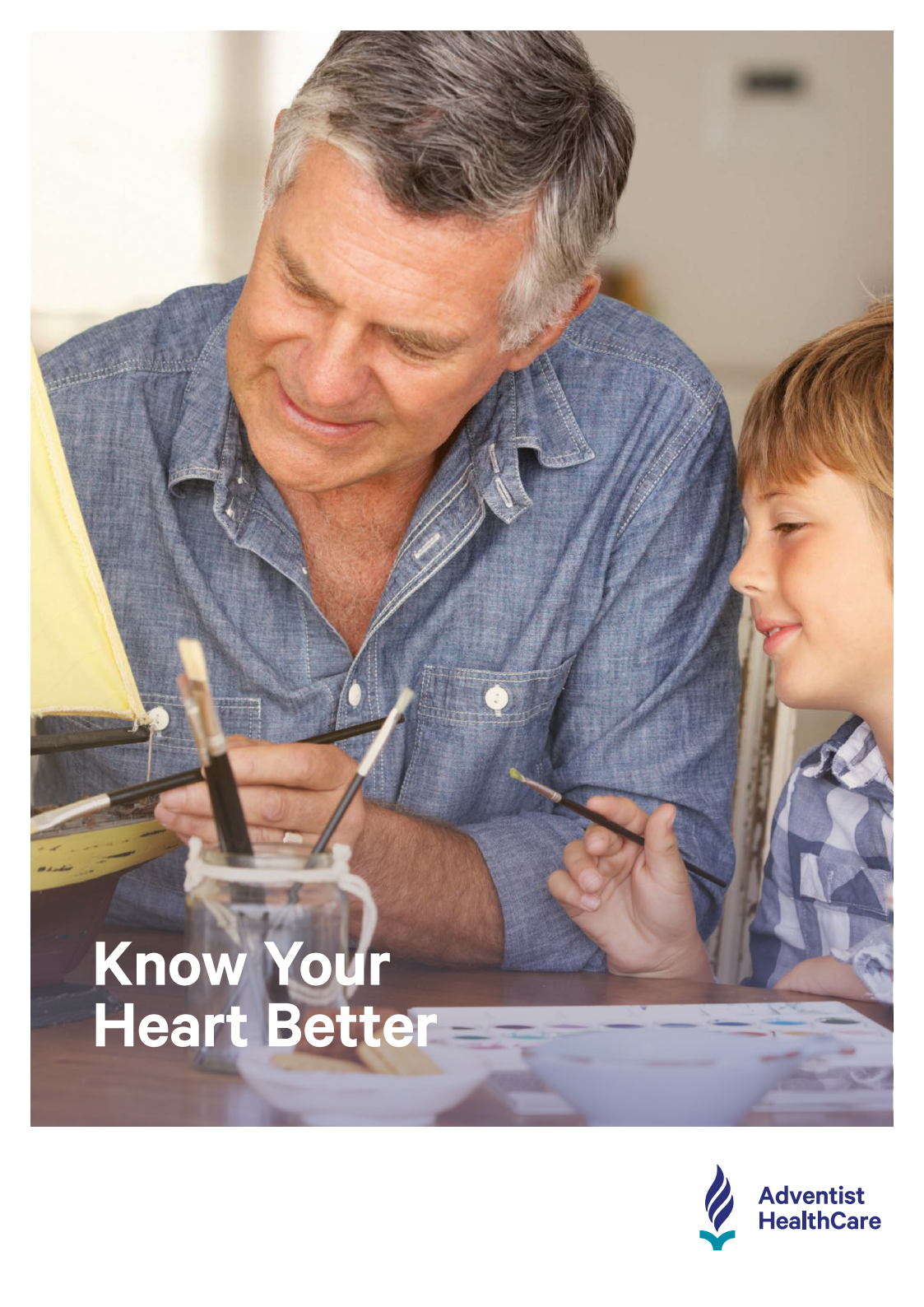


A close-up photograph of a middle-aged man with grey hair and a young boy with brown hair, both smiling and focused on painting a model sailboat. The man, wearing a blue denim shirt, is holding a paintbrush and applying yellow paint to the sail. The boy, wearing a blue and white patterned shirt, is also holding a paintbrush. They are sitting at a wooden table with various painting supplies, including a glass jar holding brushes and a palette with colorful paint. The background is softly blurred, showing a bright, indoor setting.

**Know Your
Heart Better**

Sydney Adventist Hospital is operated by Adventist HealthCare Limited.

Adventist HealthCare is a Christian health care provider owned by the Seventh-day Adventist Church, operating several businesses including: Sydney Adventist Hospital, San Day Surgery Hornsby, San Radiology & Nuclear Medicine and Sydney Adventist Hospital Pharmacy. As a not-for-profit organisation, our purpose is to benefit our community – not shareholders, with all proceeds reinvested back into services and facilities ensuring we provide the best possible care.

Adventist HealthCare originated with the opening of 'Sydney Sanitarium' in 1903 – a place of health and healing where people learned to stay well. Sydney Adventist Hospital, still fondly referred to as 'the San' has grown to become NSW's largest private hospital.

The organisation's reputation for exceptional care is built on the continuous provision of leading medical & surgical care, underpinned by the expertise, commitment and compassion of our people, and our faith-based approach to caring for the whole person – which is reflected in our Mission 'Christianity in Action – caring for the body, mind and spirit of our patients, colleagues, community and ourselves'.



**Adventist
HealthCare**

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KNOW YOUR HEART BETTER

A heart-felt welcome

WELCOME TO SYDNEY ADVENTIST HOSPITAL.

OUR TEAM OF HIGHLY SKILLED DOCTORS AND NURSES, CARDIAC REHABILITATION AND PHYSIOTHERAPY STAFF, AND MANY OTHER HEALTH PROFESSIONALS ARE ALL HERE TO CARE FOR YOU IN A WAY THAT IS UNIQUE TO THE SAN HOSPITAL. WE HOPE THAT YOU AND YOUR FAMILY WILL FIND YOUR TIME HERE A POSITIVE AND COMFORTABLE EXPERIENCE. PLEASE ASK AS MANY QUESTIONS AS YOU NEED TO SO YOU WILL FEEL REASSURED ABOUT YOUR CONDITION, PROCEDURES AND RECOVERY.

Please take the time to read this booklet as it contains information that will help you understand the physiology of the heart and aid in your recovery.

By taking a sensible approach to your recovery and by following a healthy heart lifestyle you can expect to feel fitter and healthier than ever. We look forward to helping you achieve your goals!

The Cardiac Team
Sydney Adventist Hospital

General information

Although visiting hours are not restricted during the day, please remember that all patients tire and visits should be kept fairly short.

LEVEL 5 CLIFFORD TOWER CORONARY CARE UNIT VISITING HOURS

Open for visiting between 8am – 8pm.
2 visitors only whilst in CCU as our patients get very tired.

KRESS 5 CARDIAC WARD

Please note the hospital buildings are locked after 9pm.

DISCHARGE TIME

The recommended discharge time from hospital is between 8am and 10am as this allows the room to be prepared for the next admission. If you are unable to be picked up from hospital during these hours, you may be discharged to our discharge lounge.

It is important that you see the pharmacist before you leave. They will see you on the morning of discharge.

HOW HEART DISEASE AFFECTS THE PATIENT AND THEIR FAMILY

Diagnosed heart disease is a highly significant event for all patients and their families because of the emotional and social impact on lives and the stress inherent in the situation.

Often the partners and families of cardiac patients experience similar emotions to the patients themselves. As with any crisis many people feel shock, disbelief, fear, anger, guilt or sadness. These feelings are very normal and usually resolve in 4 to 6 weeks. Being aware of your feelings and discussing them as a couple or a family are important ways of dealing with the situation. Not only will this help to lessen fears and anxieties, it can also create positive changes in a relationship.

Research has shown that couples and families who cope best are those who view this stressful situation as a challenge in their lives and an opportunity to improve relationships within the family. The challenge of the cardiac crisis is facing the reality of your situation, letting go of what is lost and developing new ways to live that enhance the quality of your life.

FOR THE PARTNER OF THE CARDIAC PATIENT

- Let your partner know that you are also important. How you both interact has a significant impact on the quality of both your lives. Remember that it's normal for you to feel scared and distressed about your partner's illness.
- Set aside time for you and your partner to talk or be together quietly. Communicate openly about your fears, anxieties and needs while trying to develop a positive plan for the future.
- Try to make some healthy changes to your lifestyles that will improve the quality of both your lives such as exercising more and making changes to your diet.

Don't be afraid to ask questions to all health care workers. Everyone needs information to aid in the recovery process.

The anatomy and physiology of the heart

HOW THE HEART FUNCTIONS

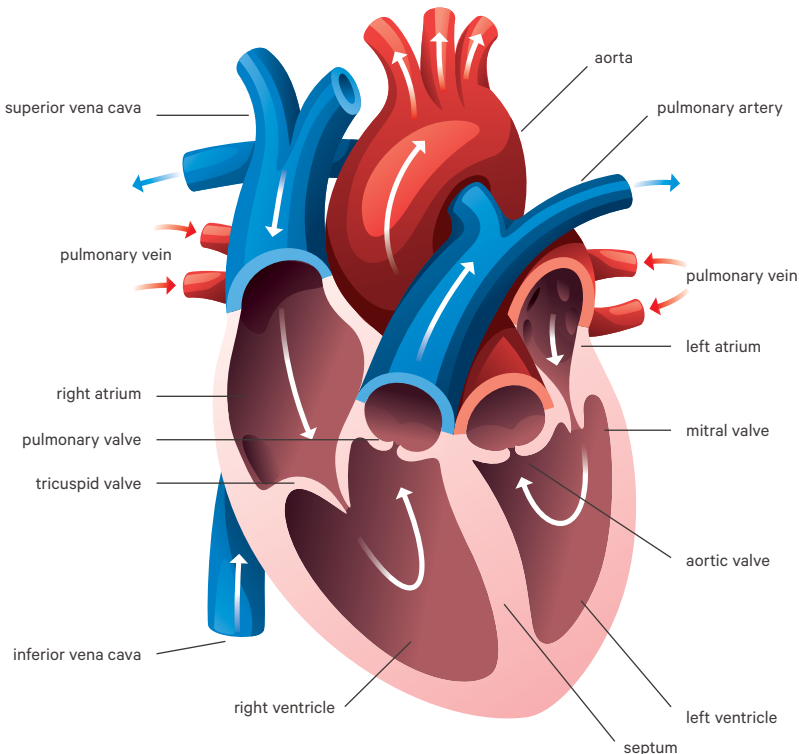
The heart is a specialised hollow organ that pumps blood around your body. It is about the size of your fist and is situated in the middle of your chest behind your breastbone. The blood that is pumped from the heart carries oxygen and other nutrients to every organ and living cell in the body.

Since the heart is a muscle it also needs its own regular supply of blood. This supply comes from arteries called coronary

arteries. There are three main arteries and a network of vessels covering the surface of the heart.

The heart is composed of four chambers. There are two small chambers called atria (atrium is singular) at the top, and two larger chambers called ventricles at the bottom. The atria collect blood that comes into the heart and then contract to pump blood into the ventricles. The ventricles contract to pump blood out of the heart. This pumping creates your heartbeat. The heart normally beats at between 50 and 100 beats per minute (bpm).

The heart also has four valves, each of which opens and closes from the pressure of the blood inside the chambers. A normal



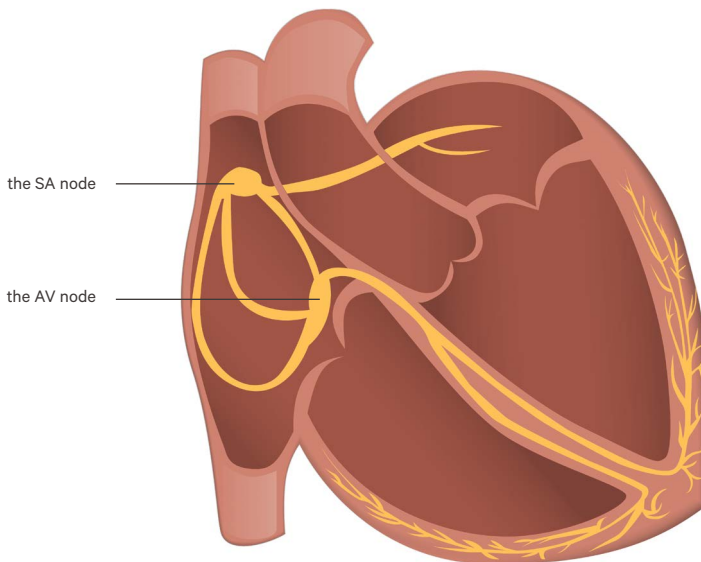
valve opens and closes tightly preventing backflow of blood. The normal pathway of bloodflow enters the right atrium and passes through the tricuspid valve into the right ventricle. The right ventricle then pumps the blood through the pulmonary valve to the lungs, where the blood gets its oxygen. The blood returns to the heart via the left atrium and passes through the mitral valve into the left ventricle. The blood is then pumped through the aortic valve into the aorta, which takes the blood rich in oxygen to the rest of the body.

ELECTRICAL FUNCTION

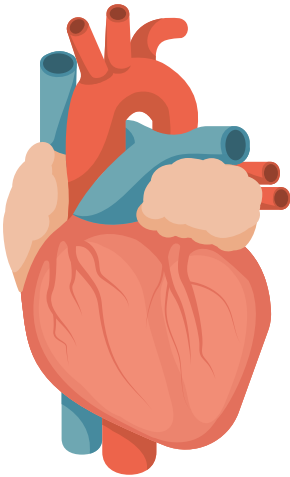
The heart has its own electrical system which allows it to beat irrespective of what the brain is doing. Its own natural pacemaker is located in the upper right atrium consisting of a small bundle of

specialised cells known as the sino-atrial node (S-A node). Beginning at the S-A node, a wave of electrical impulses spreads through the atria causing them to contract and squeeze blood through the valves into the ventricles. The electrical impulse continues to travel to the atrioventricular node (A-V node), a second bundle of cells located at the junction between the atria and ventricles. Once the impulse reaches the A-V node the ventricles contract.

An adult's heart rate may rise over 100 bpm during exertion or emotional stress. The S-A node automatically increases your heart rate in response to your body's needs when a faster bloodflow is required. For example, during exercise the heart rate will increase as the muscles in the arms and legs require a greater blood supply.



CORONARY ARTERIES

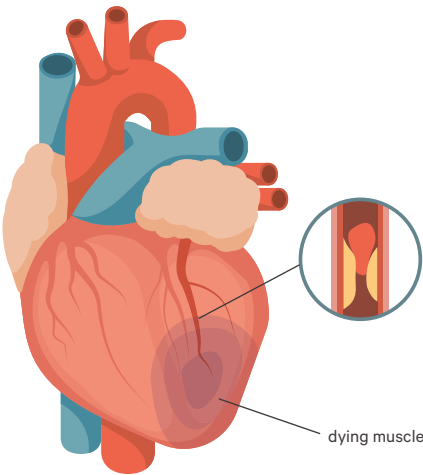


healthy heart

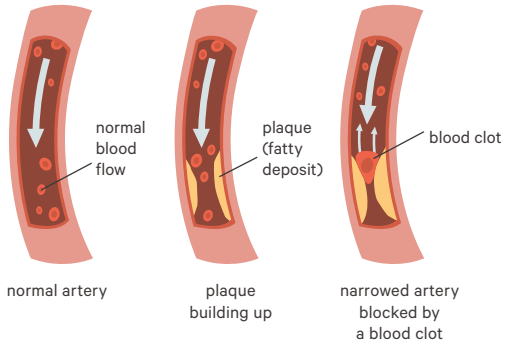
What can go wrong with the heart

CORONARY ARTERY DISEASE

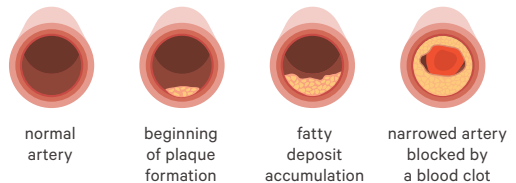
In a normal healthy heart, the coronary arteries are flexible blood vessels free of fatty deposits (called “plaques”). A ‘healthy’ heart muscle receives all the blood it requires even when it is working harder than usual. Coronary artery disease is said to be present when plaque builds up on the inner wall of an artery, restricting or blocking blood flow. This is called “Atherosclerosis” (see diagram below). Symptoms may develop at varying stages of the disease process.



heart failure



disease artery stages



ANGINA PECTORIS (COMMONLY KNOWN AS ANGINA)

When the artery is partially blocked and your heart needs increased oxygen such as during exercise, stress or after a heavy meal, the heart muscle may receive insufficient oxygen and angina can occur. Angina is the term used to describe the pain or discomfort in the chest that you may experience. As the disease in the artery progresses, angina can occur at rest or during sleep.

The rate of progression of heart disease varies from person to person, as does the way it is experienced.

Angina may be experienced as:

- A tightness, cramping or gripping feeling
- A burning sensation
- Pressure
- Similar to indigestion
- A choking feeling
- Shortness of breath
- A sharp pain
- A dull ache

It is commonly felt in the chest but may begin or spread to the shoulders, neck and jaw or down the arms. You may also feel weak or sweaty.

Sometimes angina is relieved by slowing down or stopping what you are doing. You should also take your prescribed medication. This may come in the form of a tablet which is placed under the tongue, or a spray which is sprayed under the tongue or in the side of the cheek.

If angina is felt, you should:

- Stop and rest
- Take any prescribed medication
- If the angina lasts longer than 15 minutes you should call an ambulance in case you are having a heart attack.

MYOCARDIAL INFARCTION (COMMONLY KNOWN AS A HEART ATTACK)

A heart attack is sometimes called a myocardial infarction (MI), acute myocardial infarction, coronary occlusion, coronary thrombosis or acute coronary syndrome. A heart attack happens when there is a sudden complete blockage of an artery that supplies blood to an area of your heart.

As we get older, smooth inner walls of the arteries that supply blood to the heart can become damaged and narrow due to build up of fatty materials called plaque. When an area of plaque breaks, blood cells and other parts of the blood stick to the damaged area and form blood clots. A heart attack occurs when a blood clot completely blocks the flow of blood and seriously reduces blood flow to the heart muscle. This results in chest pain. The part of the heart that the artery supplies becomes deprived of oxygen and is therefore damaged. This may affect the functioning of the heart depending on the size of the heart attack.

The signs may be similar to angina and you may experience:

- A tightness, cramping or gripping feeling
- A burning feeling
- Pressure on the chest area
- Similar to indigestion
- A choking feeling
- Shortness of breath
- A sharp pain
- A dull ache

You may feel this in the centre of the chest, the left side of the chest, the upper back, into your neck or jaw or down the arms. Other symptoms include:

- Sweating
- Feeling weak or faint
- Nausea or vomiting

Remember if the pain or discomfort persists for longer than 15 minutes and you have tried your prescribed medication, call an ambulance. Do not attempt to drive yourself to hospital. Time is essential so if in doubt, have it checked out!

HEART FAILURE

There are several different types of heart failure. They all mean your heart is not pumping as effectively as it should to meet the demands of the body. This weakness may be caused by damage to the heart from previous heart attacks, disease of the arteries in the heart, disease of the heart valves, disease of the heart muscle or long-term high blood pressure.

Your doctor will tell you if you have this condition and these are some of the common symptoms:

- Excessive tiredness or weakness
- Shortness of breath, wheezing or coughing with mild exertion
- Difficulty breathing when lying down
- Swollen ankles and/or feet
- Dizzy spells

These symptoms may possibly be related to another condition, but if you have been told you have heart failure there are ways to help your heart to function as best as it can. Various medications can be prescribed that may help reduce the amount of fluid in your body or may help the heart to pump more efficiently. Below are some things you could do to help with this condition:

- Take the prescribed medications precisely as directed and do not allow yourself to run out.
- Check with your doctor whether you need to limit your fluid intake.
- Reduce your salt intake to help reduce fluid retention.
- Ensure that you get enough rest and pace your activities.

- Weigh yourself at the same time each day and keep a record as weight gain may indicate fluid retention.
- Maintain close contact with your local doctor and report any changes in your condition such as increased shortness of breath, sudden weight gains, getting tired more easily, increased swelling in the feet or ankles, if you notice that you are passing urine less frequently, dizziness, or any chest pain or discomfort.
- Ensure your blood pressure is taken regularly.
- Alcohol intake should not exceed one standard drink per day for a woman and two standard drinks per day for a man. Excess alcohol may produce adverse effects on the heart.
- Try to include some regular exercise daily that is appropriate for your condition.

Heart Failure can also result from a condition called Cardiomyopathy. There are different types of Cardiomyopathy. It may be caused by infection, alcohol abuse and some drugs. It can be an inherited disease and sometimes the cause is not known. Your doctor will discuss this condition with you and how best to manage it. We put you in contact with the San Cardiac support nurse who can support and guide patients with heart failure.

ABNORMAL HEART RHYTHMS (ARRHYTHMIAS)

An arrhythmia is any variation from the normal rate or rhythm of the heartbeat. You may have been diagnosed with an arrhythmia while in hospital or have presented to your doctor and upon investigation of your symptoms an arrhythmia has been found. Arrhythmias may produce no symptoms or may include light-headedness, fainting, palpitations, chest pain and shortness of breath. Even in the absence of symptoms some arrhythmias may warrant treatment. However, more serious arrhythmias need to be treated.

Arrhythmias occur because the heart rate is too slow (bradycardia – less than 50 beats/minute), too fast (tachycardia – greater than 100 beats/minute) or irregular. Bradycardia may occur because electrical impulses arise very slowly from the cardiac pacemaker or because they fail to conduct through the specialised conduction system (heart block). Tachycardia may occur because electrical impulses generate too frequently or because of abnormal electrical pathways within the heart which essentially act as “short circuits”.

Some other common arrhythmias are:

- Ectopic beats – when the heart beat fires too early from either the atria or ventricles (therefore you are receiving an early heart beat). This is very common in people with a healthy heart and requires no treatment.
- Atrial Fibrillation – an irregular heart rhythm originating from no set place in the atria.
- Heart Block – occurs when the electrical impulse becomes disturbed while travelling down the conduction pathway.

- Ventricular Tachycardia – a more serious tachycardia that originates in the ventricles.

Medication may cure or control the arrhythmia but sometimes other interventions are required.

Cardiac procedures and investigations

One or more of the procedures outlined below may be advised for you by your doctor. If you have any further questions or should your doctor request an investigation which is not listed, he/she will be happy to discuss this with you.

ELECTROCARDIOGRAM (ECG)

Electrocardiogram is a recording of the electrical activity of the heart. The ECG machine is able to amplify and record on paper the electrical impulse of your heart from a variety of angles. Electrodes are placed on your chest, wrists and ankles, and then connected to the ECG machine. An ECG shows your heart's rhythm and may indicate areas of possible damage to the heart muscle. This is a painless procedure.

An ECG takes approximately 5-10 minutes and no preparation is required. Your doctor will discuss the results with you.

TRANSTHORACIC ECHOCARDIOGRAM

A transthoracic echocardiogram (TTE) is a test that uses ultrasound waves to show the size of your heart and the thickness of the muscle wall, whether there are problems with the heart's valves and how well the heart contracts. This is a painless procedure where ultrasound waves are passed through your heart and converted into a picture on a screen while you rest.

This procedure may be done whilst in your bed, in the ward or in the echocardiography department. A probe with clear gel is placed on your chest and

the technician moves it slowly around your chest so different images of your heart can be seen. After the doctor has reported on the echocardiogram the results will be discussed with you.

TRANSOESOPHAGEAL ECHOCARDIOGRAM (TOE)

A transoesophageal echocardiogram is a more complicated type of echocardiogram. The transducer is fixed to a flexible tube and manoeuvred down the oesophagus, which passes close to the back of the heart. This enables the cardiologist to get a closer and more definitive look at your heart's function, its valves and the aorta. You need to fast from food for 6 hours and from water for 2 hours before the procedure. You are sedated whilst the procedure is being carried out and your throat is sprayed with a local anaesthetic to ease the discomfort of swallowing the probe. It is therefore important you are monitored for a time after the procedure and you have to remain in hospital for at least 2 hours.

After the TOE your throat will be numb due to the local anaesthetic used. This will wear off in a couple of hours and you may have a sore throat which can take a little time to resolve. The nursing staff will ask you to drink a sip of water after two hours to ensure you can swallow properly. It is advisable to remain on a soft diet for the day after the procedure and resume your normal diet the following day. You should also not drive, operate machinery or drink alcohol for 24 hours after the TOE because of the medication you have received.

This procedure may be done in the coronary care unit, the radiology department or the cardiac catheter laboratory.

EXERCISE STRESS TEST

An exercise stress test is an assessment by a doctor to help diagnose heart disease and rhythm abnormalities, and to assess work capacity. It is performed either on a treadmill or a stationary bicycle. You are connected to an ECG machine so the doctor can see if there are changes in your heart's rhythm and ECG appearance whilst the heart is under stress due to the exercise. The test lasts approximately 30-60 minutes. You should wear loose, comfortable clothing and suitable footwear.

CT-CORONARY ANGIOGRAM

An Angiogram may be performed by CT (Computer Tomography) which allows your doctor to screen whether there is any coronary artery disease. This is a non invasive procedure, and is sometimes used instead of, or as well as, an angiogram.

If a CTCA is abnormal or inconclusive, an invasive angiogram may be required.

CORONARY ANGIOGRAM

This procedure will identify any blockages in coronary arteries, problems with the heart's pumping action, heart chambers and heart valves. A long, thin catheter is inserted through the artery in your groin or arm. It is carefully guided to your heart where dye is injected into the coronary arteries. The dye shows up on x-rays so when the x-ray is taken of the heart (called an Angiogram), the cardiologist is able to view any blockages.

The procedure itself takes approximately 30 minutes, and is usually performed under local anaesthetic. You will need to fast from food and drinks beforehand, however the staff will advise you. After the procedure, the doctor will discuss with you the test results. The staff will give you guidelines to follow when you are ready to go home.

There are several different ways that bleeding from the femoral artery in the groin may be controlled after your coronary angiogram or Percutaneous Transluminal Coronary Angioplasty (PTCA)/Stent procedure.

The following methods may be used:

Direct Manual Pressure

A doctor or nurse may apply pressure to your groin for 10-15 minutes with their hands.

Femostop

This is a clamping device that applies pressure to the puncture site in the groin. It will remain in place until your doctor and nurse are satisfied that the puncture site is not bleeding. This device may cause some discomfort.

Angio-seal

This device is made of three absorbable components, including a small anchor and a collagen sponge which are drawn together by a suture to seal the puncture hole. It takes about 60-90 days for the Angio-seal to be absorbed by your body and the site must not be reused within this time.

Perclose

This is a device inserted into the artery to allow the doctor to stitch it. You will experience some pressure briefly.

TR Band

If you have had an angiogram via your arm, a radial compression device known as a TR Band may be used to prevent bleeding from the radial artery in the wrist. Do not lift anything for 24 hours after returning from your procedure and avoid flexing or bending the affected wrist. Apply manual pressure and seek medical attention if there is bleeding or haematoma. Avoid submersion of the wrist in water for 3 days.

You will need to stay in bed after your coronary angiogram or PCTA/stent

procedure. How long before you can get up will depend on the method used to stop the bleeding from the puncture site and the results of your procedure.

Once you are home continue to check the puncture site and report to your doctor any bleeding, swelling, bruising or ongoing discomfort. Avoid heavy lifting, bending over and straining on the toilet for 48 hours. Support the puncture site with light pressure when performing the above activities and also when coughing.

If you have had an angiogram via the radial artery in the arm continue to observe the puncture site for any bleeding or significant swelling and avoid heavy lifting.

SESTAMIBI STRESS MYOCARDIAL PERFUSION STUDY

This test is performed to assess blood supply to the heart muscle (myocardium) via the coronary arteries at rest and with exercise. To obtain the images of the heart a radioactive tracer, Sestamibi, is injected into the bloodstream and concentrates

in the myocardium according to the blood supply, so areas with diminished flow can be detected. It is performed in one continuous session over a period of approximately 5 hours.

The **Rest Study**: You will be given the first dose of Sestamibi into the vein in your hand with a needle. About 30-45 minutes later you will have the resting scans or pictures which take about 45 minutes.

This is followed by the **Stress Study**: The principal aim of exercise is to raise the heart rate to a certain level. This causes the coronary arteries to dilate and increase cardiac blood flow. If fairly vigorous exercise is medically inadvisable or the patient is physically unable to exercise adequately, Persantin infusion (to dilate the arteries chemically) with little or no exercise, may be done. In either case, a further injection of Sestamibi is given. Then 30-60 minutes later the stress scanning is done.

The radiation dose is less than you would receive from a CT scan or coronary angiogram and it is not necessary to be an inpatient to undergo this test.



Treatments and operations

PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY (PTCA)

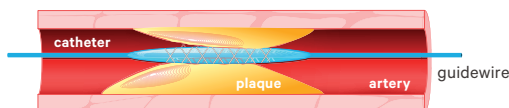
PTCA is similar to your coronary angiogram procedure. It is performed in the cardiac catheterisation laboratory under local anaesthetic. A small catheter with a balloon attached is inserted into your artery via a small puncture in your arm or leg and is guided up to the narrowed or blocked section of the coronary artery. The balloon is positioned across the blockage and then inflated. This compresses the fatty deposits in the artery and increases the diameter of the artery which improves the bloodflow in the artery.

During the procedure it is normal to experience some chest pain whilst the balloon is inflated, however it is still important to tell your doctor or nurse if you experience chest pain.

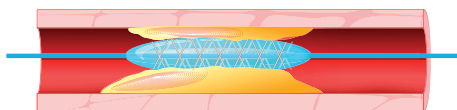
CORONARY STENT

After you have had a PTCA you may go on to have a stent inserted. A stent is a small latticed stainless steel tube that is placed within your coronary artery. It is designed to support the walls of the coronary artery to help keep the artery open and therefore improve the bloodflow within that coronary artery. The stent is incorporated into the balloon catheter used for PTCA. The stent and catheter are then manoeuvred into the blocked or narrowed artery and the balloon is inflated. This causes the stent to expand inside the artery. The balloon is deflated and removed and the stent remains in the artery permanently.

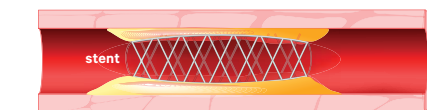
Many stents are now “drug eluting”. The stent contains a substance to prevent inflammation and cell overgrowth in the artery walls that can cause re-occlusion.



1. Stent with balloon inserted into blocked artery



2. Balloon inflated to expand stent



3. Balloon removed from expanded stent

As with the PTCA procedure you may experience chest pain whilst the balloon is being inflated and the stent is being expanded. Although this is quite common it is still very important to notify the nursing and medical staff if you are experiencing any chest pain so they can treat your pain accordingly.

After your PTCA and/or stent you will be taken to the Coronary Care Unit where you will be closely monitored until the next day. Prior to going home you will be seen by a member of the cardiac rehabilitation team and a pharmacist.

Once you are home, continue to check the puncture site and report to your doctor any bleeding, swelling, bruising or ongoing discomfort. Avoid heavy lifting, bending over and straining on the toilet for 48 hours. Support the puncture site with light pressure when performing the above activities and also when coughing.

If you have had a PTCA/stent via the radial artery in the arm, continue to observe the puncture site for any bleeding or significant swelling and avoid heavy lifting.

EPS AND RFA

An **EPS (Electrophysiological study)** is a special type of heart procedure that involves the stimulation and “mapping” of normal and abnormal electrical patterns of the heart rhythm. Normally, electricity flows throughout the heart in a regular, measured pattern and is the stimulus for heart muscle contractions. Sometimes the electrical system may develop a problem which may prevent the electrical signals from reaching the atria and the ventricles regularly, or the signals are generated too slow, fast or erratically.

This procedure involves the insertion of catheters into a vein which are directed to your heart. The doctor will then evaluate the electrical system of your heart by giving it a series of small electrical impulses that cause your heart to beat at different rates. You may feel a few skipped beats but don't be alarmed. If you feel any chest pain or discomfort you should let the staff know.

The procedure itself may take between 1-3 hours and you will need to stay in bed for 4 hours after the procedure has finished. Most people are able to go home the same day.

RFA (Radio Frequency Ablation) can be performed after an EPS when an abnormal electrical pathway is detected.

When an area of abnormal electrical signal is found, a mild radiofrequency energy is transmitted via a catheter which destroys the carefully selected heart muscle cells by cauterising or burning them. This stops the area from conducting the extra impulses that caused the rapid heartbeats.

You will need to fast for 6 hours from food and 2 hours from water prior to this procedure and stay in bed for 4 hours afterwards. Most people can go home the same day.

PULMONARY VEIN ISOLATION (PVI)

Pulmonary Vein Isolation (PVI) is a procedure used to stop abnormal electrical signals in your heart that can cause heart rhythm problems. PVI is a type of cardiac ablation. Cardiac ablation is performed via radio frequency (heat) or cryotherapy (freezing). It is common for patients to have recurrence of Atrial Fibrillation (AF) or other arrhythmias in the first 3 months following a successful AF ablation. This does not mean that the procedure has been unsuccessful. Chest discomfort/pain may be experienced for a few days after the procedure. This is most commonly due to inflammation of the lining of the heart and is known as pericarditis. This will settle down and can be controlled by anti-inflammatory medications that will be prescribed upon your discharge.

PACEMAKER

Pacemaker insertion will have been recommended if your heart's normal rhythm has become disturbed. This may mean that your heart is beating too slowly, irregularly or too fast. The pacemaker interprets your heart's natural rhythm and sends out an impulse to your heart as your heart needs it.

Therefore, only when your heart is not beating normally will the pacemaker take over its function. This can be programmed to work continuously or intermittently depending on the type of pacemaker your doctor decides you will need.

The procedure does involve a small operation which is done under general or local anaesthetic in the operating theatre. The pacemaker “box” or pulse generator is usually placed under the skin of your upper chest, below your collarbone. The pacemaker lead is then guided to your heart through a vein and the electrode which delivers the impulses to the heart is

placed in the right atrium, ventricle or both depending on the type of pacemaker your doctor has chosen for you.

After you return to the ward your cardiac rhythm will be monitored to check your pacemaker is working properly. Approximately 12 hours after your pacemaker is inserted, a pacemaker technician will review your pacemaker to ensure it is functioning at its optimum level and provide you with more in-depth literature on living with a pacemaker.

For two weeks after having a pacemaker inserted:

- You should not lift anything heavier than 3kg
- You should not drive
- You should not raise your arms above your head (eg. do not hang washing on the line)

IMPLANTABLE CARDIAC DEFIBRILLATOR

(ICD) or (AICD)

An ICD delivers pacing or electric shocks to your heart to treat rhythm disorders.

Your doctor has many options in programming the ICD to treat and interrupt the abnormal heart rhythm. The ICD is implanted inside your body similarly to the permanent pacemaker described above.

Usually the day after implantation, the ICD function is checked and if necessary it is reprogrammed to ensure the best therapy will be delivered if your heart goes into an abnormal rhythm.

Before leaving hospital you will be given more in-depth literature related to your ICD and how it may affect your life.

For two weeks after having an ICD inserted:

- You should not lift anything heavier than 3kg

- You should not drive
- You should not raise your arms above your head (eg. do not hang washing on the line).

Note: *There will be a non driving period after the implantation of your defibrillator. Check with your doctor for how long this should be.*

TAVI

Transcatheter Aortic Valve Implantation (TAVI) is a procedure that allows an aortic valve to be implanted using a long narrow tube called a catheter. Usually, the catheter is inserted into a large blood vessel in your groin. Length of stay in hospital post procedure will be +/- 4 days. Outpatient cardiac rehabilitation program should be offered to you.

LAA CLOSURE

Left Atrial Appendage Closure (LAA) is a minimally invasive procedure that is used to reduce the risk of stroke that comes as a result of Atrial Fibrillation (AF). AF is a common form of arrhythmia, a condition in which the heart beats out of rhythm. This requires an overnight hospital stay.

Note: *Avoid heavy exertion for 4 weeks.*

PATENT FORAMEN OVALE (PFO) CLOSURE

A patent foramen ovale can be called a “hole in the heart” where an opening remains between the right and left atrium of the heart. This results from incomplete natural closure of the opposing atrial walls soon after birth and can allow a very small amount of blood to leak between the two chambers.

The procedure to close this opening involves the insertion of a long thin catheter into a vein in the groin under local anaesthetic. The catheter, guided by

x-ray, allows a special device to be put in place to close the PFO. The PFO device is deployed by expanding its shape to straddle each side of the hole. The device will remain permanently in place with the body's own tissue growing over the device over a period of 3-6 months.

The procedure generally takes 1-2 hours and you will need to fast for 6 hours prior to the procedure and may be required to stay overnight in hospital. You will need to remain on bed rest for 6 hours after the procedure.

Blood thinning medication will be required for a period of time as determined by your cardiologist. If you are to undergo any surgical procedures or dental work you will need to have antibiotic cover during approximately the next 6 months.

You will not be able to feel the device and the implant will not be affected by airport or security sensors, nor any household appliances. Always be sure to inform anyone of the device you have in your heart prior to any medical tests or procedures. It is important to carry your identification card on you to show if necessary.

Following the closure of your PFO, it is important to avoid strenuous activity, in particular scuba diving, for up to 8-10 weeks. Discuss your activity restrictions or any other issues with your cardiologist.

MITRACLIP

The mitral valve allows blood to flow from the left atrium down to the left ventricle while preventing backflow up through the valve. When the valve is 'leaky' (also called mitral regurgitation) the mitral valve fails to close completely and blood flows back into the atrium. This means the heart has to work harder, which leads to feeling of breathlessness, lethargy and poor exercise tolerance and may eventually lead to heart failure.

Mitraclip is a procedure generally used if surgery to fix the valve is not appropriate. This procedure is performed to fix a leaky mitral valve by attaching a clip which pulls the sides of the valves together, helping it close more effectively and preventing back flow. Once in place, blood is pumped more effectively and symptoms such as shortness of breath will be reduced.

The procedure takes 1-2 hours and is performed in the Cardiac Catheter Laboratory. Under x-ray and ultrasound guidance, a thin catheter is inserted through the femoral vein in the leg up to the heart. The Mitraclip is then fed through this catheter and clipped onto the mitral valve. Placement of the Mitraclip is checked with an echocardiogram ultrasound.

After the procedure you will be taken to the Coronary Care Unit and monitored closely for at least one night, and you will be on bed rest for a minimum of 4-6 hours. This is mainly to prevent bleeding from the wound site in your groin. Before you are discharged you will be given guidelines for your recovery at home.

San Outpatient Heart Health Program

Participation is vital

Sydney Adventist Hospital's Outpatient Heart Health Program provides **essential care following a cardiac procedure or event.**

Benefits of the program:

1. Return to family and work life with confidence.
2. Increase physical fitness.
3. Understand cardiac disease and benefits of risk factor modifications.
4. Individually prescribed exercise in a group setting.
5. Exercise in a safe environment. Gain reassurance and learn what is normal and abnormal in recovery.
6. Sessions supervised by cardiac rehabilitation and exercise physiologist team.
7. Reduce incidence of subsequent cardiovascular events and increase quality of life.

The program runs for 4 to 8 weeks, depending on your health fund, providing exercise and education sessions to increase your confidence with exertion, overall health and wellbeing.

The Outpatient Heart Health Program can be commenced two weeks post procedure, unless directed by your surgeon and is suitable for all ages and levels of fitness.

You may be referred to the program by cardiac rehab or cardiac nursing staff. Phone as soon as possible after discharge to organise a booking. Regional patients can be referred to services closer to your location.

Once you have booked in, the department will then obtain final consent from your cardiologist.

The program is fully or partially covered by most health funds.

For further information regarding the Outpatient Heart Health Program, please contact Cardiac Rehabilitation Department on 9480 9470.

Be Heart Smart.

Home Exercise Program

Exercise is important as it has many health benefits for the body. Exercise helps improve the efficiency of the cardiovascular system, helps keep your weight at a healthy level, lowers blood pressure, improves the way your body uses glucose and can help lower cholesterol.

The nursing staff/cardiac rehabilitation team will discuss a suitable exercise program before you are discharged from hospital. It is important to remember that this program should be used as a guide only and that you should not feel fatigued after exercise. If you would like to progress more quickly it is advisable to discuss this with your cardiologist first.

Exercise will not only improve your fitness after a cardiac event or procedure, but can also increase your sense of wellbeing and vitality. Once you have completed the following plan it is important to maintain a moderate level of exercise long term

in order to continue to receive the many benefits of exercise. Walking at a moderate pace 4-5 times per week for 30-60 minutes is all it takes to enjoy the many benefits exercise has to offer your heart and general wellbeing. It is not necessary to exercise hard, in fact, exercise that is too strenuous can be harmful. Talk to your cardiologist if you plan to return to strenuous exercise such as squash and/or running. Moderate intensity exercise is all that is required and will be most beneficial.

Warming up and cooling down are very important aspects of an exercise program. When starting an exercise session it is important to start slowly and increase gradually to your peak exercise intensity. Warming up provides an increase in muscle flexibility and joint movement. It is the best way to prevent injuries and allow the body to cope with exercise. The warm-up should mimic the exercise you plan to do, however, stretching can be incorporated as part of your warm-up and cool-down. The cooling-down phase of exercise is basically the warm-up phase in reverse.



Do not just stop exercising, gradually slow down your exercise intensity allowing your body to cope with the reduced workload on the body. The cooling-down phase is important because it helps reduce pooling of blood in the extremities, which could cause feelings of light-headedness, dizziness and faintness.

Exercise within your comfort level. If during your exercise session you experience any distress, undue shortness of breath, chest pain, nausea associated with sweating or marked fatigue, slow down or stop until these symptoms subside. If the symptoms persist contact your doctor or seek some form of medical help **immediately**.

Remember for the first few weeks it is advisable to walk on level ground. Avoid exercising in extreme hot or cold conditions, for one hour after meals or two hours after consuming a large meal.

Plan A

Week 1

- Book into the Outpatient Heart Health Program (OHHP).
- Shower and dress daily.
- Begin with light household chores, clothes washing and ironing.
- Light gardening such as watering and tending to indoor plants.
- Climb stairs as necessary – go slowly and rest halfway if necessary.
- Exercise daily by walking as per Home Exercise Plan – preferably on level ground and in the company of someone else.
- Do not allow yourself to become fatigued.
- Do not lift anything over 3kg.

Week 2

- Return to most normal activities that do not involve strenuous arm action or sustained work above shoulder height.
- Resume normal sexual relationships if you feel comfortable. Sexual intercourse can be likened to walking

up two flights of stairs.

- By the end of the second week you should have resumed all normal activities, taking care with heavy chores and avoiding sudden exertion and lifting for a month from the time you were discharged.
- Resume golf putting, bowls and swimming.
- Increase walking as per Home Exercise Plan.

Keep pulse below 110bpm for the first 2 weeks.

Week 3

- Resume competitive sports (eg. tennis)

Plan B

Week 1

- Shower and dress daily.
- Begin with light household chores such as clothes washing and ironing.
- Light gardening such as watering and tending to indoor plants.
- Climb stairs as necessary – go slowly and rest halfway if necessary.
- Exercise daily by walking as per Home Exercise Plan – preferably on level ground and in the company of someone else.
- Do not allow yourself to become fatigued.
- Do not lift anything over 3kg.
- Discuss returning to work with your cardiologist.

Week 2

- Return to most normal activities that do not involve strenuous arm action or sustained work above shoulder height.
- Resume normal sexual relationships if you feel comfortable. Sexual intercourse can be likened to walking up two flights of stairs.
- By the end of the second week you should have resumed all normal activities, taking care with heavy

chores and avoiding sudden exertion and lifting for a month from the time you were discharged.

- Increase walking as per Home Exercise Plan.

Keep pulse below 110bpm for the first 2 weeks.

Commencement of Outpatient Heart Health Program (OHHP) is recommended from week 2 onwards. See page 17 for further information regarding Sydney Adventist Hospital's Outpatient Heart Health Program.

Week 3 and 4

- Resume golf putting, bowls and swimming.

Week 5

- Resume competitive sports (eg. tennis)

Plan C

Week 1

- Shower and dress daily.
- Mainly stay around the house, taking frequent rests and relaxation.
- Sedentary interests such as reading, music, TV, table games.
- Exercise daily by walking as per Home Exercise Plan – preferably on level ground and in the company of someone else.
- Carefully climb stairs making sure you rest midway.
- Minimise number of visitors and limit duration of visits as they can be very exhausting.

Do not allow yourself to become fatigued.

Week 2

- Increase activities to include light household chores such as clothes washing, ironing, preparing light meals and cooking.
- Light gardening such as watering and

tending indoor plants.

- Continue to take frequent rest periods as required.
- Short social outings of 1-2 hours or 1-2 hours of non-stressful paperwork.
- Continue exercising as per Home Exercise Plan.
- Two flights of stairs may be climbed making sure not to hurry.

The Sydney Adventist Hospital Outpatient Heart Health Program may be commenced at this stage. See page 17 for further information regarding this program.

Week 3

- Return to most normal activities such as making beds, hanging washing on the clothesline, light gardening and lawn mowing with a petrol mower, outings with friends to restaurants, theatre, visiting friends, shopping with someone to carry heavy parcels.
- Continue exercising as per Home Exercise Plan. This may include small hills.
- Continue afternoon rests if required.
- Resume golf putting, bowls and swimming (dog paddle).

Week 4 and 5

- Resume all normal activities, taking care with heavy chores or sports. Avoid sudden exertion.
- Resume normal sexual relations if comfortable, sexual intercourse can be likened to walking up two flights of stairs.
- Discuss returning to work with your cardiologist.
- Continue exercising as per Home Exercise Plan.

Week 6

- Resume swimming and competitive sports (eg. tennis)

Home Exercise Plan A

WEEKS (from discharge)	DURATION (minutes)	FREQUENCY (per day)	PACE
1	15-20	twice	stroll
2	25-30	twice	stroll
Start Outpatient Heart Health Program			
3	35-45	once	Comfortable pace, start adding slight hills
4	50-60	once	Stride it out

Home Exercise Plan B

WEEKS (from discharge)	DURATION (minutes)	FREQUENCY (per day)	PACE
1	10-15	twice	stroll
2	20-25	twice	stroll
Start Outpatient Heart Health Program			
3	30-35	twice	Stroll, start adding slight hills
4	40-45	once	Comfortable pace, start adding slight hills
3	40-60	once	Stride it out
6	40-60	once	Stride it out

Home Exercise Plan C

WEEKS (from discharge)	DURATION (minutes)	FREQUENCY (per day)	PACE
1	5-10	twice	stroll
2	10-15	twice	stroll
Start Outpatient Heart Health Program			
3	15-20	twice	Stroll, start adding slight hills
4	20-25	once	Comfortable pace, start adding slight hills
3	25-30	once	Stride it out
6	30-40	once	Stride it out

The following activities should be avoided for at least a month:

- Heavy exertion
- Heavy lifting
- Strenuous exercises
- Heavy manual tasks

COMMONLY ASKED QUESTIONS

1. Who do I see after discharge from hospital?

General Practitioner

It is advisable that you visit your GP within the first few days after discharge from hospital.

Cardiologist

Unless otherwise specified by your cardiologist, make an appointment to see them 4 weeks after discharge from hospital. You will need to call for your appointment soon after discharge in order to get an appointment close to 4 weeks post discharge.

2. What about sex?

Sexual relations after a heart attack or heart procedure can cause feelings of anxiety – this is not uncommon! Like most activities, sexual relations are something you can try when you feel ready and only you and your partner can set the pace for easing back into sexual activities. It is generally safe to resume sexual activities 2 weeks or so post a procedure and 4-6 weeks post a heart attack, depending on the size of the heart attack. It is best to avoid times when you are tired, stressed or immediately following a meal and consumption of alcohol. Make sure you are well rested and relaxed.

Talk about your feelings with your partner. It is not unusual for your partner to be afraid that sexual intercourse will result in a heart attack or sudden death. This common fear is not supported by facts as recurrent cardiac problems are rarely due to sexual activities.

3. When can I return to work?

This will depend largely upon the type of work you do and how well you are

physically. It is advisable to discuss this with your cardiologist prior to leaving hospital.

4. When will I be able to drive my car?

This will depend on your condition and the treatment you received in hospital. It is important to clarify this with your cardiologist. For further information you can visit www.nsw.gov.au and search "How medical conditions, illness and injuries affect your licence".

5. Should I avoid stairs?

Even though walking up stairs requires more energy than walking on level ground, stairs can be taken so long as you just relax and take your time. Rest during the climb when needed.

6. Is it normal to have 'down' days?

Absolutely. While not every one has depressed or emotional days, it is quite normal to have days where you feel more emotional or down in the dumps than usual. During these times it is important to remember that this is a temporary state and should not persist for more than a day or two at a time. Try to do your activities as normal and rest when required. If these feelings persist for more than a few weeks discuss how you are feeling with your doctor.

7. How often should I get my cholesterol checked?

You should get a full lipid profile and triglyceride level checked 2-3 months after discharge. This should be a fasting test. The full lipid profile will give you your total cholesterol and a breakdown of your HDL (good cholesterol) and LDL (bad cholesterol). Discuss these results with your doctor. If your levels are high you may initially need to get them checked every 3 months. Once your cholesterol has reached a desired level it should be checked every 6 to 12 months.

YOUR CHOLESTEROL RESULT & GENERAL COMMENTS

Date of test:

Cholesterol:

Triglycerides:

Comments:

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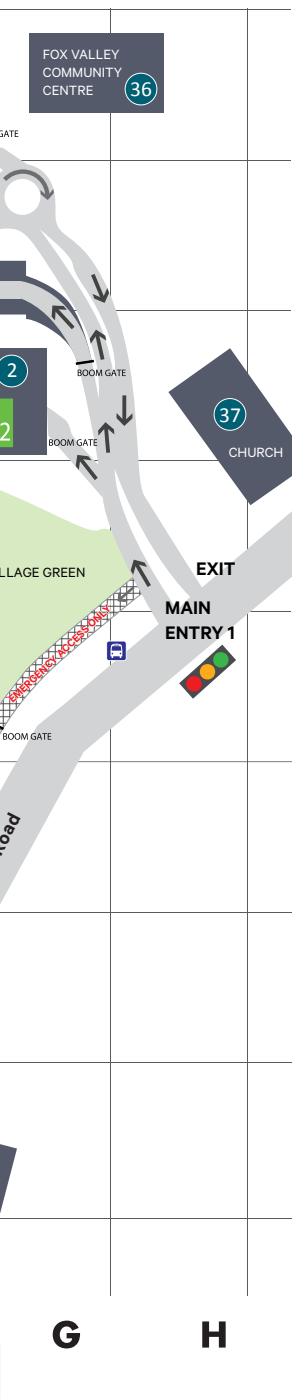
CHECK LIST PRIOR TO DISCHARGE

Following points will be discussed with you prior to discharge

Doctors appointments to organise:

- ☐ Cholesterol test (Lipid Profile)
- ☐ Understanding of current medications
- ☐ Wound care
- ☐ Phase II Cardiac Rehabilitation Program
- ☐ Cardiac risk factor identification





Sydney Adventist Hospital

Site Map

BUILDINGS	Building No.	Grid Ref
Beattie Complex	14	B3
Biomedical Engineering	10	D5
Building 18	18	D5
Child Care Centre	17	C6
Clark Tower	4	D3
Clifford Tower	8	F5
Clinical Education Centre	23	B7
Engineering and Maintenance	11	C5
Fox Valley Community Centre	36	G1
Hospital Entry Building	1	F3
Information Services	9	D5
Jacaranda Lodge/Cancer Support	13	C3
Kress Building	7	F6
Museum	12	D5
San Clinic	2	G3
San Clinic Tulloch	3	E3
San Foundation	21	C5
Shannon Building	6	E4
Tulloch Building	3	E3

KEY

VEHICLE ACCESS

PARKING

PAY STATIONS

TAXI

BUS

INFORMATION



Current as of June 2026

Sydney Adventist Hospital

IMPORTANT CONTACT NUMBERS

SYDNEY ADVENTIST HOSPITAL	9480 9111
CARDIAC REHABILITATION (LEVEL 3)	9480 9470
CARDIAC WARD (LEVEL 5 KRESS BUILDING)	9480 3560

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