, it is the pressure in the arteries as the heart squeezes blood out during contraction.
- **Diastolic** is the lower number, it is the pressure in the arteries as the heart relaxes before the next beat.

Normal, or 'healthy' blood pressure ranges are between 100/60 to 130/80. Acceptable blood pressure falls within a range rather than being a particular pair of numbers. Blood pressure varies throughout the day according to the body's needs and activites.

## High Blood Pressure

The medical term high blood pressure is hypertension. Hypertension means that the pressure of blood in the arteries is too high. This causes strain on the heart, as it is forced to pump harder to cirulate blood around the body.

Hypertension also increases the stress on the artery walls. This causes the walls to thicken and increases the rate of atherosclerosis and coronary artery disease.

If your blood pressure remains high it can increase your risk of:

- Heart attack
- Heart disease
- Heart failure
- Stroke
- Kidney problems

You may not be aware that you have elevated blood pressure as often there are no warnings or symptoms. Therefore, it is important to have your blood pressure checked regularly. Your local doctor will advise you on this.

People with hypertension may need to take medications to help control their blood pressure. Medication is recommended in combination with a healthy lifestyle:

- Regular exercise
- Weight loss if necessary
- Not smoking
- A healthy diet
- Moderate alcohol intake

Finally, it is important to remember your blood pressure changes throughout the day according to the physical and emotional demands you place on your body.

# Diabetes and Heart Disease

## What Is Diabetes?

Diabetes is a condition wherein the body either does not produce enough insulin, or is resistant to the insulin that it produces. Without sufficient insulin the body cannot properly metabolise glucose, resulting in high (hyperglycaemia) or low (hypoglycaemia) blood glucose (sugar).

Glucose is one of the body's main fuels. When we eat any carbohydrate food (e.g. bread, pasta, rice, potatoes, cereals, fruit, or sugary "treats"), these foods are broken down into glucose and transported in the bloodstream. To use glucose efficiently, we secrete insulin from the pancreas. Insulin works like a bridge, allowing glucose to move from circulation to inside our muscles and fat. Our arteries and nerves absorb glucose directly from the bloodstream. If the blood glucose is high, our cells receive too much fuel. Over time this can cause arterial and nerve damage.

## What Is The Link Between Diabetes And Heart Disease?

Coronary artery disease is the leading cause of mortality in people with diabetes. People with diabetes have a greater tendency to develop atherosclerosis, resulting in thickening, hardening and narrowing of the arteries. Atherosclerosis can affect both the quality and duration of our lives, by affecting circulation to the areas of the body such as the heart, brain and legs. Those with impaired glucose tolerance (pre-diabetes) are also at risk of this damage.

## What Are The Risk Factors For Diabetes And Heart Disease?

Diabetes is usually divided into Types 1 and 2. Type 1 requires insulin injections; whereas Type 2 can be managed with a healthy diet and exercise, with addition of medications and / or insulin as required.

**Risk factors for Type 1 Diabetes include:**

- Family history
- Exposure to a viral, chemical or environmental factor

**Risk factors for Type 2 Diabetes include:**

- Family history
- Age
- Impaired glucose tolerance
- Hypertension
- High cholesterol
- Being overweight
- Cultural heritage
- History of gestational diabetes or PCOS

## Who Can Help?

To reduce the risk of diabetes or coronary heart disease, it is important to manage as many of the known risk factors as possible. If diabetes or coronary artery disease has already developed, clear information and effective management can also help reduce the risk of further complications.

Your GP and specialist can provide perspective, help manage blood glucose levels, blood pressure, cholesterol and triglycerides. They can also ensure NSW Health Department Standards of (Diabetes) Care are addressed and see that relevant tests or referrals are made.

**Referrals are often made to:**

- dietitian (nutrition)
- diabetes educator (overall understanding, management of medication and glucose monitoring),
- podiatrist (foot health)
- exercise physiologist (exercise)
- healthy lifestyle unit (fitness and general health)
- Diabetes Education Centres (situated at all major public hospitals)

# Acute Post-Acute Care (APAC)

## What Is Acute - Post Acute Care (APAC)?

APAC is a multi discliplinary team comprising registered nurses, physiotherapists, occupational therapists, social workers, pharmacists and community care aides. These staff may visit you in your own environment to provide you with care that would otherwise have been provided in hospital.

APAC aims to provide you with quality short term health care in a safe environment, tailored to meet your specific needs. As a client of APAC, you will experience the highest level of care, delivered with compassion, kindness and respect.

## How To Receive Our Service

Your cardiac rehabilitation nurse, coronary care nurses or medical team will make the appropriate referrals. APAC will assess your needs and discuss with you whether your care can be safely undertaken at home.

While on the service, a doctor is always responsible for your medical care and review of your treatment. This may be the specialist or your local doctor. However, care can only be provided by APAC with your agreement.

## How APAC Works

If appropriate the APAC team will provide your treatment and care once you are discharged from hospital. It is important for you to inform us of any changes that may influence your treatment or ability to be available for your APAC home visits.

# The Heart Failure Service

## What Is Heart Failure?

Heart failure occurs when the heart is unable to pump enough blood to meet the needs of the rest of the body. It can be caused by a previous heart attack, high blood pressure, excessive alcohol intake, hardening or leaky valves, a viral heart infection or a chronic lung disease (asthma, emphysema).

If you have heart failure, you may experience the following symptoms which can be caused by your heart muscle not pumping as efficiently as normal:

- Shortness of breath
- Weakness
- Fatigue
- Swelling of the ankles

## What Can You Do To Help Yourself?

- Take your medications regularly
- Weigh yourself regularly
- Reduce your salt intake
- Monitor your fluid intake
- Drink less alcohol
- Exercise regularly
- Quit smoking
- Contact the Heart Failure Service

The Heart Failure Service is a free education and support program for those with heart failure. A heart failure specialist nurse visits patients in hospital and at home and liases with the GP for ongoing care.

The Heart Failure Service contact number at RNSH is: 9463 1702

# Cardiac Rehabilitation

Cardiac Rehabilitation is an important step in your ongoing care and recovery process. It combines education, exercise and support by providing you with:

- Practical information and advice on healthy lifestyle and recovery issues
- Information regarding the management of cardiac risk factors
- The opportunity to have questions and concerns addressed
- The opportunity to increase your confidence and ability to exercise
- Recommendations for planning your own home exercise program

## While You Are In Hospital

During your hospital stay, a member of the cardiac rehabilitation team will come to see you. They will provide you with the contact details for a cardiac rehab program closest to your home as well as explain details of the program and answer any questions you may have regarding your recovery once you are home.

## Outpatient Cardiac Rehabilitation Program - RNSH

### Assessment

We encourage all patients to attend a follow up appointment with the cardiac rehabilitation team to discuss recovery and have cardiac risk factors identified. You may then attend part or all of the program including:

### Education

So that you will have the knowledge and confidence to manage your heart disease, it is highly recommended that you access the education / information sessions outlined below.

We offer two session modules:

- “Fast Track” – a half day workshop
- Weekly sessions which are run over 5 consecutive weeks either in person or online

Areas covered:

- Heart health, risk factors and recovery
- Physical activity and exercise
- Managing stress and anxiety
- Nutrition
- Medications

**Exercise**

Exercise sessions are conducted throughout the year and are held in the Outpatient Physiotherapy Gym located in the Ambulatory Care Department on Level 3 of the Main Building of RNSH. Please contact us for more details.

**You will need to attend an assessment before you commence the exercise and education program. Bookings are essential.**

**What to bring:** Please wear loose comfortable clothing and exercise (enclosed) shoes. It is also recommended that you bring a small towel if the weather is hot. **It is essential that you bring a bottle of water**, and some light food for lunch or a snack.

All exercise sessions are run in a group setting and are led by an exercise physiologist, cardiac nurse and physiotherapist. Your blood pressure and heart rate will be monitored and you will be asked to exercise within your limitations. Activities include walking, aerobic stations, resistance exercises, stationary cycling and stepping.

Home based programs are also available. Please ask an exercise physiologist if you would like a home program.

NB: Volunteer transport may be available for those living within certain areas whose family or friends are unable to drive them. Please ask the cardiac rehabilitation team for details.

**Support**

Our group-based programs offer a good opportunity to meet and gain support from people who share similar experiences to you. If you require further support or counselling please talk to your GP or your cardiac rehab team.

# Donating to cardiac rehabilitation

The NORTH Foundation, (formerly the Kolling Foundation), works in partnership with our hospitals and research units to raise much needed funds so they can continue to provide the best in patient care and drive research to find solutions to real-world health problems impacting our community.

If you would like to make a voluntary contribution to Cardiac Rehabilitation or any other services at Northern Sydney Local Health District please visit the North Foundation website:

***https://northfoundation.org.au/how-you-can-help/donate/***

## Who Do I Contact?

A member of the cardiac rehabilitation team will visit you during your stay in hospital to provide you with further information about the cardiac rehabilitation program closest to your home. Bookings are essential for all cardiac rehabilitation programs.

The Cardiac Rehabilitation team at the Royal North Shore Hospital can be contacted at:

***NSLHD-CardiovascularEducation@health.nsw.gov.au***

The North Shore Cardiovascular Education Centre (NSCEC)

Ph: (02) 9463 1170

## Your Closest Cardiac Rehabilitation Program

Contact Name: _____

Hospital: _____

Phone Number: _____

**To obtain the number for other cardiac rehabilitation programs not listed on the next page please phone the National Heart Foundation on 13 11 12 or visit www.heartfoundation.org.au**

# Other Cardiac Rehabilitation Programs

**Bankstown Hospital** Ph: 9722 7963
Eldridge Rd, Bankstown

**Concord Repatriation Hospital** Ph: 9767 6765
Hospital Rd, Concord

**Gosford / Wyong Hospitals** Ph: 1300 725 565
Cnr Racecourse Rd and Stephen St, Gosford

**Hornsby Hospital** Ph: 9763 3595
Palmerston Rd, Hornsby

**Mona Vale Community Health Centre** Ph: 9998 6180
Coronation St, Mona Vale

**Royal Prince Alfred Hospital** Ph: 1300 722 276
Missenden Rd, Camperdown

**Ryde Hospital** Ph: 9858 7764
Denistone Rd, Eastwood

**St Vincent's Hospital** Ph: 8382 2321
Victoria St, Darlinghurst

**Sydney Adventist Hospital** Ph: 9487 9473
Fox Valley Road, Wahroonga

**Westmead Hospital** Ph: 8890 6787
Hawkesbury Rd, Westmead

# Other Resources That May Be Helpful

| | |
|---|---|
| **Aboriginal and Torres Strait Islander Health Service** | Ph: 9462 9017 |
| **Diabetes Australia** | Ph: 1300 136 588 |
| **Drug and Alcohol Outpatient Counselling** | Ph: 9462 9199 |
| **Heart Failure Service RNSH** | Ph: 9463 1702 |
| **Hypertension Clinic RNSH** | Ph: 9463 1739 |
| **National Heart Foundation** | Ph: 13 11 12 |
| **Nutrition Department RNSH** | Ph: 9463 1666 |
| **NSW Mental Health Line** | Ph: 1800 011 511 |
| **Occupational Therapy Department RNSH** | Ph: 9463 1628 |
| **Pharmacy Department RNSH** | Ph: 9463 1100 |
| **Quitline** | Ph: 13 78 48 |
| **Social Work Department RNSH** | Ph: 9462 9477 |

# The following Websites May Be Useful

**Australian Government Department of Health**
www.health.gov.au

**Austroads**
www.austroads.com.au

**Cpr Friendly**
www.cprfriendly.org

**Diabetes Australia**
www.diabetesaustralia.com.au

**Dietitians Association of Australia**
www.daa.asn.au

**Exercise Right**
www.exerciseright.com.au

**Food and Nutrition Australia**
www.foodwatch.com.au

**Heart Research Australia**
www.heartresearch.com.au

**Healthy Lifestyle NSLHD**
www.nshealthpromotion.com.au

**National Heart Foundation**
www.heartfoundation.org.au

**National Prescribing Service (NPS) Medicine Line**
www.nps.org.au

**Quit Smoking**
www.iCanQuit.com.au

**St Vincents Hospital Heart Health**
www.svhhearthealth.com.au

**'Your Room' NSW Health (alcohol & other drugs)**
www.yourroom.health.nsw.gov.au

**Beyond Blue**
www.beyondblue.org.au

# Resources in other languages

The Heart Foundation provides heart health resources, including the heart attack action plan and healthy lifestyle tips, in over 25 different languages. Visit the Heart Foundation website for more information:

***www.heartfoundation.org.au/support/information-in-your-language***

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- Pharmacy Department
- Physiotherapy Department
- Nutrition and Dietetics Department
- Social Work Department
- Department of Cardiology
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- Julia Brooke

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Thankyou to everyone who has contributed to the previous editions.

# Research saves lives

## Making breakthroughs in heart disease happen

### Heart disease affects more Australians than any other disease and remains the leading cause of death.

Heart Research Australia supports ground-breaking research into the prevention, diagnosis, and treatment of heart disease. Your support helps us fund research that will improve heart health in the future.

**You can support us by:**

- ♡ Donating
- ♡ Becoming a 'Heart Hero' (regular giver)
- ♡ Leaving a gift in your Will
- ♡ Donating in memory or in celebration
- ♡ Participating in our REDFEB campaign

**Join the Heart Health Club** and receive exclusive information about heart health, research updates and invites to events.

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Contact us to find out how you can make a difference:
**Heart Research Australia** ABN 62 002 839 072
PO Box 543, St Leonards NSW 1590. **P** 02 9436 0056
**E** enquiries@heartresearch.com.au **W** www.heartresearch.com.au

Heart Research Australia

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