The following is an outline of instructions and information for patients following cardiac surgery. Although you may have been told different information by friends or others, please follow these instructions specifically. If you have any questions, the physiotherapist looking after you on the ward will be happy to answer them.

**Pain**

It is normal to have some pain in the days immediately following your surgery. You will be given pain relief to make you more comfortable. Excessive pain can delay mobility and/or prevent coughing which can lead to chest complications. Therefore, it is important that you tell the team looking after you about your pain, so that appropriate pain relief can be given to you, allowing you to move about more freely and make a speedy recovery.

*Only take medications given to you by the nursing staff.*

**Respiratory Care**

Some of the side effects of a general anaesthetic include shallow breathing and infrequent sighing or coughing. These are the body's mechanism for keeping the lungs free from secretions and infection. After an anaesthetic, your lungs may be somewhat deflated and secretions may have built up. It is important therefore, to do regular breathing exercises to re-inflate all parts of the lungs and to clear any build up of secretions, decreasing the risk of infection. Your physiotherapist will instruct you in these exercises, which are explained below:

**Breathing Exercises**

- Sit high up in bed with your head and shoulders well supported by pillows. Your bottom should be all the way back to your pillow. You may feel more comfortable bending your knees and resting your feet flat on the bed.
- Take a long, slow, deep breath in to fully expand the lungs, hold for 3 seconds, then breathe out slowly, repeat this three to four times, then take a rest. Repeat this cycle three times.
• After doing the deep breaths, you may feel that secretions have moved into throat and upper airways. A huff will often help to move these sections to the back of throat, and from there, you should be able to clear them with a less vigorous cough.

• When huffing, it is important that you tilt your chin up, and keep your mouth open. Take a medium sized breath in and a short, sharp breath out, as if fogging up a mirror. Repeat this step two to three times.

Coughing
It is important to cough as required in the days following your surgery. It is a good idea to support your wound with your a folded-up towel, and you may wish to bend your knees up towards you chest. Fewer strong coughs have more effect than a lot of weak ones. Your physiotherapist will instruct you in this technique.

YOU WILL NOT DAMAGE THE STITCHES OR CLIPS IN THE SCAR BY HUFFING OR COUHING.

Incentive Spirometry
Incentive spirometry is designed to mimic natural sighing or yawning, therefore, encouraging maximum inflation of your lungs and preventing the build up of secretions. You will be provided with an incentive spirometry device by your physiotherapist. It provides visual feedback on how deep a breath you are taking. The aim is to take long slow deep breaths in through the incentive spirometer, raising two of the balls and trying to hold them up for three seconds. It will get easier the more often you do it.
**Mobility**

It is important to mobilize as early as possible post surgery. This will help to facilitate a speedier recovery. Your nurses and physiotherapist will probably advise you to sit out, and to take a few steps day one post surgery. They will be there to assist you the first time you get up, and you will be closely monitored. While static positions and walking are not excessively painful, moving out of bed can cause pain. You will be instructed in how to get out of bed on the first day after the operation. Try to stay out for 30 – 40 minutes. The nursing staff will monitor you during this time.

To get out of bed:

- Bend knees up and roll onto side. (This avoids twisting the abdomen and incision).
- Hook your legs over the edge of the bed and the nursing and physiotherapy staff will assist your upper body into sitting. **Try to avoid pushing up through your arms.** Reverse these steps to get back into bed.

Getting out of bed may make you feel light-headed or nauseous. This can be a side effect of the general anaesthetic or the surgery and can be helped by sitting at the bedside for a few minutes and taking deep breaths.

Most patients will have connections such as an arm-drip, a central line, a wound-drain, a pacing device and a urinary catheter. These are usually removed within 2-3 days. Care should be taken that they are not pulled during mobility.

**Walking**

Try to walk about five metres on the first day with the physiotherapist. Increase this distance gradually. The aim should be that by discharge, you can walk a minimum of 30-40 metres with ease. The physiotherapist will also supervise you climbing one to two flights of stairs prior to discharge.

**Upper Limb Exercises**

It is important to move your arms at your shoulder joints in the days following your surgery, in order to prevent your shoulders from becoming stiff and sore. The movements will also help to stretch your wound and prevent the tissue from healing too tightly.

- In sitting, circle your shoulders slowly backwards ten times.
- In sitting, shrug your shoulders up and down slowly, repeat ten times.
- In sitting, raise your arms slowly out in front of you to shoulder level, repeat ten times.
• In sitting, raise one arm slowly above your head and slowly lower it back down, repeat ten times on each side.

• Turn your head to look over your shoulder, repeat on the other side.

• Bend neck form side to side and feel the muscles on each side stretching.

**Lower Limb Exercises**

It is important to move your legs in bed to maintain good circulation, and to maintain the strength in your legs.

• Pump your ankles and feet up and down through range, 10-20 times per hour while awake.

• Push the back of your knee into the bed while simultaneously bringing your toes up towards your head, hold 5 seconds, repeat 5 – 10 times on each side.

• Squeeze your buttock muscles together and hold for 5 seconds, relax, and repeat 5 – 10 times.

**Maintenance of blood circulation**

General anaesthetic and immobility slows down blood circulation, particularly in the legs. To avoid swelling or blood clot formation, pump your ankles and feet up and down for 4-5 minutes each hour, as shown by the physiotherapist. Elastic stockings given to you by the nursing staff, will also prevent leg swelling. These exercises can be stopped once you have achieved normal levels of mobility.