



Preparing for Heart Surgery

What every patient needs to know.



Maritime Heart Center
Cardiovascular Clinic
2269-1796 Summer Street
QEII New Halifax Infirmiry Site
Halifax, NS B3H 3A7

What you need to know.

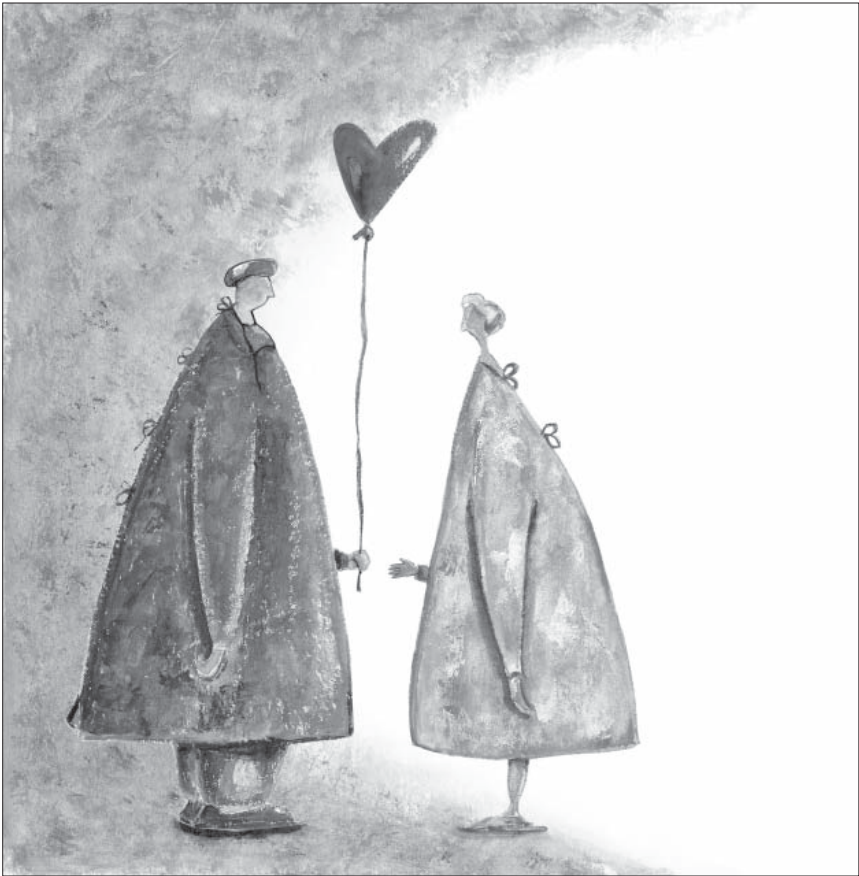


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What you need to know.



Purpose

The purpose of this booklet is to assist you and your family through your heart surgery. It provides information about your hospital stay and what you can do to help yourself before and after surgery. Please encourage your family to read it as well. You and your family play a big part in your recovery and your continuing good health.

Admissions Checklist

- Bring all medications in original bottles
- Toiletries, toothbrush, toothpaste, razor, shaving cream, hairbrush, comb, deodorant (scent free)
- Special needs, glasses and case, hearing aid, walking aides, prosthetics
- Maritime Heart Booklet
- Provincial health card
- QE II Card (if you have one)
- Discharge plans in place
- Dentures and case
- Earplugs
- Pajamas and housecoat (that do NOT pull over your head)
- Slippers (rubber soled and loose fitting)
- Leave all valuables at home

Predicted Time Line

Day of Surgery

- Health care team members will help you and your family to discuss your surgery.
- You will meet your surgeon. The plan for you to go home on Day 5 will be reviewed with you.

Locating Phone #
CVICU 5.1 (473-7555)

- Your nurse will prepare you for surgery. S/he will arrange for pre-op tests. Teaching will be done to prepare you for your surgery. This will include instruction on how to complete your skin treatment before surgery, viewing a video, and review of your Maritime Heart Booklet.
- Your nurse will tell you when to stop eating and drinking before the surgery. You should let the staff know if you have any concerns or questions.

Day 1 After Surgery

- Your family may stay with you until you go to the operating room.
- You will wake up in the Intensive Care Unit on the 5th Floor. The surgeon will meet with your family immediately after the surgery and let them know about your operation.

Locating Phone #
IMCU 7.1 (473-7552)

- You will be connected to several tubes including a breathing tube.
- You will be sitting at the bedside soon after your breathing tube is removed.
- You will be shown how to deep breathe and cough while using your heart pillow for support for support.
- Pain medication will be given by IV to keep you comfortable. You will be able to take fluids later in the day. Family members may visit with you.

Day 2 to 3 After Surgery

- You will be cared for on the Intermediate care unit on 7.1, where you will be closely monitored.
- You will be up in time for meals and will be walking with supervision.
- You will be given solid food.
- You will be considering your discharge plans.
- Pain medications will be available to you regularly. Ask if you need them.
- You will be moved from the intermediate care unit to the general nursing unit on 7.1
- You will be walking on your own in the hallways.
- On day 3 you will be getting in/out of bed independently.
- You will attend teaching classes as required.
- The Discharge Plan will be discussed and finalized with you and your family. Home supports will be arranged if needed.

Locating Phone #
7.1 Ward (473-7552)

Day 4 to 5 After Surgery

- You will be walking independently and increasing the lengths of walks of each day.
- You will attend teaching classes as required.
- You will walk up and down the stairs if needed.
- You will be given instruction on follow-up appointments and care before you leave the hospital.

Locating Phone #
7.1 Ward (473-7552)

Before the Operation

Preparing for your heart surgery

While waiting at home, you can get ready for your surgery by doing these exercises. When you come to the hospital, these exercises will be reviewed with you by your physiotherapist.

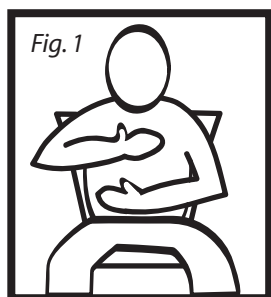
Deep breathing

The first few days after your surgery you will have more mucous (phlegm) in your lungs than normal. You will be encouraged to deep breathe and cough often. This will help your lungs and prevent you from having a chest infection, like pneumonia.

To practice deep breathing at home follow these steps:

Breathing

One quick test: Sitting, breathe with left hand on belly, right hand on chest. If only right hand moves, breathing is too shallow. (Fig. 1)



Good breathing uses diaphragm (divider between chest & belly). To develop this, focus on left hand (& belly) moving out on inhale and in on exhale.

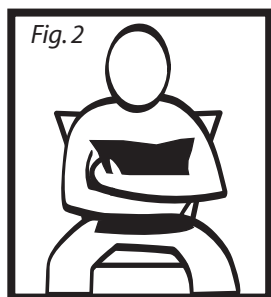
This uses lower lobes of lungs and oxygen reaches all parts of body.

Repeat five times, rest a few minutes and repeat five more times. Do these exercises twice a day.

If you have any chest pain while deep breathing; stop and rest. The next time you try, do only two or three deep breaths at a time.

Coughing

After your surgery your chest will be sore. This is normal. You will receive a pillow that you will hold against your chest to protect it when you cough and when you go from sitting or lying to standing. (Fig. 2)



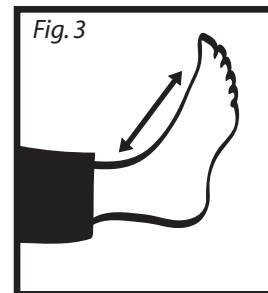
Practice at home by:

Holding a small pillow in front of your chest will make coughing more comfortable and prevent

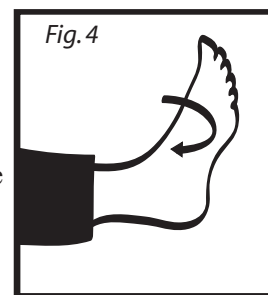
strain on your chest. Take a deep breath in. Cough two to three times in a row as you breathe out.

Daily leg exercises

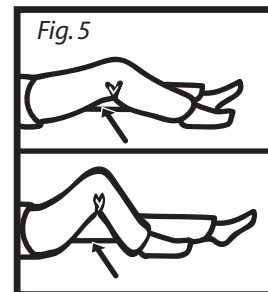
Moving your legs in bed after surgery will help prevent blood clots. Practice these exercises at home, twice a day:



Move your foot up and down five times, each foot. (Fig. 3) Move your foot around in a circle five times, each foot. (Fig. 4)



Bend your knee up and down five times each leg. If you have a graft taken from your leg, this leg may be a little stiff and painful. This exercise will help to reduce the stiffness and pain. (Fig. 5)



You will do these exercises daily after your operation.

Stop these medications

- Coumadin, Warfarin, Aspirin, Entrophen, Novasen, Plavix, Naprosyn/Naproxen, Motrin and Ibuprofen and all anti-inflammatories, 5 days before surgery. Please check with your family doctor if you are unsure what medications to stop.
- You must take all other medications unless otherwise directed.
- Please bring your pills in their original bottles from the pharmacy with you. (They will be returned to you)
- You will receive a call from the Maritime Heart Centre (booking desk) telling you when to stop your medication.

Stop smoking

- Smoking can increase heart disease.
- Smoking narrows the arteries in your heart.
- Smoking increases blood pressure and pulse rate.
- If you stop now the results of your surgery will be better.
- If you start again after surgery your bypass grafts have an increased chance of blocking.

What you need to know.

Pre-op questionnaire

Take a moment and fill out this questionnaire about your health status **prior** to having your heart surgery.

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

For each of the following questions, please mark an in the one box that best describes your answer.

1. In general, would you say your health is: Excellent Very good Good Fair Poor

2. **Compared to one year ago**, how would you rate your health in general now?

Much better now than one year ago	<input type="checkbox"/>
Somewhat better now than one year ago	<input type="checkbox"/>
About the same as one year ago	<input type="checkbox"/>
Somewhat worse now than one year ago	<input type="checkbox"/>
Much worse now than one year ago	<input type="checkbox"/>

3. The following questions are about activities you might do during a typical day. Does **your health now limit you** in these activities? If so, how much?

	Yes, limited a little	Yes, limited a lot	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifting or carrying groceries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing several flights of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing one flight on stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bending, kneeling, or stooping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking more than a kilometre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking several hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking one hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathing or dressing yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. During the **past 4 weeks**, how much of the time have you have any of the following problems with your work or other regular daily activities as **a result of your physical health?**

	All of the time	Most of the time	Some of the time	A little of the time
Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were limited in the kind of work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had difficulty performing the work or other activities (for example, it took extra effort)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. **During the past 4 weeks**, how much of the time have you had any of the following problems with your work or other daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time
Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did work or other activities less carefully than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. During the **past 4 weeks**, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours or groups?

Not at all	Slightly	Moderately	Quite a bit	Extremely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How much **bodily pain** have you had during the **past 4 weeks**?

None	Very Mild	Mild	Moderate	Severe	Very severe
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. During the **past 4 weeks**, how much did pain interfere with your normal work (including both work outside the home and housework)?

Not at all	Slightly	Moderately	Quite a bit	Extremely
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks:

	All of the time	Most of the time	Some of the time	A little of the time
Did you feel full of life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been very nervous?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt so down in the dumps that nothing could cheer you up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt calm and peaceful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have a lot of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt downhearted and depressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel worn out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been happy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel tired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. **During the past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

All of the time	Most of the time	Some of the time	A little of the time
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How **TRUE of FALSE is each** of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
I seem to get sick a little easier than other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am as healthy as anybody I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I expect my health to get worse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My health is excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for completing these questions!

What you need to know.

Getting ready for the hospital

Bring with you

- Your medications (in their original bottles)
- Toiletries - such as: toothbrush, toothpaste, razor, shaving cream, pyjamas, housecoat (that does not require to be pulled over your head), slippers (rubber soled), hairbrush, comb, deodorant.
- Special needs: glasses & case, hearing aids, dentures & case, walking aides.
- THIS BOOKLET

Please note:

- DO NOT bring jewelry or valuables. Leave them with your family. Hospital staff are not responsible for your belongings that are not secured in the hospital safe. Please do not bring or use scented products in the hospital.
- Your stay will be about 5 days.
- Expect to travel home by car.
- It is okay to use a train or plane.
- An ambulance is NOT necessary.

Sometimes you have to wait

Sometimes there is a long waiting period for open heart surgery, this is monitored closely to adhere to national standards. It is also possible for the operation to be postponed even on the day your surgery is scheduled. We do everything we can to prevent this from happening (it only happens 10% of the time) and you will be rescheduled for the very next available slot if it does happen.

Same day admitting procedure

- Report to the 5th floor Pre-Admission Clinic (use the Robie Street entrance, take the elevators to the left of the information desk to the 5th floor).
- You will be contacted by phone to inform you of your appointment date and time.
- If you are from out of town the Department of Health will cover the cost of a patient's overnight stay, (there is an additional charge for any family members that may accompany you) at Point Pleasant Lodge 421-1599. Reservations may also be made online at <http://www.pointpleasantlodge.com/>
- The Pre-admission Clinic provides out patient services before your admission to hospital.
- This will allow you to remain at home until the day of your surgery.

The purpose of the pre-admission clinic is

- To meet your surgeon and discuss the surgical plans.
- To provide all necessary information about your hospital visit before the day of surgery.
- To begin the planning process for nursing care and other services that you will need before admission.
- To teach you about your care before and after your operation.
- To begin early discharge planning, and to find out what services you may need when you go home.
- Please note your time in clinic may be quite long (expect to be there most of the day).
- Make sure you have a light breakfast on the day of your pre-admission clinic.
- During your visit you will meet the members of the health team. You will be able to ask your questions and have any concerns addressed.
- Please bring your pills in their original bottles from the pharmacy with you. (They will be returned to you).

Hours of Operation

- The clinic is open Monday to Friday
7:30 am - 4:00 pm
- The clinic is located on the 5th floor of the New Halifax Infirmary (use Robie Street entrance). The clinic phone number is (902) 473-3120.
- You will be told the day before whether your surgery will be in the morning or afternoon. If it is in the morning your family may come in early to visit you before the surgery.
- Your surgery date may be days to weeks after your pre-admissions clinic visit.

Your cardiovascular team

Many of us take care of you in hospital. You and your family are a large part of your care.

Your team includes:

Surgeons, resident surgeons, cardiovascular associates, dieticians, social workers, nurses, physiotherapists, unit clerks and aides, volunteers, anesthetists, perfusionists, and many allied personnel.

Before your surgery

- You will have a history and physical done by a cardiovascular nurse associate or a resident doctor.
- The doctor who puts you to sleep (the anaesthetist) will visit you.
- Your surgeon will explain your surgery and obtain consent.
- Your nurse will show you a video explaining your stay.

- A member of the Open Heart Support group will visit you. This is an individual who previously has had heart surgery and may be able to answer many of your questions.
- Your nurse will prepare you for surgery and arrange for blood tests, EKG and any other test you might need. The nurse will give you specific instructions regarding skin treatment before your surgery.
- You should not eat or drink after midnight the night before your surgery. The anesthetist will indicate which of your medications should be taken in the morning with a sip of water.
- You may be approached by a researcher to ask for permission to enter a research trial. These studies undergo a thorough screening by other doctors to ensure they are safe. The results can improve the care of all patients. Your help is appreciated, but you are under no obligation to participate. Your care will not be influenced by whether or not you participate.
- Before you come to hospital you should give some thought to discharge plans. By discharge you should be able to walk by yourself (if you did so before surgery) and manage your own personal care. You need to make plans to have someone help you with housework and to get groceries. We suggest that you have someone with you for the first few days at home.

On the day of your surgery

- You will receive a sedative to relax you.
- Your family may take home some belongings. Please leave toiletries, dentures, glasses, housecoat, and slippers. They will be placed in a locker so that they will be available for you to use in ICU.
- Your wedding band and all jewelry must be removed.
- If your surgery is later in the day, you may be allowed a liquid breakfast. You will be taken to the operating room on a stretcher. Your anaesthetist will start an intravenous to put you to sleep. When you wake up you will be in Cardiovascular Intensive Care Unit.



After the Operation

Intensive care unit (5.1 CVICU)

This is like a recovery room. Once your vital signs are stable and you are beginning to awake most of the tubes will be removed. The first tube that is usually removed is your breathing tube. This is done when you are more awake and various tests show you are ready to breathe on your own (which may be as soon as 4 hours post-op or may take up to days). Soon after this, you will be assisted to sit at the side of your bed for deep breathing and coughing exercises. This is a very important exercise to help you remove any secretions from your lungs, and is encouraged frequently. It is important that you request pain medication for any discomfort because this will enable you to move more easily.

The next important aspect of your stay in the ICU is to get you moving as quickly as possible to ensure a speedy recovery. This will be a team effort including your nurse and/ or physiotherapist and most importantly - YOU.

When you wake up in the Intensive Care Unit you will notice that several tubes were put in while you were asleep. These are described below.

Breathing tube

After you are asleep, a smooth tube is placed in your windpipe. This is connected to a breathing machine that will breathe for you during your surgery and the early recovery period.

You may wake up while the tube is in your windpipe. You will not be able to speak or drink. While the breathing tube is in place, the nurse will word questions to you so that you can answer by nodding your head yes or no. You can also point for what you want. Some patients have hoarseness after the tube is removed. This hoarseness will go away in time. The breathing tube will be removed when you are awake enough to deep breathe and cough on your own.

Chest tube

One or two tubes will be placed through small incisions in your chest area, separate from the main incision. These are for drainage of fluid and old blood from around your heart. These tubes will be removed when the drainage is minimal.

IV tubing

Fluids, medication and blood if needed are given to you through the IV tubes. These will be placed in the neck and arms. There will be a small tube in your wrist through which

we take blood and measure your blood pressure.

Catheter

A small rubber tube will be placed in your bladder while you sleep to drain urine and help monitor how your kidneys are functioning.

Monitor

Small pads are placed on your chest to record your heart rate. These are a continuous EKG machine.

Pacing wires

One or two pacing wires are connected to your heart during the operation to allow us to control the electrical activity of your heart temporarily, if necessary. They are removed before you go home.

Beeps, bells and whistles

Many of the machines used in your care make noisy signals to warn the nurse. Do not be frightened when they go off. You are not in danger.

After surgery you will be given medication to ease your discomfort. Although you will feel sleepy; you will be awake enough to follow directions and to know your family.

A word to those waiting

Waiting time

The total time in the operating room depends on what has to be done during surgery. It may be four hours or longer. We realize that this is a trying anxious time for you. The family room on 5.1 has been provided for you during this time. The surgeon will look for your family here following surgery. He will give you a report and answer any questions at this time.

If your family will not be in hospital for someone to meet with when the operation is complete, please leave a phone number where your family spokesperson may be reached.

The patient will need to be settled in the ICU. This may take some time. In the waiting room there is a buzzer and intercom system that you may use to communicate with the ICU nurses.

A Surgical Liaison Nurse (SLN) is available Monday to Friday between the hours of 9:00am – 5:00pm to make contact with family members who are waiting for relatives having surgery. This includes all out-patients, same day admissions and in-patients. The SLN makes rounds on an hourly basis to provide information to the many family members waiting during this time of surgery. Feel free to ask questions during this time and/or express any concerns to the

SLN.

Visiting

Your family is encouraged to visit you throughout your stay in the intensive care unit.

Your nurse will discuss visiting with your family, keeping in mind your needs and those of your family. Family members should also be reminded that your rest is important for your recovery. It is a good idea to pick one spokesperson in your family who may phone the Intensive Care Unit from outside the hospital, to check on your progress. The spokesperson can then share information with the entire family.

Change of shift is 0630-0730 a.m. and p.m. It is encouraged to delay phone calls/visits during this time to enable the nurses to give/receive report and complete the necessary assessment on your family member.

The Cardiovascular ICU is on the fifth floor of the New Halifax Infirmary building. The telephone number is (902) 473-7554.

Transfer from the ICU to 7.1

- Following your ICU stay you will be moved to the intermediate care unit (IMCU) on 7.1. The phone number is (902)473-7552.
- During your recovery it is very important to walk, exercise, deep breathe and cough. These are the keys to a safe recovery.
- Deep breathing helps to open up the air passages and move the muocus/phlegm out of your lungs. Use your “heart pillow” to support your incision when coughing.
- You may be sore. Pain medication may be taken every four hours. Please ask for these when you need them. Don’t be heroic. It’s better to be comfortable and able to move around then frozen because of pain.
- Relaxing, changing your position regularly and using your pillow to support your chest incision will help to relieve your discomfort. It is also important to get your rest.
- Limit visitors.
- Remember rest period is from 14:30 to 15:30.
- You will be involved in a number of teaching sessions about exercise, diet, and activity. Your nurse will inform you and your family of the time, we encourage family to be present.
- This is your opportunity to learn how to maintain good

health for the long term.

Common concerns after surgery

Dry mouth, sore throat

This is the result of the breathing tube used during your surgery. Cough drops, ice chips, and time will help.

Poor appetite

This is common after surgery. As you recover from the effects of the anaesthetic, your hospital diet will be slowly increased, from liquids only to solid food. You may benefit from a talk with the dietician about menu choices.

Bowel habits

Many patients have problems with constipation after surgery. Here are a few ways to help deal with this problem.

As you return to a diet with solids, ensure you are drinking sufficient liquids. Juice, milk and water are all good choices. Try to get lots of water especially - it is the best liquid to drink. Foods with lots of fibre will help too - whole grain breads and cereals, bran, fruits and vegetables, legumes (peas, beans and lentils). It may take a while before you feel like eating a lot of these foods, but try to start as soon as you can.

If constipation lasts more than a day or two, ask your nurse for a laxative. This will help, but try not to use laxatives often. If you get lots of fibre and fluid every day, you won’t need a laxative.



What you need to know.

Numbness and pain

You may have some numbness and tingling in your hands. It may take a long time for this to resolve. Tingling over the breast area may also occur if a graft has been taken from the chest wall. This tingling may also last a long time. Aches and pains between your shoulders, back of neck and around the chest incision are common and may last several weeks. The physiotherapist will teach you stretches and exercises to help you reduce this discomfort.

Swelling

There may be swelling in the leg where the vein is taken. This may last a long time. Keep your leg up when sitting and wear support stocking when ordered by your doctor. Do your leg exercises as often as possible.

Up and down days

You may have mood changes while recovering from this surgery. You may feel happy and cheerful one day and cranky and down the next. This will change as you become more active.

Poor memory and bad dreams

You may notice this after your surgery. Medications are often the reason for this. In time, you will be back to yourself. It is important for you to tell the nurse how you are feeling.

Excessive sweating

During sleep excessive sweating is common following open heart surgery and may even occur after discharge from the hospital. It will decrease with time.

Rapid heart rate

It is not unusual to experience a rapid and/or irregular heart rate post op. This can be controlled with medications. Control of your heart rate with medications may take several days, and may delay your discharge.

Your Daily exercise program

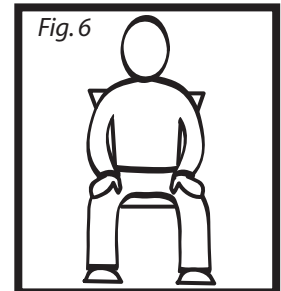
A regular walking and exercise program will help prevent your new grafts from becoming blocked again. Most of these exercises will be done in the physiotherapy class. These should be done once a day in hospital and continued for 4 weeks.

The purpose of these exercises is to

- Decrease the stiffness which may result from your surgery and being in bed.
- Increase your muscle strength and endurance. This will make your daily activities easier.
- Improve your overall well being.

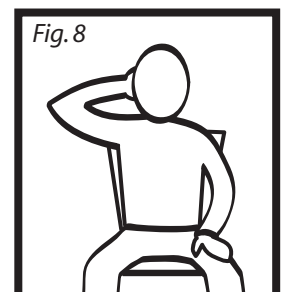
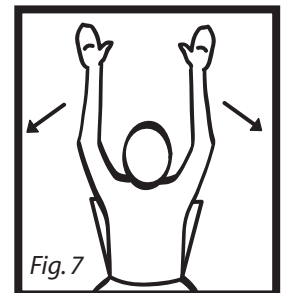
Directions

- Sit on firm chair with no arms but good back support. (Fig. 6)
- Do the exercise program once a day. Morning is a good time.
- Do each exercise 10 times.
- Do the exercises at a slow to moderate pace.
- Work within your pain free range (as directed by the physiotherapist)
- You should also continue your deep breathing and coughing exercises each morning.



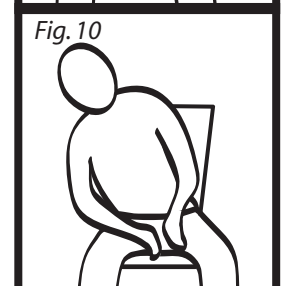
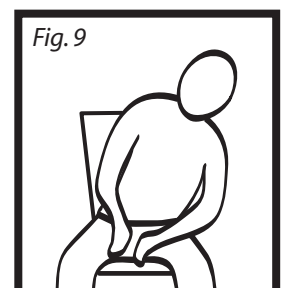
Daily arm exercises

- Cross both arms in front of you.
- Breathe in as you lift your arms up and out to the sides.
- Touch your hands together over your head. (Fig. 7)
- Breathe out as you lower your arms.
- Touch the back of your neck with your hand as you breathe in. (Fig. 8)
- Lower your hand to your side as you breathe out.
- Repeat the exercise now with the opposite hand.



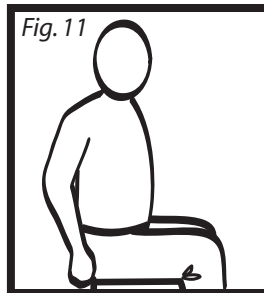
Place your arms on your lap.

- Sitting up straight, (with your bottom on the chair) lean to the side. (Fig. 9)
- Now straighten up and lean to the other side. (Fig. 10)
- Circle shoulders backward.
- Now circle your shoulders forward. (Fig. 11)
- Repeat 10 times in each direction.
- As well, shrug your shoulders then relax them. (Fig. 12)
- Repeat as above.



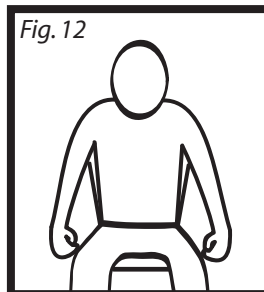
Place your feet flat on the floor.

- Straighten one knee all the way, pulling toes up toward you.
- Relax. (Fig. 13)
- Repeat with the other leg.



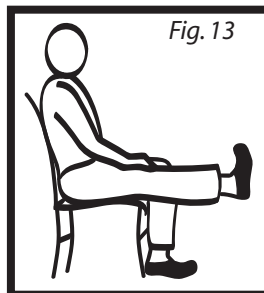
Place your feet flat on the floor.

- Straighten knee, now lift leg out to side. (Fig. 14)
- Return to starting position.
- Repeat with the other leg.



Lift your leg so your foot is lightly off the floor.

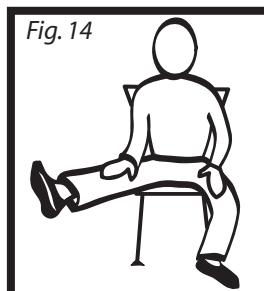
- Move foot up and down in a pumping motion. (Fig. 15)
- Circle ankle in each direction.
- Repeat with opposite foot.



Calf stretch

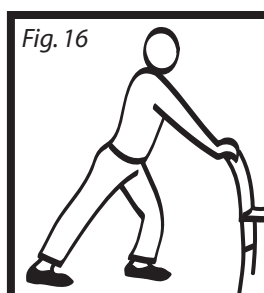
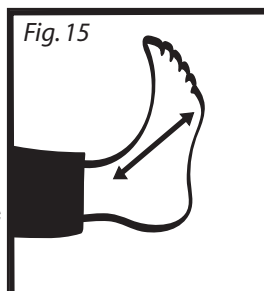
The calf stretch should be done before and after you walk. Stand with your right foot forward, feet pointing straight ahead.

- Lean forward, bending your front knee and a slight bend in your back knee. (Fig. 16)
- Both heels should be on the floor.
- Hold this position for 8-15 seconds (do not bounce), relax.
- Repeat with other leg.
- Do 2-3 on each leg, before and after your daily walk.



Before you begin walking, remember:

- Always wait at least one hour after eating before walking.
- If you are feeling ill, do not walk as far. If you do not walk for more than 3 days, when you start again, decrease the length of time you walk.
- In very humid, warm, cold or windy weather, walk indoors (ex. a shopping mall). In summer, walk during the cool part of the day. In winter, walk during the warm part of the day.



- Wear comfortable, loose clothes and walking shoes with support. In the winter, wear layers of clothing rather than a heavy coat.
- If you take a shower after you exercise, the water should be warm. Do not use saunas, steam baths, or whirl pools.

Your daily walking program

Begin your program 2 days after you have been home.

- Remember walk at a comfortable pace.
- Do not climb hills for the first 2-3 weeks.
- Walk on a flat surface.
- Let your arms swing gently and enjoy the fresh air. For the first 3/12 nothing heavier than 5 lbs should be lifted in either hand.
- Slow down your pace if you are too short of breath to talk while you are walking.
- Remember "Walk and talk"
- No weight lifting, chin-ups or push-ups until the first 3/12 post op passed.

My daily walking program

- Start out by walking 15 minutes twice a day.
- Increase the time of your walk by 2 minutes per day until you are walking for 60 minutes.
- Once you have reached 60 minutes, you may decrease your walking to one walk a day.
- Remembering to always "Walk and talk".

Using an exercise bike or treadmill

If you have an exercise bike or a motorized treadmill you may use either to exercise.

- With an exercise bike do not use any tension until you can cycle comfortably for 20 minutes.
- With the motorized treadmill walk on the flat (no incline) until you progress to your target time.
- After you reach your target time you may add an incline.

Exercise Exchange

After 2 months you may begin to exchange some of your walks for other activities that give as much benefit. Below, you will find some suggestions. Discuss these with your physiotherapist or surgeon.

- Social dancing
- Tai Chi
- Bowling
- Gardening
- Elderobics
- Swimming
- Playing with grandchildren
- Grocery shopping
- Household chores
- Aqua Aerobics
- Line Dancing
- Lawn mowing
- Golfing
- Riding an exercise bicycle

Discharge and follow-up

Discharge

The usual discharge time is 9:30 - 10:30 am. You may travel by car, bus, train or plane. (An ambulance is not needed)

Please do not leave the hospital without the following:

- Your interim report (give to your Family Doctor within one week).
- Your prescriptions for any new medications.
- This booklet with your discharge instructions and discharge medications written in.

Follow-up

A nurse will call you within 7-10 days to check on your progress. You may find it helpful to keep a daily diary to record questions, i.e. medications, activity, diet, incisions, temperature and weight. This diary may be helpful when the nurse calls and when you visit your doctor.

Your surgeon may wish a follow-up appointment in 6-8 weeks after discharge. This will either be given to you at discharge or the office will contact you later.

You should also see your cardiologist in 4-6 weeks time. Your Family Doctor's office should make that appointment for you.

For information regarding cardiac/exercise programs in your area as well as support groups, please call:

The Heart and Stroke Foundation of NS
1-902-423-7530 or 1-800-423-4432

The Heart and Stroke Foundation of PEI
1-902-892-7441 or 1-888-473-4636

The Heart and Stroke Foundation of NB
1-506-634-1620 or 1-800-663-3600

The web site is www.heartstroke.ca

Prior to discharge you will be given a booklet titled "Your Passport to Cardiovascular Health" identifying the Cardiac Rehabilitation Program within Capital Health and a list of Cardiac Rehabilitation Programs in Nova Scotia.

How to stay healthy

Diet

Eating a well-balanced diet will speed healing and make you less tired. Your appetite will improve over time. A healthy diet is low in cholesterol, salt and caffeine.

Rest

You will need rest. Plan a 30 min. or 1 hour rest when you feel tired. Try to get a good night rest. You will feel stronger in time.

Exercise

Walking is your basic exercise for the first few months after surgery. Walk outdoors when you can as fresh air is good for you. Follow the exercise plan on page 15 (from your physiotherapist). If you have any questions regarding your exercise or walking program please contact your physiotherapist.

My physiotherapist's name is

PRINT NAME HERE

and I can call him/her at 473-3578.

Check your temperature

Follow your temperature for 1 month. Take your temperature at the same time every day. Normal temperature is 37C or 98.6F. If your temperature is increased for two days let your family doctor know.

Incisions and home care

Look at you incisions before leaving the hospital. They may be numb, sore, or have some swelling. This will resolve in time. If you notice an increase in redness, swelling, or drainage, notify your family doctor. Once your incision is completely dry you may apply a moisture cream such as Vitamin E cream to keep the tissue soft and less sensitive. If a homecare consult is required to care for your incision, this will be arranged prior to discharge.

Weight

Keep a record of your weight for one month. If you gain 2-3 lbs. in one day you may be retaining fluid. Call your doctor if you gain 4-5 lbs. in 2 days. Weigh yourself the same time each morning, after you urinate, and wearing the same amount of clothing.

Know your cholesterol level

If you have not had a recent lipid profile/cholesterol let your family Doctor know. A cholesterol level should not be done until 6 weeks following your surgery

Smoking and second-hand smoke

Do not enter smoke filled rooms. Family and friends should not smoke near you. If you currently smoke and need help to stop please contact your family doctor or the Heart & Stroke Foundation for some suggestions. Please feel free to ask your nurse for information prior to discharge.

Healing time

It takes 6 weeks for your breast bone (sternum) to heal completely. For the next 6 weeks do not lift, push, or pull more than 10 pounds. You may gradually ease back into your usual routine after this time. Check with your doctor about when you may try shoveling snow or mowing the grass.

Stress management

Stress can put a strain on your heart, making it pump harder and faster. It can also increase your blood pressure. To control stress you may find it helpful to practice deep breathing, yoga, meditation, or listening to relaxing music.

Monitoring blood sugars

Controlling your blood sugar is also very important. If you are diabetic, you must follow your diet, take your medications, and monitor your blood sugars. High blood sugars can increase blood pressure, increase blood cholesterol and slow healing.

Stable blood pressure

It is also important to follow your blood pressure. Discuss what the appropriate levels are for you with your family doctor. Take blood pressure medication as prescribed.

Food for a healthy heart

The basics

This is a great time to start looking at what you eat now, and decide what changes you can make, to help your heart! Of all this risk factors for heart disease, your diet is one of the easiest for you to control. Eating more fibre, and less fat and salt, is part of a lean and healthy heart lifestyle - and it CAN taste great!

More fibre in your diet can help lower your cholesterol, and help your bowels work better.

Oatmeal, fruit and vegetables are packed full with great nutrition that you don't want to miss out on! These foods can help lower cholesterol. Wholegrain breads and cereals help your bowels work regularly. When you start to eat more fiber, drink plenty of fluids, especially water.

Extra fat in your diet can be used by your body to produce extra cholesterol, which can block your arteries.

Eating too much fat will make you overweight, which makes your heart work harder. So - give your heart a break by eating less fat. Try some of the tips below:

- Trim the fat off meat and chicken before you cook them;
- Avoid processed meats like hotdogs, sausages, bacon, pepperoni, salami, and bologna - bake, broil, grill, BBQ or roast meat, fish or chicken instead of frying it.
- Avoid deep-fried, pan-fried or creamed foods.
- Add less fat to food, such as butter, margarine, mayonnaise, salad dressings, and salad oil. (Try sandwiches with low-fat mayonnaise, mustard or horseradish instead of regular mayonnaise. Use jam on toast, instead of butter or margarine. Use low-fat salad dressings or flavored vinegars to dress salads.)
- In your coffee skim or 1% milk are the best choices; use 2% regular milk only occasionally. If you eat dessert choose fresh fruit, angel food cake, plain cookies, frozen yogurt or fruit crisps - most pies, cakes and squares are too high in fat to eat often.

Too much salt can make your blood pressure go up, which makes your heart work harder.

Try to use less salt. Use only a little salt to cook with if you like, but take the saltshaker off the table. Add flavor to foods with herbs and spices. Eat less salty snack foods (chips, nuts, etc.) Try popcorn - the "light" microwave kind, or air-popped - or fresh fruit or vegetables, or low fat cheese and crackers for snacks.

Try eating one evening meal a week without meat, fish, or chicken. These are sources of animal protein and can be a very big source of fat in your diet. You don't have to become a vegetarian to eat a heart-healthy way, but "meatless" meals can be good for your heart. Beans and brown bread, a salad, and some fruit for dessert is a great example of a "meatless" meal. Other ideas are chili, casseroles, and thick soups with lots of foods like vegetables, pasta, lentils and peas. Vegetarian cookbooks are full of delicious, low-fat recipes. Give them a try! There are lots of low-fat and vegetarian cookbooks at your local library or bookstore.

What you need to know.

If you choose to drink alcohol, do so in moderation. Check with your Doctor first to see if there is any reason why you should not drink alcohol. If it is OK to drink, do so in moderation. “Moderation” is 1 drink per day for women, and no more than 2 drinks a day for men. A “drink” is 12 oz. (340 ml) of beer or 4 oz (110 ml) of wine or a 1 oz (30 ml) “shot” of hard liquor (rum, whiskey, gin, vodka, etc.).

Eat heart healthy! It’s all up to you!

The Dietitian will give you more information on Heart Healthy Eating when you come to the Hospital. If you have any questions, write them down here and ask the Dietitian about them.

When to call your family doctor

- Increased redness, swelling, pain, or drainage from incision.
- Fever over 100F/38C FOR MORE THAN 2-3 days.
- Flu-like symptoms (aches, chills, fever, loss of appetite and fatigue) lasting 2-3 days.
- Angina symptoms like those before surgery (do not hesitate to try NITRO).
- Pain in chest, neck or shoulders that worsens with deep breathing.
- Shortness of breath that does not go away.
- Weight gain of 4-5 lbs. for 2-3 days.
- If you notice that your heart is racing and then slows down after ½ hour rest or you have pain in your chest with the fast heart rate.



Post-op questionnaire

Take a moment and fill out this questionnaire about your health status **after** having your heart surgery and just before your six-week post-op clinic visit.

Your Health and Well-Being

This survey asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

For each of the following questions, please mark an in the one box that best describes your answer.

1. In general, would you say your health is: Excellent Very good Good Fair Poor

2. **Compared to one year ago**, how would you rate your health in general now?

Much better now than one year ago	<input type="checkbox"/>
Somewhat better now than one year ago	<input type="checkbox"/>
About the same as one year ago	<input type="checkbox"/>
Somewhat worse now than one year ago	<input type="checkbox"/>
Much worse now than one year ago	<input type="checkbox"/>

3. The following questions are about activities you might do during a typical day. Does **your health now limit you** in these activities? If so, how much?

	Yes, limited a little	Yes, limited a lot	No, not limited at all
Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lifting or carrying groceries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing several flights of stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climbing one flight on stairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bending, kneeling, or stooping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking more than a kilometre	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking several hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walking one hundred metres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bathing or dressing yourself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. During the **past 4 weeks**, how much of the time have you have any of the following problems with your work or other regular daily activities as **a result of your physical health?**

	All of the time	Most of the time	Some of the time	A little of the time
Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Were limited in the kind of work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Had difficulty performing the work or other activities (for example, it took extra effort)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What you need to know.

5. **During the past 4 weeks**, how much of the time have you had any of the following problems with your work or other daily activities **as a result of any emotional problems** (such as feeling depressed or anxious)?

	All of the time	Most of the time	Some of the time	A little of the time
Cut down on the amount of time you spent on work or other activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accomplished less than you would like	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did work or other activities less carefully than usual	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. During the **past 4 weeks**, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbours or groups?

	Not at all	Slightly	Moderately	Quite a bit	Extremely
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How much **bodily pain** have you had during the **past 4 weeks**?

	None	Very Mild	Mild	Moderate	Severe	Very severe
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. During the **past 4 weeks**, how much did pain interfere with your normal work (including both work outside the home and housework)?

	Not at all	Slightly	Moderately	Quite a bit	Extremely
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. These questions are about how you feel and how things have been with you **during the past 4 weeks**. For each question, please give the one answer that comes closest to the way you have been feeling. How much of the time during the past 4 weeks:

	All of the time	Most of the time	Some of the time	A little of the time
Did you feel full of life?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been very nervous?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt so down in the dumps that nothing could cheer you up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt calm and peaceful?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you have a lot of energy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you felt downhearted and depressed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel worn out?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Have you been happy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Did you feel tired?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. **During the past 4 weeks**, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives, etc.)?

	All of the time	Most of the time	Some of the time	A little of the time
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. How **TRUE of FALSE is each** of the following statements for you?

	Definitely true	Mostly true	Don't know	Mostly false	Definitely false
I seem to get sick a little easier than other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am as healthy as anybody I know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I expect my health to get worse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My health is excellent	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Thank you for completing these questions!

Specific Operation Details

a. Coronary Artery Bypass operation

Date of surgery: _____
Vessel(s) bypassed: _____
Ejection Fraction: _____
Research study (if applicable): _____

Precautions

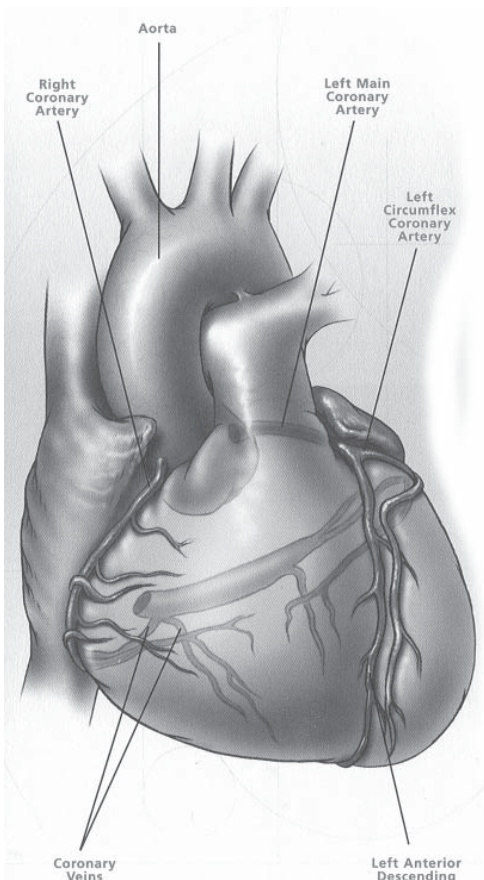
Follow the staying healthy guidelines in this book. (see page 14, *How to stay Healthy*).

Medications

See page 21.

Incisions

Watch for any change in your drainage. Report increased drainage immediately to your family doctor.



b. Valve surgery operation

Date of surgery: _____
Type of valve(s): _____
Research study (if applicable): _____

Precautions

Follow the staying healthy guidelines in this book. (see page 14, *How to stay Healthy*).

Temperature

Record once daily for one month. Notify your family doctor immediately if you have a temperature. This is an early sign of infection.

Antibiotics

Notify your dentist that you have had a valve replaced. You will require antibiotics before and after any dental procedure including routine cleaning of your teeth.

If you are to have any type of surgery or minor procedure, notify your surgeon so that you will receive antibiotics before and after any procedure. This is a precaution to prevent possible infection.

Incisions

Watch for any change in your drainage. Report increased drainage immediately to your family doctor.

Anticoagulants

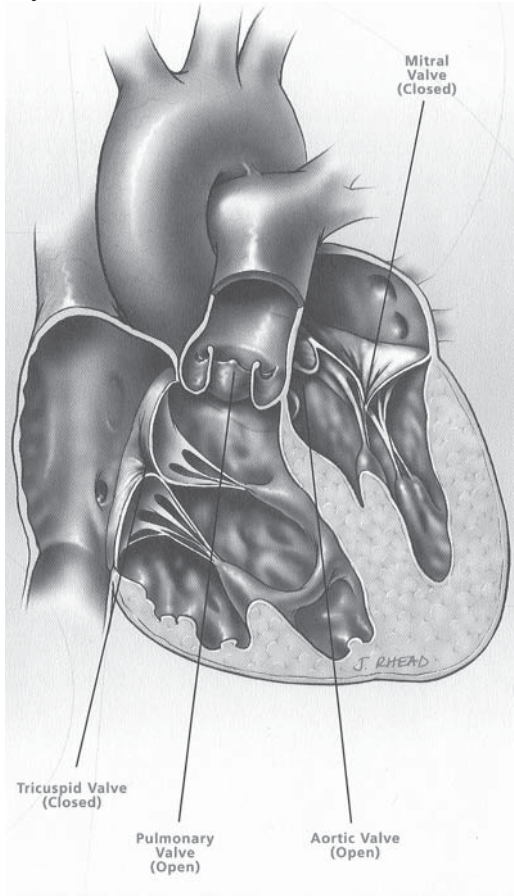
You may be required to take a blood thinner (Warfarin, Coumadin). You will receive teaching on this medication by a pharmacist prior to discharge. It is very important for you to know the INR level your doctor feels is the best for you.

It is important to

- Take the drug at the same time each day.
- Have regular blood work drawn as indicated by your family doctor.
- Report signs of bleeding - bruising, frequent nose bleeds, excessive bleeding from a cut, from gums after dental care, bowel movements that are red or black, dark colored wine, blood in sputum from coughing.
- Take extra precautions in the kitchen and with outdoor activities such as gardening to avoid cuts.
- If you have chest pain or palpitations, call your family doctor.
- Carry your valve card in your wallet. You may wish to wear a medic alert bracelet. For more information on medic alert, contact your pharmacist.

What you need to know.

- You may gain weight even though you are not overeating. This is because you may be retaining water. Other signs of this are shortness of breath and swollen feet. It is important to follow a salt-free diet so you will not retain water and to report sudden weight gain to your family doctor.



c. Antiarrhythmic surgery

Date of Surgery: _____
Type of Operation: _____
Research Study (if applicable): _____

Precautions

Follow the staying healthy guidelines in this book. (*see page 14, How to stay Healthy*).

- Anything more than scant drainage from your incision site is abnormal and should be reported.
- Any sign of infection such as fever, chills, and marked local redness, swelling, tenderness of pain is abnormal and should be reported.

- Symptoms that might suggest device malfunction, such as dizziness, loss of consciousness, chest “fluttering”, or marked fatigue should be reported.
- Symptoms suggesting pacing of the diaphragm, such as upper abdominal twitching or discomfort, should be reported.
- Symptoms suggesting fluid outside the lungs such as unusual shortness of breath, should be reported.

d. Heart Failure surgery - VAD/Transplant

Date of Surgery: _____
Type of VAD (if applicable): _____
Research Study (if applicable): _____

Precautions

Follow the staying healthy guidelines in this book. (*see page 14, How to stay Healthy*).

Relatively complex and rare

Keep all general recommendations in mind : (Antibiotics/ Temperature/Incisions, etc.)

In addition:

- Diet:** Follow direction given to you by your physician and nutritionist regarding low salt intake.
- Weight:** You should weigh yourself daily and record your weight. You should report to your doctor any consistent increase in your weight, particularly if associated with ankle swelling or shortness of breath.

Frequently

Asked Questions

1. Who makes changes to my prescription?

Your family doctor or your cardiologist may make changes to your prescription.

2. Can I hurt myself by doing too much activity?

(for example, walking either outside or on a treadmill). Pace yourself, as you will fatigue easily. You need to work on increasing your strength by following the exercises outlined in this booklet.

3. Why am I coughing so much?

Your coughing is due to the surgery. You probably have slight fluid on your lungs and coughing helps move the fluid. If the coughing persists check with your family doctor. Your family doctor may order a chest x-ray or alter your medication.

4. What is there is a delay in my stay at the hospital?

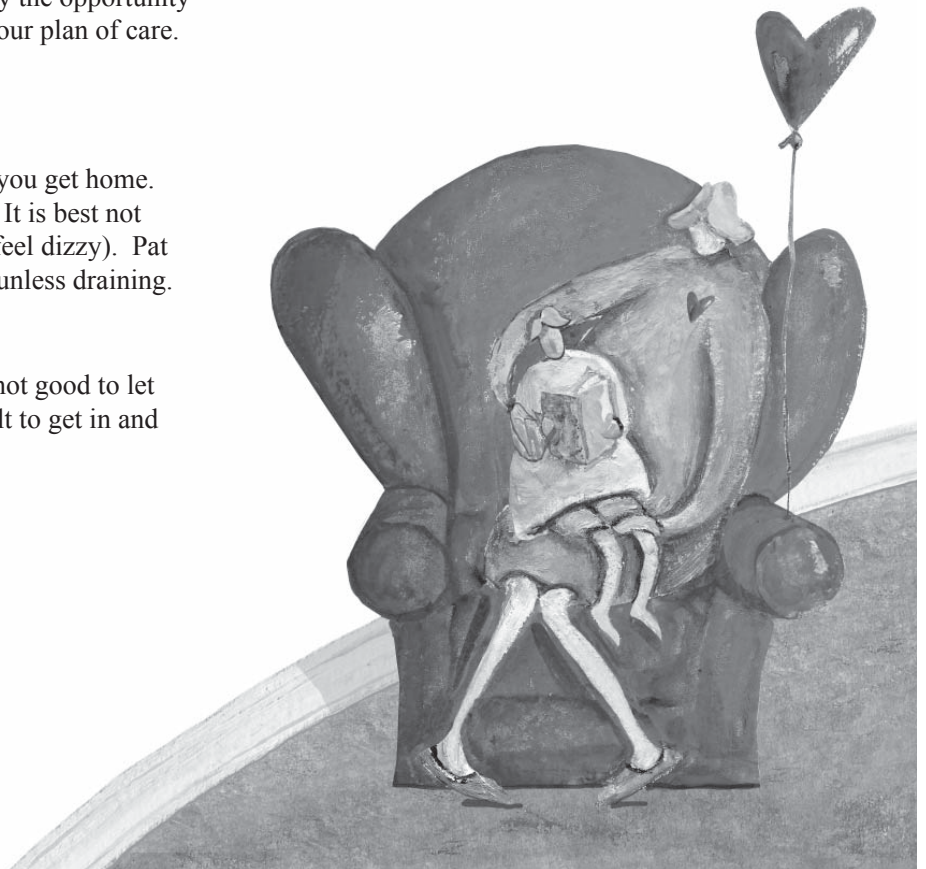
The average length of hospital stay following surgery i.e. 4-5 days. If your length of stay is longer than 5 days the health care team is available to meet with you and your family to discuss your specific condition. Communication with your cardiovascular team is important to provide you and your family the opportunity to ask questions and to be informed of your plan of care.

5. When can I...?

a) Shower: You can safely shower when you get home. Stand with your back facing the shower. It is best not to use very hot water (it may make you feel dizzy). Pat your incisions dry and leave open to air unless draining. If so it will require a dry dressing.

b) Bath: Avoid baths for 6-8 weeks. It is not good to let your incisions soak and it will be difficult to get in and out of the tub safely.

- c) Housework:** When you get home you may do light housework such as setting the table, drying dishes, preparing light meals. Do not do heavy work such as vacuuming, laundry, for 8 weeks.
- d) Hobbies:** Such things as hunting, fishing, golfing, swimming, and bowling, should not be done for at least 6 weeks.
- e) Drive:** Do not drive your car for 6-8 weeks. As a passenger always use your seat belt. You may use a pillow to protect your chest incision. If you are the passenger and there is an airbag please make sure your seat is pushed all the way back. On a long trip stop every 2 hours so you can stretch your legs. Do your leg exercises (page 12) often when in the car.
- f) Sexual Activity:** You may begin once you can climb 18 stairs with little problem. Weight bearing through the arms should be avoided for 8 weeks. Lie on your back or your side.
- g) Return to Work:** Ask your doctor. It will likely be assessed after 6 weeks if you can climb the stairs. Just take it slow and easy.



Discharge Medications

MEDICATIONS INDICATED									
Category	Anti-Coagulants+	Ace Inhibitors*	Beta-Blockers**	Calcium Channel Blockers	Cholesterol Lowering Agents	Diabets Meds	Diuretics	Anti-Arrhythmic Agents	Angiotensin Receptor Blockers
Action	blood thinners	blood pressure control, heart function treatment	blood pressure, heart rate control, rhythm control	blood pressure, vasodialator, rhythm control	cholesterol control		water pills	rhythm control	blood pressure control, heart function treatment
Examples	ASA, Plavix, noxaparin, Coumadin	Altace	Metoprolol	Adalat, Cardizem	Lipitor, Crestor	Metformin Glyburide	Lasix, Metalazon, Zarolyn	Amiodarone, Digoxin	Avapro Avalide Atacand

Problems									
Post CABG	X (ASA ± Plavix)				X				
Prior MI	X (ASA ± Plavix)	X	X		X				
Renal Failure (Cr>170)		X							
Heart Failure	X (ASA ± Plavix)	X	X					X	
A-Fib (PR)	X (Coumadin)		X	X			X		
Hypertension (BP>140/90)		X	X	X				X	
Diabetes Mellitus		X			X				
Smoker									
Post Mechanical Valve Replacement	X (Coumadin)								
Post Bioprosthetic Valve Replacement	X (ASA ± Coumadin)								

+ Acetylsalicylic acid (ASA, aspirin)

Minimum 75 mg per day, maximum 325 mg per day. All patients following CABG unless intolerant or contraindicated. Continue indefinitely.

Goldman S, Zadina K, Moritz T, Ovitt T, Sethi G, Copeland JG, Thottapurathu L, Krasnicka B, Ellis N, Anderson RJ, Henderson W, for the VA Cooperative Study Group. Long-term patency of saphenous vein and left internal mammary artery grafts after coronary artery bypass surgery: results from a Department of Veterans Affairs Cooperative Study. *J Am Coll Cardiol* 2004;44:2149-56.

Mangano DT, for the Multicenter Study of Perioperative Ischemia Research Group. Aspirin and mortality from coronary bypass surgery. *N Engl J Med* 2002;347:1309-17.

+ Clopidogrel (Plavix)

75 mg per day. No good evidence post-CABG but probably should be given in patients with:

- * Severe ASA allergy/intolerance
 - * Recurrent stroke/transient ischemic attack while on ASA
- Continue indefinitely

CHARISMA trial. Bhatt et al. *N Engl J Med* 2006;354:1706-17.
CAPRIE trial. *Lancet* 1996;348:1329.

CAPRIE substudy in post-cardiac surgery patients. *Circulation* 2001;103:363.

CURE trial. *N Engl J Med* 2001;345:494.

+ Warfarin (coumadin)

Use selectively in patients post-CABG if:

- Valve repair or replacement performed in addition to CABG (however, this is highly dependent on surgeon's preference)
- Post-operative atrial fibrillation (may discontinue in 6 weeks if normal sinus rhythm has returned and there is no clot documented in the heart by repeat echo)
- Large heart attack (especially anterior MI) with or without clot in the left ventricle

* Angiotensin-converting enzyme (ACE) inhibitors

Use selectively in patients post-CABG if:

- Patient is diabetic
- Patient has had a heart attack in the past and was on it pre-op
- In all patients with poor EF and/or clinical heart failure

May not be able to use in the above scenarios in patients with the following conditions post-CABG:

- Low blood pressure (less than 100-110 mm Hg systolic)
- Renal failure and/or high creatinine levels

Angiotensin receptor blockers are reasonable substitutes or may be used together with ACE inhibitors for heart failure

Oosterga M, Voors AA, Pinto YM, et al. Effects of quinapril on clinical outcome after coronary artery bypass grafting (the QUO VADIS study). Am J Cardiol 2001;87:542-6.

Kjoller-Hansen L, Steffensen R, Grande P. The angiotensin-converting enzyme inhibition post revascularization study (APRES). J Am Coll Cardiol 2000;35:881-8.

The PEACE Trial Investigators. Angiotensin-converting-enzyme inhibition in stable coronary artery disease. N Engl J Med 2004;351:2058-68.

van Gilst W. IMAGINE: Ischemia Management with Accupril Post Bypass Graft via Inhibition of the Converting Enzyme. European Society of Cardiology, 2005. Available at: http://www.escardio.org/knowledge/OnlineLearning/slides/ESC_Congress_2005/Van%20Gilst-FP1330.

Fox KM. Efficacy of perindopril in reduction of cardiovascular events among patients with stable coronary artery disease: randomized, double-blind, placebo-controlled, multicentre trial (the EUROPA study). Lancet 2003;362:782-8.

Yusuf S, Sleight P, Pogue J, et al, for The Heart Outcomes Prevention Evaluation Study Investigators. Effects of an angiotensin converting-enzyme inhibitor, ramipril, on cardiovascular events in high-risk patients. N Engl J Med 2000;342:145-53.

** Beta-blockers

Use in all patients post-CABG for heart rate control and atrial fibrillation prophylaxis. However, may be discontinued 6 weeks post-CABG if there has been no atrial fibrillation and no recurrence of chest pain.

Continue indefinitely in patients with prior MI and/or heart failure (carvedilol is best here).

Carvedilol Heart Failure Study Group. The effect of carvedilol on morbidity and mortality in patients with chronic heart failure. N Engl J Med 1996;334:1349-55.

Poole-Wilson PA, Swedberg K, Cleland JG, et al. Comparison of carvedilol and metoprolol on clinical outcomes in patients with

chronic heart failure in the Carvedilol Or Metoprolol European Trial (COMET): randomised controlled trial. Lancet 2003;362:7-13.

Crystal E, Connolly SJ, Sleik K, et al. Interventions on prevention of postoperative atrial fibrillation in patients undergoing heart surgery: A meta-analysis. Circulation 2002;106:75-80.

Mitchell LB, Crystal E, Heilbron B, et al. Atrial fibrillation following cardiac surgery. Can J Cardiol 2005;21(Suppl B):45B-50B.

Sjoland H, Caidahl K, Lurje L, Hjalmarson A, Herlitz J. Metoprolol treatment for two years after coronary bypass grafting: effects on exercise capacity and signs of myocardial ischaemia. Br Heart J 1995;74:235-41.

MACB Study Group. Effect of metoprolol on death and cardiac events during a 2-year period after coronary artery bypass grafting. Eur Heart J 1995;16:1825-32.

± Statins

All patients post-CABG unless intolerant or contraindicated. Titrate to LDL cholesterol levels < 2.5, but < 2.0 is even better. If statins are not tolerated, then may try other lipid-modifying meds such as fibrates, niacin, or bile acid sequestrants, but statins are better.


Campeau L, Knatterud GL, Domanski M, et al, for The Post Coronary Artery Bypass Graft Trial Investigators. The effect of aggressive lowering of low-density lipoprotein cholesterol levels and low-dose anticoagulation on obstructive changes in saphenous-vein coronary-artery bypass grafts. N Engl J Med 1997;336:153-162.

Knatterud GL, Rosenberg Y, Campeau L, et al, for The Post Coronary Artery Bypass Graft Trial Investigators. Long-term effects on clinical outcomes of aggressive lowering of low-density lipoprotein cholesterol levels and low-dose anticoagulation in the post coronary artery bypass graft trial. Circulation 2000;102:157-65.

Eagle KA, Guyton RA, Davidoff R, et al. ACC/AHA 2004 guideline update for coronary artery bypass graft surgery: a report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Update the 1999 Guidelines for Coronary Artery Bypass Graft Surgery). American College of Cardiology Web Site. Available at: <http://www.acc.org/clinical/guidelines/cabg/cabg.pdf>.

What you need to know.

Personal Medication Chart

TREATMENT	DRUG	DOSAGE	TIMES
Blood thinner <i>(are you taking an aspirin?)</i>			
Blood pressure <i>(your pressure should be less than 140/90)</i>			
Cholesterol <i>(LDL less than 2.5 HDL more than 1.0 Triglycerides less than 1.7)</i>			
Diabetes:			
Heart Function Medications: <i>(is your EF <30%)</i>			
Other:			
Other:			

Medications

- Your doctor will instruct you on what medications you will be going home on.
- These will be reviewed with you by your nurse.
- Make sure that you are clear on what medications you are to take and when.
- You may want to have a family member review these as well so that all your questions are answered before you go home.

Play your way to a healthy heart

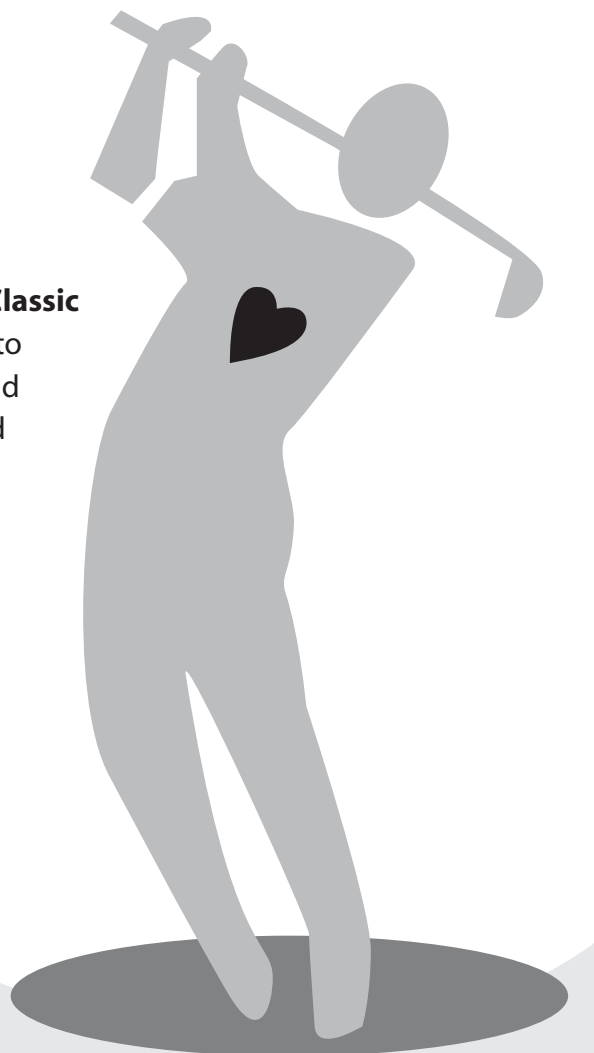


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