

Cardiac rehabilitation resource booklet



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Acknowledgements

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Reviewed and updated August 2022

“The World Health Organization and the Heart Foundation recommend that all patients who have had a heart attack, heart surgery, coronary angioplasty or other heart or blood vessel disease should routinely be referred to an appropriate cardiac rehabilitation and prevention program”.

“Cardiac rehabilitation describes all measures used to help people with heart disease return to an active and satisfying life and to prevent recurrence of cardiac events”.

Report of a WHO Expert Committee, Geneva Switzerland 1993, WHO Technical report series no.831.
National Heart Foundation Australia, ‘Recommended framework for Cardiac Rehabilitation 2004’.

Introduction

Welcome to cardiac rehabilitation at Cabrini

Cardiac rehabilitation is a support, exercise and education program to help you recover after being diagnosed with a heart condition. It is an important part of your recovery. Research shows that people who attend cardiac rehabilitation have improved recovery, enhanced mental health and a better quality of life.

Our aim is to make your time with us enjoyable, educational and helpful, and to keep you fully informed of your progress to enable you to make the right health choices.

Each class consists of an exercise component and an education session conducted by registered nurses, exercise physiologists, dietitians, pharmacists, psychologists, social workers, and occupational therapists.

Exercise will be under the direct supervision of the nurses and exercise physiologists. We ask that you refrain from vigorous exercise before attending the session.

The exercise physiologist will determine your individualised exercise program, taking into consideration your personal needs and any existing health issues. You will be asked to 'rate' each exercise at every class to enable the exercise physiologist to determine any requirements for your next visit.

Please do not attend if feeling unwell. We will always offer you a replacement class at your request. Please ensure you have taken your medications prior to attending class.

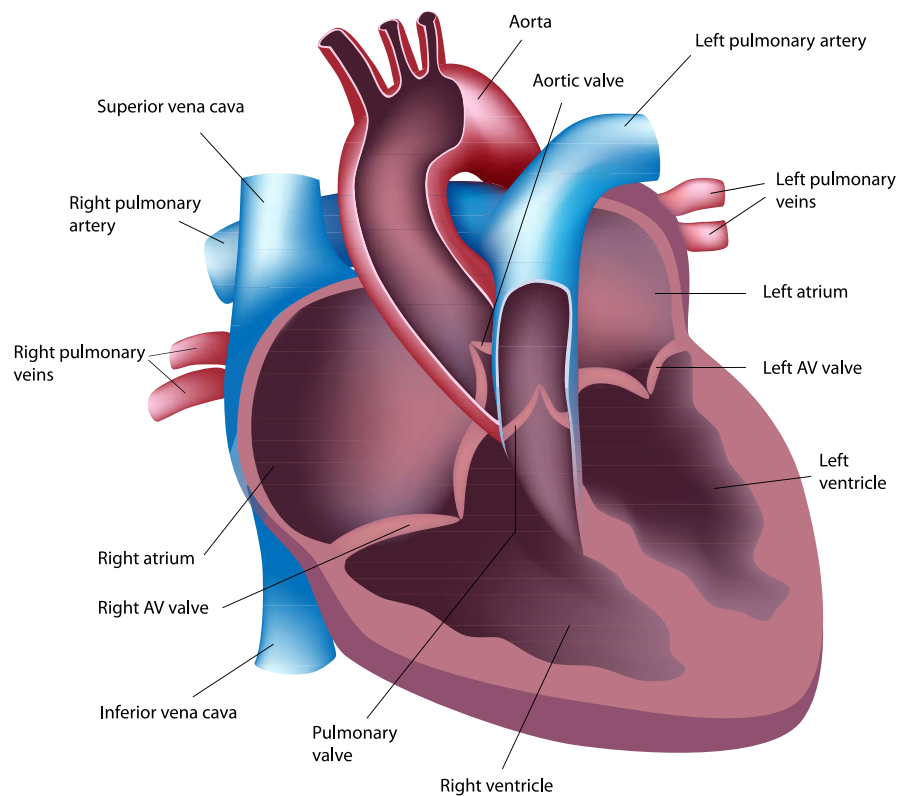
The information in this booklet is intended as an adjunct to your education sessions.

We hope you enjoy the program.

The heart

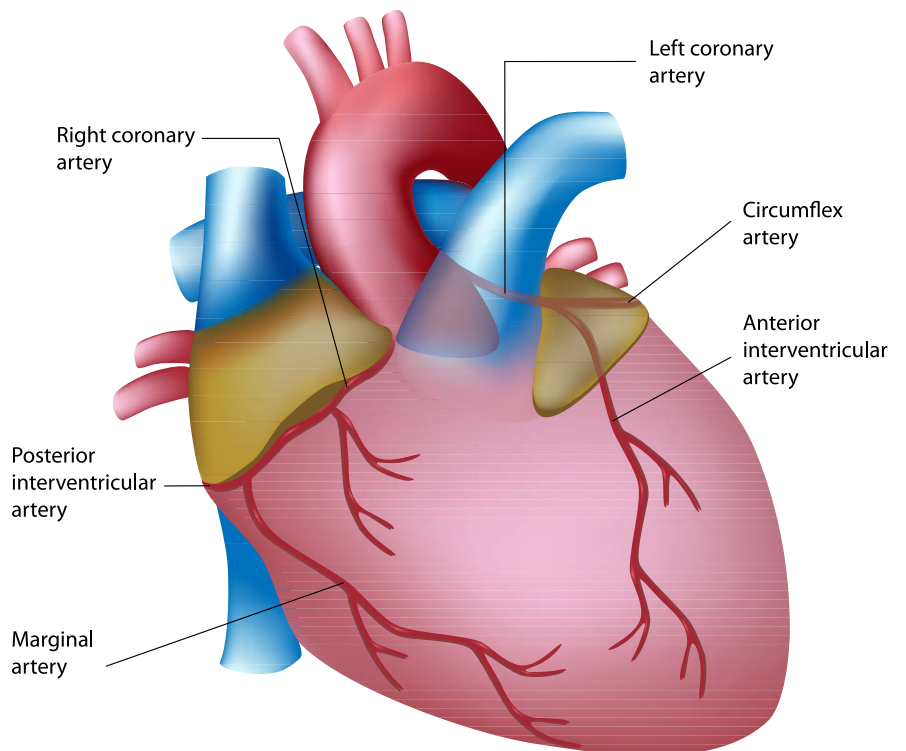
About the heart

The heart is a complex muscular organ, about the size of a large fist. Its function is to pump blood around the body. The blood provides the body with oxygen and nourishment. Waste products and gases are transported by the blood and leave the body through the kidneys and lungs. The heart has a right and left side separated by a thick muscular wall. Each side has an upper chamber called the atrium and a lower chamber called the ventricle. Blood flow between the four chambers of the heart is controlled by heart valves.



About the coronary arteries

The heart muscle requires its own rich blood supply in order to function. This occurs via two major coronary arteries originating from the aorta. The one on the left side is called the left main coronary artery which divides into the left anterior descending and the circumflex vessels, and both divide into smaller branches, supplying most of the left ventricle. The right coronary artery supplies most of the right side of the heart.

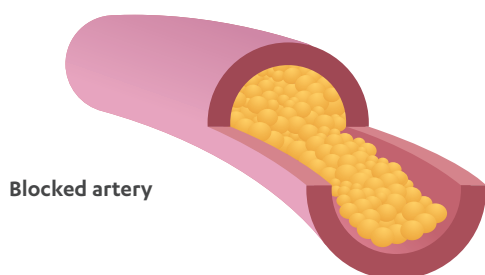
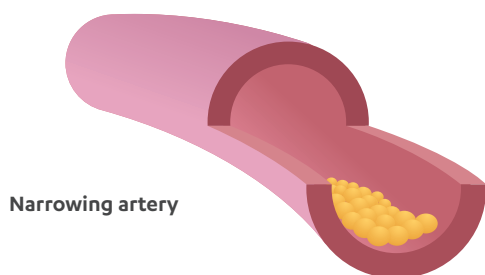
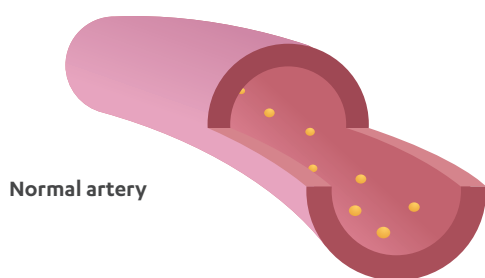


Coronary artery disease and angina

What is angina?

Angina is a condition resulting from an imbalance between oxygen demand by the heart, and a decrease in supply caused by the gradual narrowing of one or more of the coronary arteries. Fatty plaque deposits within the artery walls cause a decreased blood supply and oxygen flow to the heart muscle. The lack of oxygen causes pain, discomfort and or shortness of breath. It occurs at times when the body is under some form of stress.

Diagram of normal coronary artery and a narrowing artery



Symptoms of angina

It is important to remember that everyone's symptoms are different. Some patients may have no discomfort or pain. Angina typically presents in the left side or centre of the chest. It may also be felt in the throat, jaw, neck, shoulders or one or both arms.

Angina may feel like:

Tightness, heaviness, aching, squeezing, burning or pressure, which may be interpreted as indigestion.

Additional symptoms can include:

Shortness of breath, sweating, tiredness and nausea.

When does angina occur?

Angina often occurs when the heart has to work harder than usual, for example during exercise, emotional stress, sexual intercourse, in cold or extreme weather or after a heavy meal.

If angina occurs when resting or increases in frequency and severity, it may indicate that your coronary artery disease has progressed and you should see your general practitioner.



Spray for angina

You may have been prescribed a spray to assist your angina. The active ingredient is Glyceryl Trinitrate (GTN), also known as Nitrolingual spray by brand name. This spray works by widening the blood vessels to enable more blood and oxygen to reach the heart.

You should carry your spray with you at all times. It can be carried in your pocket, but it needs to be stored under 25°C.

Do not use this medicine after the expiry date.

The Nitrolingual spray is available from your local pharmacy with or without a prescription.

Keep a spare bottle of spray in your medicine cabinet.

The most common side effects from the spray include headache, dizziness or feeling flushed and faint. Therefore always sit or lie down prior to taking this medication.

If using for the first time, only use one spray.

Chest pain management

If chest pain occurs, follow these steps unless directed otherwise by your doctor or hospital

- Stop activity, sit down and rest
- Remove the plastic cover and hold the bottle upright with your forefinger on top of the grooved nozzle
- Do not shake the bottle
- Administer one spray under your tongue

WAIT FIVE MINUTES

If chest pain/tightness is still present:

- Administer another (one) spray

WAIT FIVE MINUTES

If chest pain/tightness is still present:

- **Call an ambulance on 000**
- Administer a further (one) spray

WAIT FOR THE AMBULANCE

If you are in a country area and an ambulance is not readily available:

- Quickly call your nearest hospital/medical clinic or your doctor
- Have someone drive you to hospital

If your chest pain resolves after the above actions, see your doctor within 24 hours.

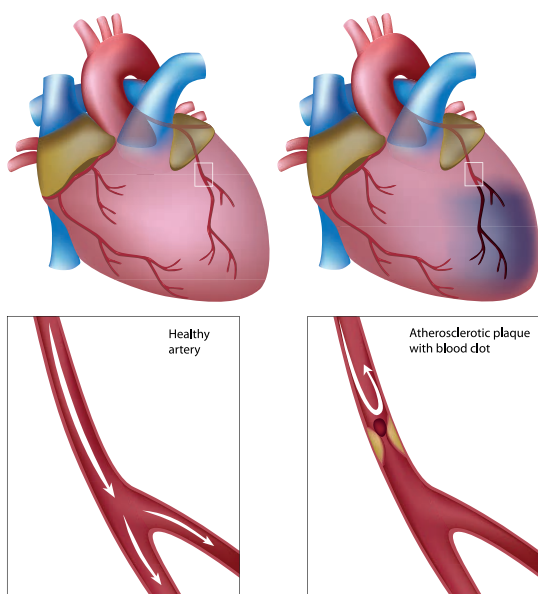
Heart attack (myocardial infarction)

What is a heart attack and what causes it?

A heart attack is the term used when a coronary artery has suddenly become blocked by a blood clot. The area of the heart muscle supplied by that artery is permanently damaged because it has been starved of blood and oxygen.

Like angina, fatty plaques build up slowly over many years, narrowing the artery. In a heart attack, this fatty plaque can rupture, causing blood clots to form around the site and cause the blockage of blood supply.

Diagram of what causes a heart attack



Symptoms commonly include chest discomfort or pain, a heavy or crushing feeling in the chest, and may or may not be associated with shortness of breath, sweating or weakness.

Heart attack symptoms can differ for each person. They can be mild, moderate or severe and are similar to, but more prominent than those experienced with an angina attack as described on page 5.

Follow the steps (right) if you suspect a heart attack.

Recognising a heart attack

Do you feel any:

- pain
- pressure
- heaviness
- tightness

In one of more of your:

- chest
- neck
- jaw
- arm/s
- back
- shoulder/s

You may also feel:

- nauseous
- a cold sweat
- dizzy
- short of breath

YES



STOP and rest now

TELL someone how you feel

If you use a spray for angina:

- Administer one spray
- Wait five minutes - if you still have symptoms, administer another (one) spray
- Wait five minutes

Are your symptoms:

- Getting worse/more severe?
- Lasting longer than 10 minutes?

YES



CALL 000

- Ask for an ambulance
- Don't hang up
- Wait for the operator's instructions

Note, If calling 000 does not work on your mobile phone, try 112.

Treatment for a heart attack

When having a heart attack, the earlier you seek treatment, the less damage is likely to occur to your heart muscle.

The most common treatment is a procedure known as an angioplasty which includes the insertion of a stent. A balloon catheter is inserted through an artery in the groin or wrist and is passed up to the heart. The balloon is inflated within the blocked coronary artery, allowing for normal blood flow to the heart muscle to resume. A stent (a flexible steel mesh cylinder) keeps the artery open. This procedure can significantly reduce the amount of damage to the heart muscle.

Medications

Following a heart attack, the medical staff will prescribe medications which help to prevent further angina and heart attacks, enabling you to participate in activities you enjoy.

Medications are taken to:

- Thin the blood to prevent the development of further blood clots within the coronary artery and/or stent
- Prevent further build-up of cholesterol in the blood vessels
- Decrease the workload of the heart and allow the heart to pump more efficiently

For more information on medications, please speak to a nurse or pharmacist.

Diagram of angioplasty and insertion of a stent

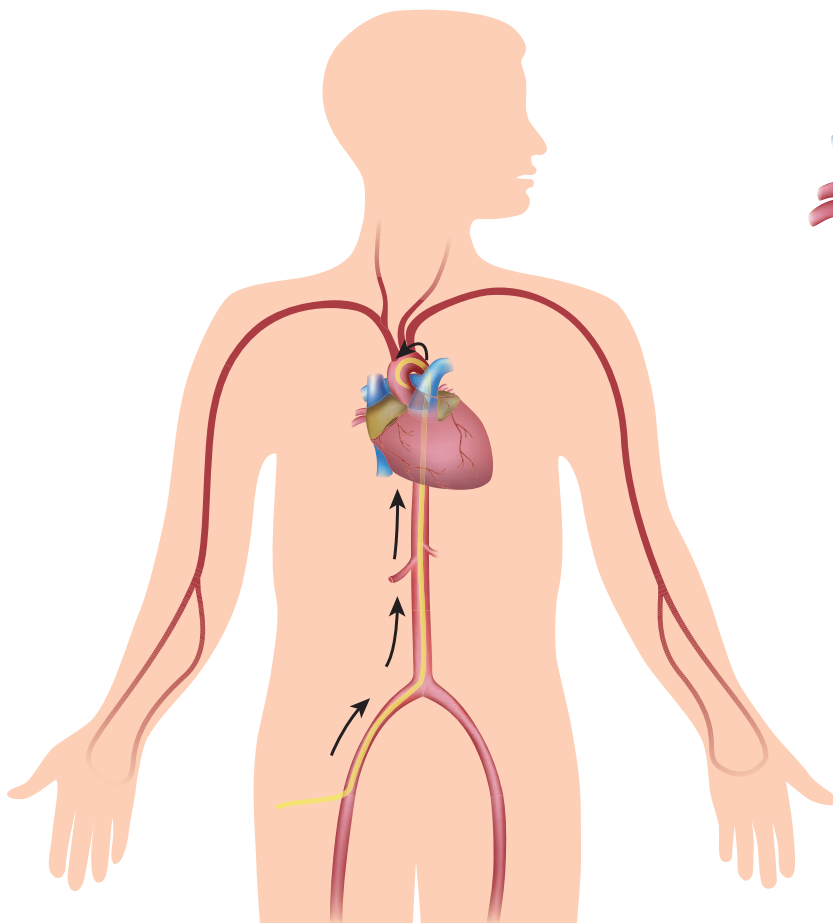


Diagram of a catheter balloon

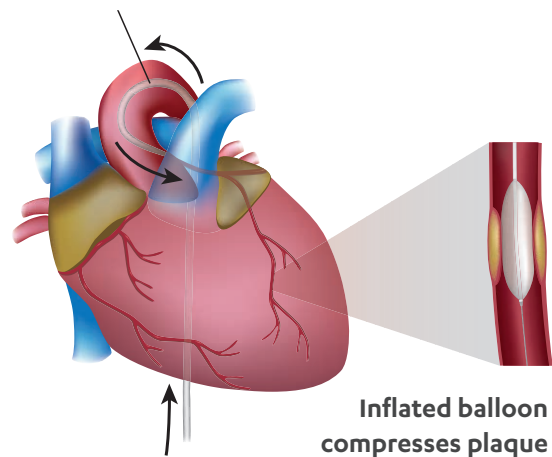
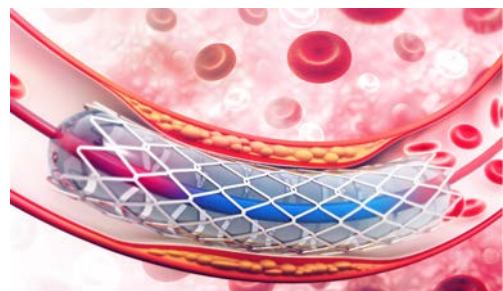


Diagram of a coronary artery stent



Cardiac surgery/procedures/treatment

Blocked arteries

An angiogram detects the number and position of any narrowed coronary arteries. If these blockages cannot be opened by the angioplasty and stent procedures, or there are multiple blockages, it may be necessary to have cardiac bypass surgery. A small group of patients may require bypass surgery immediately following a heart attack. Others may have surgery at a later date, or as an elective procedure. Cardiac bypass surgery aims to redirect the blood flow around the narrowed part of the artery to supply the heart muscle with a good blood flow. The blood vessels from the chest, arm or leg may be used for the bypass vessels **grafts**. The hospital stay is between five to seven days.

Diagram of coronary artery bypass grafts

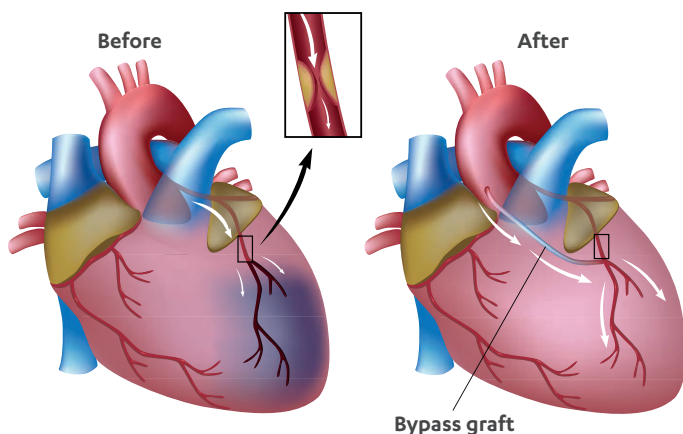
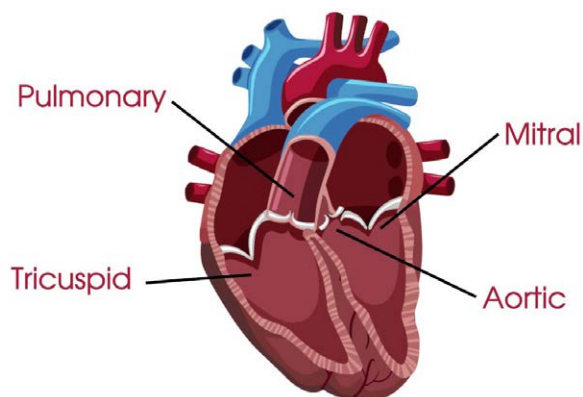


Diagram of heart valves



Heart valve disease/aortic stenosis

Aortic stenosis is a progressive thickening and hardening of the leaflets (heart valve flaps), so they are unable to open properly when the heart ejects blood.

Valves that do not open and close, make it more difficult for blood to flow properly through the heart. This makes the heart pump harder in order to circulate enough blood to the body. Over time this can weaken the heart. Symptoms can range from moderate to severe and include:

- Shortness of breath
- Chest pain
- Dizziness/feeling faint

Treatment varies according to the severity and type of disease.

Medications may provide adequate management of the condition in the early stages.

However, surgery to repair the heart valve or to replace the heart valve may be required. This may be a mechanical valve or a bovine valve.

The valve is replaced to:

- Relieve the burden on your heart
- Improve your blood supply
- Help you feel better

Trans-catheter aortic valve implantation (TAVI) is a less invasive way of implanting the valve prosthesis. It does not require open heart surgery. It is usually done through a small incision in the groin. The procedure is usually performed under conscious sedation. The hospital stay is between three to four days.

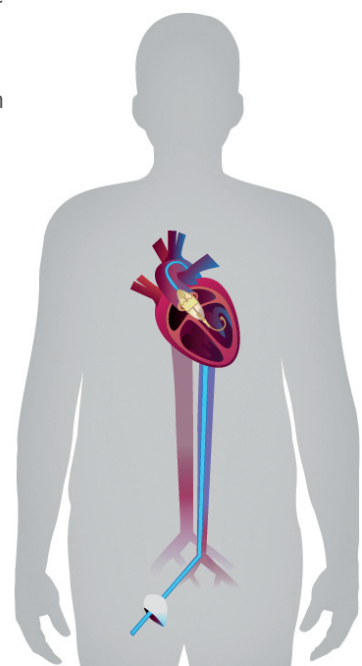


Diagram of TAVI procedure

Heart disease risk factors

A cardiovascular risk factor is a condition or habit that is associated with an increased risk of developing heart disease.

By addressing **modifiable risk factors**, you will help the health of your heart and longevity of life. There are some risk factors that you cannot change – these are called **non-modifiable risk factors**.

Modifiable risk factors

- High blood pressure
- Smoking
- High cholesterol level
- Being overweight or obese
- Diabetes
- Depression, social isolation, lack of social support
- Obstructive sleep apnoea
- Lack of exercise

Non-modifiable risk factors

- Increasing age
- Gender: male sex
- Family history of heart disease
- Ethnicity

Modifiable risk factors

High blood pressure

Blood pressure is the pressure of the blood exerted on the artery walls as it pumps around the body from the heart. It is recorded as a top (systolic) and bottom (diastolic) figure, for example: 120/70.

- Normal blood pressure is generally less than 140/80 (this is a guide only)
- Hypertension is the medical term for high blood pressure
- High blood pressure can be silent and often does not give warning signs
- High blood pressure can lead to serious problems such as a heart attack, stroke, heart failure and kidney disease

To help reduce your blood pressure:

- Do not smoke
- Reduce your salt and fat intake
- Achieve and maintain a healthy body weight
- Limit your alcohol intake
- Undertake regular physical activity
- Take prescribed blood pressure medication

Smoking

Cigarette smoking is the single largest preventable cause of death and disease in Australia.

Cigarette smoking is a major cause of heart attacks, stroke, peripheral arterial disease and abdominal aortic aneurysms, all of which are forms of cardiovascular disease. Both mainstream (directly inhaled) tobacco smoke and side stream (environmental or passively inhaled) tobacco smoke have been shown to negatively affect cardiovascular health.

Research indicates that cigarette smoking:

- Increases the risk of heart attack two to six times
- Increases the risk of heart disease among women using the oral contraceptive pill
- Increases the risk of a stroke three-fold
- Increases the risk of peripheral arterial disease (which can lead to gangrene and limb amputation) by more than five times
- Increases the likelihood of an abdominal aortic aneurysm (enlargement of the body's main artery in the abdomen which may rupture) by six to seven times (for current smokers)

Quitting

The health benefits of quitting smoking:

- After 12 months your increased risk of dying from heart disease is half that of someone who continues to smoke
- After 15 years your risk of heart attack and stroke is almost the same as a person who has never smoked
- It is never too late for smokers to quit, even if they already have some form of cardiovascular disease
- Quitting smoking can reduce the likelihood of a repeat heart attack and the chances of developing other forms of cardiovascular disease
- Reducing the prevalence of smoking in the community can result in considerable short term savings in medical costs associated with heart attacks and strokes that are prevented

Call the Quit line on 137 848

Reference: www.quit.org.au

Cholesterol

Cholesterol is a fatty substance produced naturally by the liver. Certain foods can elevate cholesterol levels. It is used for many different things in the body, but can cause problems for our health when there is too much of it in the blood.

Too much cholesterol can cause fatty deposits to gradually build up in the blood vessels making it harder for blood to flow, and potentially causing a heart attack or stroke.

There are several types of cholesterol found in our bodies:

- High density lipoprotein (HDL) or 'good' cholesterol
- Low density lipoprotein (LDL) or 'bad' cholesterol
- Triglycerides (TG) – there is evidence to suggest that some people with high triglycerides have a higher risk of coronary heart disease (CHD)

For people with CHD it is recommended that your:

HDL is equal to or higher than 1 mmol/L

LDL is equal to or lower than 1.8 mmol/L

Triglycerides are equal to or less than 2 mmol/L

It is advisable that you discuss your levels with your cardiologist or general practitioner and have your cholesterol level checked regularly.

Managing your cholesterol level

Making lifestyle changes will help to manage your cholesterol level:

- Maintain a diet low in saturated fats
- Maintain a healthy weight
- Get at least 30 minutes of moderate physical activity on most, if not every day of the week
- Be smoke free
- Take your cholesterol lowering medications as prescribed

Being overweight or obese

Almost two in every three (63.3%) adult Australians are overweight or obese. Adult males are more likely to be overweight or obese than adult females.

Being overweight can have a serious impact on your health, increasing your risk of coronary heart disease, high blood pressure and high cholesterol.

Excess weight around your middle is a greater health risk. Waist measurements should be:

Men < 94 cms

Women < 80 cms

The key to achieving and maintaining a healthy weight is enjoying a healthy diet and daily physical activity.

You can maintain your weight if the amount of kilojoules you consume (how much you eat and drink) equals the amount your body uses (how active you are).

It is all about achieving a balance.



Healthy ways to lose weight

- Make small easy changes to your diet: e.g. swap full cream milk for skinny milk, make biscuits and cakes occasional treats rather than an everyday occurrence.
- Move more – take the stairs not the lift, walk to the shops, get off the bus/tram a stop earlier, park your car further away from the shops. Take up an activity you enjoy such as dancing or swimming. Watch less television.
- Take it slowly – do not aim to lose 20 kilos in a week! Give yourself reasonable and achievable goals over a good period of time. Even small amounts of weight lost can have a large positive impact on your health.
- Seek advice from health professionals and ask your GP for a plan. See a dietitian.

Diabetes

- Diabetes is a chronic disease associated with abnormally high levels of glucose in the blood
- Diabetes is a major risk factor for heart attacks and stroke
- It is Australia's fastest growing disease
- There are two main types of diabetes, but Type 2 is the most common (90 per cent of all cases of diabetes)
- Up to 60 per cent of Type 2 diabetes can be prevented

Risk factors for developing diabetes:

- Being overweight or obese
- Family history
- Inactivity
- Pre-diabetes – this is a condition when blood glucose levels are higher than normal, but not high enough to be diagnosed as Type 2 diabetes
- Gestational diabetes

Depression, social isolation, lack of social support

Social isolation and depression are now recognised as significant risk factors for heart disease. Evidence shows that depression can be as big a risk factor for heart disease as smoking, high cholesterol levels or high blood pressure. Furthermore, depression can affect the recovery of people with heart disease and increase their risk of further heart problems.

Being aware of the signs of depression and seeking help is important as there are many effective treatments available.

A person who has experienced a low mood for more than two weeks and has felt sad, down, or miserable most of the time, and has lost pleasure in most of their usual activities may be depressed.

Some other signs may include:

- Not going out
- Being tired all the time
- Sleep problems
- Relying on sedatives, alcohol or other drugs
- Inability to concentrate
- Feeling unhappy, frustrated or indecisive
- Thoughts such as "I'm a failure" and "life's not worth living"
- Withdrawing from close family and friends

It is important to seek help as soon as possible – mental health problems are both common and treatable.

Seeing your GP is recommended so that if required, appropriate treatment can be determined.

Lack of exercise

People who are inactive are more likely to have heart attacks, heart disease and early death.

Lack of activity is associated with high blood pressure, high cholesterol and being overweight.

Regular moderate activity is good for your heart. You should aim to include at least 30 minutes a day of moderate-intensity physical activity such as brisk walking on most, if not every day of the week. This can also be split into two 15 minute, or three 10 minute walks.

With regular exercise it is likely that you will:

- Live longer
- Be less likely to have a heart attack
- Have lower blood pressure
- Have a lower cholesterol level
- Control your weight better
- Reduce your stress levels
- Feel more energetic

Consider joining a formal activity group – such as a walking group.

Non-modifiable risk factors

Gender and increasing age

Generally, middle age men have a higher risk than women of developing coronary heart disease. The risk rises as they get older.

However the risk of developing coronary heart disease is also an important issue for women, especially as they get older. It is likely that hormonal changes after menopause, added to changes in risk factors, play a role.

Women are protected by oestrogen. Once women go through menopause the risk of heart disease is equal to men.

Family history

If your parent or sibling has developed heart disease under the age of 60 years, then you are at greater risk.

Having a family history of coronary heart disease does not necessarily mean that you will develop it, but it is important to remove or reduce other modifiable risk factors.



Healthy eating for heart disease

Following a healthy diet can help control a number of risk factors for heart disease, including cholesterol, blood pressure and weight. Some simple dietary changes can reduce these risk factors and improve your overall heart health.

Fats

Fats are an important part of our diet. The amount and type of fat we eat affects our blood cholesterol levels. Healthy fats include monounsaturated (MUFA) and polyunsaturated fats (PUFA), which can increase our 'good' (HDL) cholesterol levels and decrease our 'bad' (LDL) cholesterol levels, and should be included in our diet. Unhealthy fats include saturated fats (SFA) and trans fats (TFA), which increase our 'bad' (LDL) cholesterol levels and should be avoided.

Foods containing PUFA & MUFA	Recommendation	Suggestions
MUFA • Extra virgin olive oil • Avocado • Almonds, peanut and cashew nuts	Each day choose at least one: • 3 Tbs of olive oil (60ml) • ¼ avocado • 30g of unsalted nuts • 1 Tbs of nut butter	• Spread avocado on a sandwich instead of butter • Use olive oil in cooking and dressings • Spread natural unsalted peanut butter on wholegrain crackers
PUFA • Oily fish and seafood • Canola and sunflower oils/spreads • Walnuts and brazil nuts • Chia, linseed, flaxseed and sunflower seeds • Tahini • Eggs (omega 3 enriched) • Soy products	Each week choose: • 2-3 serves of oily fish or seafood Each day choose at least one: • 30 grams of unsalted nuts • 2 tsp of seeds • 1 Tbs tahini • 2 tsp of canola spread	• Tinned salmon or tuna or sardines in a sandwich or salad • Have a mix of unsalted nuts and seeds as a snack • Sprinkle seeds on your salad or cereal • Use canola spread on sandwiches or toast
Foods containing SFA & TFA	Recommendation	Suggestions
SFA • Butter, lard • Fat on meat, poultry skin • Deli meats • Cakes, pastries, pies and take-away foods • Coconut oil TFA • Deep fried foods • Biscuits, cakes, pastries	• Shouldn't be consumed daily	• Choose low fat dairy • Use olive oil instead of coconut oil or butter in cooking • Use canola spreads instead of butter • Choose lean cuts of meat or remove visible fat and skin prior to cooking

Omega 3 fats

Omega 3 fats (ALA, EPA, DHA) are a type of PUFA that can help reduce our risk of heart disease by increasing the amount of 'good' (HDL) cholesterol in the blood and reducing inflammation. They are found naturally in oily fish, seafood and plant foods such as soya beans, linseed, walnuts, chia and flaxseed. Some eggs, milks and margarines also contain added omega-3 fats. If you are unable to consume these options you may want to consider fish oil supplements, however consult your doctor prior to commencing.

Plant sterols

Plant sterols help in lowering our total and 'bad' (LDL) cholesterol levels, by blocking the absorption of LDL cholesterol in the body. The National Heart Foundation recommends 2-3 grams of plant sterols per day. Eating more plant foods and choosing products that have added plant sterols are simple ways to increase our plant sterol intake.

2-3g plant sterols = 2 x Cholesterol Lowering WeetBix® biscuits with 1 x cup of Heart Active® milk

Fibre

Fibre can reduce our risk of heart disease by blocking 'bad' (LDL) cholesterol absorption. It also helps to control our appetite by keeping us fuller for longer, aiding in weight management, and keeping our bowels regular.

High fibre foods	Suggestions
• Oats • Psyllium • Nuts and seeds • Lentils and legumes • Fruits and vegetables (flesh and skin) • Wholegrain breads and cereals	• Porridge for breakfast • Add chickpeas to salads • Snack on fresh fruit or nuts and seeds • Add psyllium or chia seeds to smoothies or cereal • Choose wholegrain bread

Salt/sodium

Eating too much salt can lead to high blood pressure which is a risk factor for heart disease. The Heart Foundation recommends a maximum of **5g of salt** (1 teaspoon) per day.

Salt added during cooking or at the table makes up only a small portion of the salt most of us consume each day. Processed and packaged foods are the main source of salt in our diet, as they contain large amounts of added salt. These include:

- Cakes, biscuits, muffins, chips/crisps
- Processed meats e.g. salami, sausages, ham, bacon
- Bread, breakfast cereals
- Sauces and stocks
- Canned foods

Where possible, choose salt reduced or no added salt varieties, and look for <400 mg sodium per 100 g serve.

Alcohol

Excessive alcohol intake can lead to high blood pressure and increase our risk of heart disease and stroke. The Heart Foundation recommends no more than 10 standard drinks per week and no more than four standard drinks on any one day.

1 standard drink = 10 grams of alcohol.

This is how it looks:

	Spirits 40% alcohol 30ml nip		Wine 13% alcohol 100ml average serving
	Sparkling wine 13% alcohol 100ml		Full strength beer 4.9% alcohol 285ml glass
	Light beer 2.7% alcohol 425ml glass		Cider 4.9% alcohol 285ml glass

Shopping for heart disease

Nutrition information panels can be confusing, but if you know how to read them they can be a useful source of information to help you choose heart-healthy options.

Nutrition information panels appear on most food products and are presented per serving size and per 100 g/mL. Products can easily be compared using the 100 g/mL column.

There are five main nutrients to look out for on a nutrition information panel:

Check the quantity of:	Aim for:
Saturated fat	<2g per 100g
Trans fats	<1g per 100g
Salt/sodium	<400mg per 100g
Fibre	>3g per serve
Sugar	<15g per 100g

Example of reading a nutrition information label:

	Per serving	Per 100g
Energy (KJ)	151	3020
Protein	<1g	0.5
Fat, total	4.1	81
- Saturated	2.8	55.1
Carbohydrate	<1g	<1g
- Sugars	<1g	<1g
Dietary fibre	<1g	<1g
Sodium	35	695



Nutrition claims – what do they mean?

Nutrition claims on foods can be very confusing and misleading. Always check the nutrition information panel and ingredients list to determine if it is a heart-healthy choice.

Lite or light: Can refer to colour, flavour, energy (calorie/kilojoule) or fat content.

Reduced fat: Contains at least 25% less fat than the original product. However, may not be low in fat or saturated fat or sugar.

High fibre: Contains at least 3g of fibre per 100g.

Cholesterol free: Contains no naturally occurring cholesterol. However, the product may not be low in saturated fat or salt.

• This product is high in saturated fat with **55g/100g**

• This product is low in fibre as it has less than **3g/100g**

• This product is high in sodium as it has **>400mg/100g**

Eating in and out for heart disease

Making small changes to recipes, cooking methods and takeaway choices can reduce your risk of heart disease or future cardiac events.

Ideas for making recipes heart-healthy:

- Using healthier cooking methods such as stir frying, air frying, steaming, grilling or baking (rather than deep frying)
- Reducing, removing or replacing ingredients (see table below)

Ingredient	Healthier alternative
Full fat cheese and milk	Choose reduced fat cheese and milk
Cream, sour cream	Replace with low fat unflavoured yoghurt, reduced fat ricotta cheese or evaporated milk
Butter, lard	Use oils or margarine spreads made from oils such as canola, sunflower and olive
Meat and poultry	Choose lean meats and/or remove fat before cooking

Tips for choosing heart-healthy options when eating out:

- Choose sauces that are not cream or butter based and/or request to have sauce on the side
- Choose lean meats or cut the fat/skin off meat and poultry before eating
- Limit dishes that are battered, crumbed or fried
- Choose vegetables or salad over fried foods such as hot chips
- If having dessert, share one between two



Medication

The aims of heart medications are to improve symptoms, prevent hospitalisation, slow or reverse disease progression and reduce mortality. Improvement in symptoms can be achieved by taking diuretics, beta blockers, renin-angiotensin system inhibitors (ACE inhibitors), antithrombotic therapy and statins.

When commencing any new medications prescribed by your doctor it is important to be familiar with the drug name, why you are taking the medication, how to take the medication (dose and frequency) and any side effects which may occur.

Below is a list of some of the most common cardiac medications which your doctor may have prescribed for you.

Antiplatelet medications

- Aspirin is an antiplatelet medication which is taken in a low dose every day to prevent platelets from sticking together, which helps prevent the formation of blood clots
- Aspirin should be taken daily with or after food
- As Aspirin will thin your blood you may bleed more easily than normal – report a bloody nose, bloody diarrhoea or rash to your doctor
- Clopidogrel or Ticagrelor are alternatives to Aspirin and also help to prevent blood clots
- Following the insertion of a cardiac stent your doctor may prescribe both Aspirin and Clopidogrel or Ticagrelor for a period of time

Anticoagulants

- Blood thinners for the prevention of stroke in patients with atrial fibrillation
- These medications include: Warfarin, Apixaban, Dabigatran and Rivaroxaban
- These medications can interact with a number of other medications so it is important that before starting any new medications (including vitamins or over the counter medications) that you speak to your doctor or pharmacist
- As these medications can increase your risk of bleeding it is important that you tell your doctors, dentists, pharmacists, podiatrists and physiotherapists who treat you that you are taking a blood thinner
- You will need to see your doctor for regular check-ups but tell your doctor immediately if you experience:
 - Unexplained bruising
 - Bleeding
 - Pink, red or dark brown urine
 - Red or black faeces

Beta-blockers

- Commonly prescribed beta-blockers include: Metoprolol, Atenolol, Sotalol and Bisoprolol
- These medications reduce blood pressure, regulate heart rate and rhythm, improve the pumping of the heart and treat angina
- Common side effects include:
 - Dizziness or tiredness (especially at the start of treatment or when the dose is increased)
 - Breathing difficulties if asthmatic
 - Cold fingers or toes
 - Drops in blood pressure
- These side effects often reduce within two weeks of starting these medications, however if your symptoms persist for more than two weeks contact your doctor.



Statins or cholesterol lowering medications

- Lipid lowering medications such as statins (Atorvastatin, Rosuvastatin, Simvastatin, Pravastatin) are beneficial for both primary and secondary prevention of coronary heart disease in patients with high cholesterol
- Reduce the production of LDL cholesterol ('bad cholesterol') which can build up within your arteries causing plaques
- These medications are often prescribed as lifelong medications and should be taken at the same time each day
- Common side effects of these medications include:
 - Unexplained muscle pain of large muscles
 - Flatulence
 - Diarrhoea
- It is important to avoid grapefruit juice while on statins and report unusual joint pain and appearance of dark urine to your doctor
- Other cholesterol lowering agents include: Fenofibrates, Gemfibrozil, Ezetimibe, Cholestyramine and Nicotinic acid

Blood pressure medications

- Includes ACE inhibitors (e.g. Perindopril, Ramipril) and sartans/ARBs (e.g. Candesartan, Irbesartan, Olmesartan, Telmisartan)
- These medications reduce blood pressure, can improve heart muscle function after a cardiac event and improve symptoms of heart failure
- Common side effects include:
 - Low blood pressure (feeling light-headed or dizzy)
 - Persistent dry cough (with ACE inhibitors)

Diuretics

- Your doctor may have prescribed a diuretic including: Frusemide, Spironolactone or Hydrochlorothiazide
- These medications work on your kidneys to remove excess water from your body to relieve symptoms of fluid retention
- These medications are best taken in the morning and will require ongoing monitoring of your weight, dose and symptoms by your treating doctors
- Common side effects include:
 - Frequent and urgent visits to the toilet
 - Low blood pressure and dizziness
 - Can trigger symptoms of gout (in high doses)

Over the counter medications

It is important to check the safety of over the counter medications, such as fish oil, coenzyme Q10, zinc, magnesium, anti-inflammatory medications and other products with your doctor or local pharmacist before taking any new medications.

Important tips about taking medications

- It is important you take your medications regularly at the same time each day
- Do not stop taking your prescribed medications unless advised by your treating doctor
- It is useful to keep a medication list and have this list reviewed regularly by your treating doctor – this list can also be helpful when admitted to hospital or when commencing new medications
- Generic medication is becoming more common; ensure you are familiar with the drug name of your medications not just the brand name
- If you have any questions about your medications ask your local pharmacist or your GP

More information

As well as the general resources listed on page 26, you may like to visit the following sites that focus on medication:

- MyDr: www.mydr.com.au/medicines
- National prescribing service: www.nps.org.au

Emotional reactions to a heart event

Emotional changes are normal

Having a heart attack or heart surgery or being diagnosed with heart disease can come as a huge shock and can make you realise you are not immortal. Having a heart event is an emotional experience, not just a physical one.

Many people experience changes in mood and emotions at the time of a cardiac event. Some people feel angry and irritable, some feel sad and tearful. Some feel moody and 'up and down'. Many people have difficulty sleeping. Some lose their appetite and their sex drive. Some people worry about whether they will ever get 'back to normal'.

When you leave hospital you may find yourself on an emotional rollercoaster. These feelings and reactions are all common and normal, especially in the first few weeks or months.

Many people experience mixed emotions including:

Shock

You may feel numb or find it hard to believe that you have a heart problem.

Denial

You might find it hard to accept that this has happened to you.

Fear

You may feel scared and worry that you will never get back to your old life. You might be fearful about dying.

Guilt

You may blame yourself for what has happened.

Anger

You may become frustrated about the changes that are happening. You may be more irritable than usual.

Sadness

You may get tearful or feel miserable and lose interest in things that you normally enjoy. You might withdraw from others.

Relief

You may feel relieved or thankful that your heart disease has been diagnosed and treated.

When to get help

If you get 'stuck' in feelings of sadness or depression, anger or anxiety, it is important to get help. If you do not get help, these feelings can last for a long time.



*Page reproduced from Heart Research Centre Workbook –
A guide for health professionals working with lifestyle change
Higgins, Elliot, Murphy & Furber 2010*

Cardiac rehabilitation and exercise

Program aims

- Educate you on the importance of staying active
- Teach you how to monitor your progress during activity, including recognition of your limitations
- Give you confidence to exercise safely
- Set weekly goals for home exercise that you can achieve
- Have you record your exercises at home on a weekly basis
- Reintroduce exercise as a normal part of your day
- Help you participate in cardiovascular exercise (exercise that makes you puff) for at least 30 minutes, five times per week. If 30 minutes isn't achievable, you can break it up into smaller bouts, e.g. two x 15 minute walks per day.

Note: If you are unsure about staying active, or any information in this booklet, please contact a member of the cardiac team.

When exercising DO

- Commence your exercise or physical activity slowly and gradually – you will not benefit from doing too much too soon
- Exercise in the cooler times of the day when the weather is not hot or humid
- Warm up before starting any physical activity
- Remember to cool down properly after exercise
- Carry your GTN spray with you while exercising if required
- Stay hydrated - carry a water bottle with you when exercising
- Monitor your blood sugars and take a starchy carbohydrate snack with you if you are diabetic
- Wear loose, comfortable clothing
- Wear sensible, well-fitting supportive footwear
- Choose physical activities you enjoy doing so that it becomes a regular part of your life – exercise takes many forms – involve your friends and family to make staying active fun and sociable

When exercising DON'T

- Do not exercise if you feel unwell in any way
- Do not exercise for two hours after eating a big meal
- Do not exercise if your blood glucose level is <6 if you are diabetic
- Do not exercise after consuming alcohol
- Do not have a very hot or cold shower or sauna after activity as it can lower your blood pressure and make you feel light headed or dizzy
- Do not perform long continual actions especially with your arms raised above your head, such as lifting very heavy objects or hanging out washing (this is particularly important if you are on sternal precautions)
- Do not hold your breath while exercising
- Do not exercise if it is too hot or too cold for you to be comfortable
- Do not continue to exercise if you feel any chest discomfort and/or tightness: stop and use your GTN spray as directed
- Do not continue to exercise if your previous day's activity has left you tired and sore – listen to your body and give yourself a day off to recover

Exercise exertion

While staying active, we ask you to use the Borg Rating of Perceived Exertion Scale (RPE) ranked from 6-20 to help you rate how strenuous an exercise or activity feels as you are doing it. The perception of exertion depends mainly on the strain and fatigue in your muscles and on the feeling of breathlessness or aches in the chest.

No	Effort experienced	Verbal expression
6	No exertion at all	Nothing noticeable
7		
8	Extremely light	Just noticeable
9		
10	Very light	Easy to continue
11		
12		
13	Somewhat hard	Beginning to puff
14		
15	Hard (heavy)	Feeling puffed
16		
17	Very hard	Tiring – you have to push to continue
18		
19	Extremely hard	Out of breath/very fatigued
20	Maximal exertion exhaustion	As hard as most people have experienced, whole body exhausted

- It is very important that you truthfully state what you perceive – that is, your own feeling of effort and exertion – and not what you believe you ought to answer. Be as honest as possible and try not to overestimate or underestimate the intensities.
- Try to exercise between ‘Somewhat hard’ (13) and ‘Hard’ (15) when completing activity at home. Try not to exert yourself more than ‘Hard’ (15) without professional supervision.
- During the exercise classes you will be asked on occasion to report your perceived exertion as a number on the scale. This will help familiarise you with the system.

- Please remember to use the scale at home when exercising and record the RPE number in your home exercise table.
- You should always exercise or exert yourself to a level where you feel most comfortable. You may need to start lighter then progress the intensity as your fitness builds.
- As your fitness improves you should be able to do more exercise or activity and still be within your comfortable range.

Benefits of exercise

- Builds up the strength of the heart so it becomes more efficient, gradually enabling you to do more, with less effort.
- Helps maintain normal blood pressure. It can act to decrease high blood pressure and reduce the likelihood of high blood pressure developing.
- Controls diabetes by improving your ability to maintain normal blood glucose levels.
- Improves your blood cholesterol by preventing the formation of fatty deposits in your coronary arteries.
- Helps you maintain a healthy weight by losing those unwanted kilos! Exercise multiplies the rate at which calories are burned.
- Improves your sense of wellbeing and makes you feel better about yourself. This is due to an increase in endorphins in the blood.
- Acts as a de-stressor. It leaves you feeling energised and yet relaxed and improves your quality of life.
- Keeps your bones healthy. It improves muscle strength and helps to improve balance and flexibility.
- Can help to reduce your admissions to hospital.



Daily activity modification

Occupational therapists provide guidelines, advice and therapy to enable return to daily activities and to increase activity tolerance.

Activities of daily living include: personal care tasks, domestic activities, leisure activities, accessing the community, sexual activities and return to work.

Returning to activities

There are often recommendations made by your surgeon regarding activity limitations and activities you should avoid after surgery while you are healing. This will be discussed further by your occupational therapist.

It is often recommended that:

- After open heart surgery you do not lift anything greater than 5kgs in the first six weeks
- If you have a pacemaker do not lift your arms above your head for four weeks post surgery

Work simplification

Aims to:

- Reduce the length of time taken to complete a task
- Reduce the amount of energy used when completing an activity
- Reduce the physical demands on the body during tasks
- Reduce the physical stresses on the body when completing an activity

Energy conservation

Aims to:

- Enable you to achieve more with less effort
- Reduce energy required to complete daily tasks
- Avoid fatigue
- Avoid over exertion

Methods of work simplification and energy conservation:

- Plan ahead
- Add rest breaks
- Pace yourself
- Sit when you can, e.g. while cooking, talking on the phone, ironing
- Limit the demands you put on yourself
- Use correct body mechanics and working posture
- Organise storage at your home and workplace
 - ideal placement of items is between knee and shoulder height
- Use the right equipment

Advice to remember while healing and returning to graded activities:

- Plan
- Organise
- Keep active
- Rest
- Respect symptoms such as breathlessness, pain and fatigue
- Delegate

Social support

Social support is vital

Research has shown that it is very important to have support from family and friends after a cardiac event. Social isolation can affect the recovery process and result in a poorer coronary heart disease prognosis.

Indeed there are many positive factors that a person can experience if actions to increase social support and reduce social isolation are implemented.

What does social support mean to you?

- What social support do you have? Is it beneficial? Does it meet your needs?
- How have other people in your life been affected by your heart disease (fear of dying, your inability to work, family role).
- How good are you at talking about yourself to others? What stops/helps you to talk to others?
- What thoughts would make it harder to increase your social support?
- What thoughts would make it easier to increase your social support?

Types of social support

Practical support

Practical support (also known as tangible or instrumental support) comes from people who give you help when you need it. Practical support includes house work, lawn-mowing and many other day-to-day activities.

After a cardiac event, you may need assistance with personal care and help around the home. To make things easier, Cabrini has an arrangement with Prestige Inhome Care.

Prestige Inhome Care can tailor services to your individual need and can have someone on hand to help you at home. They can assist with:

- House cleaning and laundry
- Transportation
- Meal preparation
- Hiring and buying equipment
- Home and garden maintenance
- In-home respite care
- Personal care (showering/dressing/toileting)

- 24/7 care
- Shopping and errands
- General nursing care

You can contact Prestige directly via phone or email (make sure you mention you are a Cabrini patient).

Phone: 1300 10 30 10

Email: info@prestigeinhomecare.com.au.

Informational support

Informational support comes from people who can tell you what you need to know. This may be health professionals, but also other patients. People who have gone through the same thing as you can make you feel that you are not alone.

Information that is accurate, relevant and timely can assist people to problem solve and empower them to make informed decisions.

Social companionship and affiliational support

Companions (friends) are people who can share your activities, such as playing sport, outdoor activities, shopping, parties, trips and visits to cinemas, theatres, museums and restaurants. Affiliational support from being a valued member of a group of people who share similar interests or have had similar experiences is also beneficial.

Emotional support

Emotional support is having people to share your feelings and your worries. They listen to you when you want to talk, show you love and make you feel wanted.

Think about talking to people with whom you would feel comfortable. Consider ringing or having coffee with a close friend, relative or neighbour.

Re-establish links with someone with whom you have lost touch. Do not assume that you are going to be a burden to others because you have shared how you feel or become emotional. Would you be prepared to listen to and provide support to someone who came to you?

Summary/checklist of social supports

Think about your level of social support in each of the following categories. We have provided some examples.

If you have no or low support in any of these areas, think about what you can do to increase the level. Many people find that attending rehabilitation is one way of increasing support.

You might like to tick the boxes of areas that you would like to try to increase your social support.

Informational support

- ☐ Visit reputable websites
- ☐ Phone a friend for advice
- ☐ Books
- ☐ Leaflets
- ☐ Ask your GP
- ☐ Ask other health professionals
- ☐ Support groups
- ☐ Fellow patients

Practical support

- ☐ Family
- ☐ Friends
- ☐ Neighbours
- ☐ Local council
- ☐ Home deliveries from local shops
- ☐ Commonwealth Home Support Program & Home Care Packages

Social companionship and affiliational support

- ☐ Sporting clubs
- ☐ Local paper 'what's on'
- ☐ U3A
- ☐ Men's Sheds
- ☐ Craft groups
- ☐ Probus/Lions/Rotary
- ☐ Church
- ☐ Volunteer at a local charity to meet people with similar values
- ☐ Organise outings with others – shopping, go for a coffee or meal, go to a movie or museum

Emotional support

- ☐ Current friends
- ☐ Old friends or people with whom you have lost touch
- ☐ Support groups

Future planning

Consider writing or updating your Will. To find a lawyer that specialises in Wills you can contact the Law Institute of Victoria (www.liv.asn.au) or for further information about making a Will you can contact Victorian Legal Aid (www.legalaidvic.gov.au).

Appoint a Power of Attorney for your financial and medical affairs. Documents are available from the post office, your lawyer or from the Office of the Public Advocate (www.publicadvocate.vic.gov.au).

Discuss an Advance Care Plan with your appointed representative and family. This will inform them of your wishes for end of life management. Please ask us for a copy of our Advance Care Planning brochure for more information.



Useful resources

www.bakeridi.edu.au

www.betterhealth.vic.gov.au

www.beyondblue.org.au

www.diabetesaustralia.com.au

www.heartfoundation.org.au

www.myheartmylife.org.au

www.quit.org.au

The Heart Foundation website

[**www.heartfoundation.org.au**](http://www.heartfoundation.org.au)

has many useful pages on topics such as:

- Spontaneous coronary artery dissection
- Heart conditions in women
- Conditions/heart valve disease
- Heart health education/healthy eating



Disclaimer: This booklet is provided for general information purposes only. This booklet does not provide you with specific personal, professional or medical advice. It is not intended to be a substitute for professional or medical advice and should not be relied upon as such. You should obtain advice from your treating doctor or healthcare professional about your individual circumstances.

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www.cabrini.com.au/cardiac

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