Heart Surgery

A Guide for Patients and their Loved Ones

Connect the DOTS

St. Mary's GENERAL HOSPITAL
What to Pack for Your Hospital Stay

Remember to bring this “Heart Surgery” booklet with you to your Pre-Surgical Clinic visit (if you have one booked). Bring this booklet with you again when you come to hospital on the day of your surgery.

Have your family bring these items to the CVICU on the day of surgery.

☐ Toothbrush and toothpaste
☐ Hair comb
☐ Deodorant
☐ Other toiletries (scent-free)
☐ Glasses
☐ Dentures and denture cleaning tablets
☐ Hearing aid(s) and batteries
☐ Housecoat/pajamas – must open fully in front (no “pull over the head” items)
☐ Undergarments (underwear, bra with an extension)
☐ Rubber-soled slippers with closed toe and heel
☐ CPAP machine (for patients with sleep apnea)
☐ Clothes to wear on the day of discharge, including a shirt that buttons up the front
☐ Home medicines (in their original containers)

Please leave your valuables at home! The hospital cannot be responsible for belongings.

Important Phone Numbers:

St. Mary’s General Hospital: (519) 744-3311 (Switchboard)
Regional Cardiac Care Coordinator for Surgery: (519) 749-6578, ext. 1936
Pre-Surgical Clinic: (519) 749-6907
Day Surgery Unit: (519) 749-6654
Cardiovascular Intensive Care Unit (CVICU): (519) 749-6690
Cardiac Surgery Unit (3 West): (519) 749-6435
Visiting Hours

Regular visiting hours are from 7:30 a.m. to 8:30 p.m. however, admitted patients are now able to have visits from designated family and other partners in care up to 24 hours a day. While the hospital is accessible 24 hours a day, the optimal visiting times for patients are a collaboration between a patient’s preference, condition and care needs.

To ensure safe and coordinated visiting, the process for visiting St. Mary’s from 8:30 p.m. to 5:30 a.m. is as follows:

- Visitors must have patient consent and be respectful of roommates
- Visitors enter through the Emergency Department and check in with the Security office
- Once checked in, Security will notify the clinical area for patient consent
- Security will escort the visitor(s) to the elevators
- Security can be requested to escort the visitor(s) from clinical areas to the exit after hours.

Rest is an important part of the healing process. We ask that visitors respect the patient rest period of 12:30 p.m. to 2:00 p.m. and refrain from visiting during this time.

Note that for security reasons, the main entrance door is locked from 9:00 p.m. until 5:30 a.m. daily. During this period, visitors will need to follow the above instructions to access patient areas other than the emergency department.

Compassionate Rates for Lodging

You will find an up to date list of local businesses that provide compassionate rates for lodging on the St. Mary’s General Hospital website:

http://www.smgh.ca/patients-and-visitors/visitor-information

Scroll down to “Hotel Accommodations” and click on the blue text for the link to the list.

Instructions for Patient/Family Members

- Patients/Family members are responsible for booking and paying for their accommodation.
- Each business listed has indicated that they will provide Compassionate Rates to family members of patients. These rates will vary by business.
- Please review the businesses and the instructions provided for booking accommodation.

If you have any issues or concerns obtaining the rates indicated, please contact the Communications Department at St. Mary’s General Hospital (519)749-6578, ext. 1501, so that we can assess the business on this list.
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You have been referred for heart surgery at the St. Mary’s Regional Cardiac Care Centre.

Your test results have been reviewed by a cardiologist and a cardiac surgeon. These experts have determined that heart surgery will provide the most benefit to your health and lifestyle.

The goal of this booklet is to keep you informed and to answer your questions. We will work with you to develop a plan for your recovery and build towards a healthy heart lifestyle for you and your loved one(s).

Having heart surgery can be a significant event in your life. It may affect you and your family in many ways. This booklet is designed to help you and your loved one(s) understand your condition and what you can expect while you are in St. Mary’s General Hospital. It will also describe what you need to do when you go home after surgery.

Bring this booklet with you each time you come to the hospital and keep it with you during your stay.
The Heart and How it Works

The human heart is an amazing piece of engineering. It is a very strong muscle about the size of your fist. It lies slightly to the left of the middle of your chest cavity, behind the breastbone (sternum). A muscular wall called the “septum” divides the heart into the right side and left side. Each side functions as a pump. The heart pumps continuously to supply blood to all parts of the body. Blood carries oxygen and nutrients that your body needs.

The right side of the heart has an upper chamber, the **right atrium**, and a lower chamber, the **right ventricle**. Blood, which has already circulated through the body, enters the right atrium. The blood passes through the **tricuspid valve** into the right ventricle. The right ventricle then pumps the blood through the **pulmonary valve** to the lungs. In the lungs, the blood exchanges the waste gases collected from circulating in the body for fresh oxygen.

The left side of the heart has an upper chamber, the **left atrium** and a lower chamber, the **left ventricle**. Oxygen-rich blood from the lungs enters the heart in the left atrium. It passes through the **mitral valve** into the left ventricle. The left ventricle pumps the oxygen rich blood through the **aortic valve** into the aorta. The aorta delivers the blood to the rest of the body.
Heart Valves

The heart has 4 valves: the aortic, mitral, tricuspid, and pulmonic valves. Heart valves are delicate, yet very durable. Each heart valve opens and closes over 100,000 times every day. These valves maintain the forward flow of blood through the heart and, when working properly, prevent backwards flow when the heart beats.

Valves may be abnormally formed at birth, or can become damaged later in life due to conditions such as:

- Infection
- Rheumatic Fever
- Heart attacks
- Normal aging process that causes calcium build up

Any of these conditions can result in a variety of types of damage to the valve:

1. The valve opening may become smaller and unable to open freely. This is called **stenosis**.
2. The valve may fail to close completely.
3. The valve may collapse backwards into the heart chamber it was supposed to seal off. This is called **prolapse**.

If the valve does not close completely or if it is prolapsed, it will allow blood to flow backward through the heart. This is known as **regurgitation**, and it causes your heart to work harder. The aortic and the mitral valves are the valves that are most frequently affected or damaged.
Coronary Arteries

The heart muscle itself needs a good supply of blood to keep pumping. The arteries that supply the heart muscle with blood are called the **coronary arteries**. Normally, the aorta will supply the coronary arteries with a good supply of blood. This blood supply is rich in oxygen and nutrients. This keeps the heart muscle working properly.

The main coronary arteries are shown in the picture below:
Coronary Artery Disease

Coronary artery disease is a condition in which the arteries to the heart muscle become narrowed or blocked. This restricts the amount of blood reaching the heart muscle. **Atherosclerosis** is a build-up of fatty material on the inner linings of the arteries. This build-up narrows the passage of blood through the artery. Blood flow becomes restricted.

When the blood flow is reduced, the heart muscle receives less oxygen. This is called **ischemia**. Many people will feel chest tightness or pain when ischemia occurs.

The build-up of fatty material and cholesterol in the coronary arteries can harden into **plaque**. Plaque deposits can break apart into smaller pieces that can block the artery. Sometimes the plaque deposits will crack, creating a place for a blood clot to form. If an artery becomes completely blocked, the blood flow to the heart muscle is cut off. This will cause damage to the heart muscle. This is also known as a “heart attack”.

![Coronary Artery Diagram](image-url)
Bypass Surgery

Cardiac bypass surgery may also be called “coronary artery bypass grafting (CABG)” or “aortocoronary bypass (ACB)” surgery. All of these names mean the same thing. Grafting simply means “to join”. This is the most common type of open-heart surgery. The goal of this surgery is to restore blood flow to the heart muscle, improving the delivery of oxygen and nutrients. This should stop the chest pain (angina) that the person experiences.

To perform this surgery, the cardiac surgeon will need to make an incision in the sternum and spread the ribs apart. The heart and lungs may be stopped and your blood will be circulated using a bypass machine, (also called a “heart-lung machine”).

The surgeon may use a vein from your leg, an artery from your arm, and/or an artery in your chest as the graft. The graft attaches to one end of the aorta (the large vessel supplying blood to the heart). The other end will attach to the coronary artery below the area of the blockage. The plaque built up inside the artery is not removed, but is “bypassed” instead. Blood will now flow through the graft, past the blockage, so the heart muscle can receive oxygen and nutrients. Once the bypass grafts are attached, the surgeon will restart the heart and take you off the heart-lung machine.

A blood vessel can be removed from your arm or leg without changing blood flow to the limb. The surgeon and the Registered Nurse First Assist (RNFA) will check the blood flow to your limbs prior to planning to remove the vessel. This will ensure there is an enough blood flow to your limb with the vein or artery removed.
Valve Surgery

Heart valve problems may be fixed by either repairing or replacing the valve. Your surgeon will discuss the best treatment and the surgical approach that will be used, with you and your family.

Valve Repair

The heart valves can be repaired in a variety of ways.

Which of these applies to me?

Valvulotomy

An open-heart surgery where the surgeon cuts into the valve for the purposes of repairing or replacing the damaged one.

Commissurotomy

Used in cases of mitral valve narrowing, the valve leaflets are “split” by the surgeon.

Annuloplasty

Used for either mitral or tricuspid valves. The ring of the heart valve, which holds it in place, has become enlarged. To help the valve function properly, the surgeon will insert a new, smaller artificial ring or band. This ring or band is designed to restore the shape and size of the valve and help prevent further enlargement.
Valve Replacement

The heart valve may be too badly damaged to repair and replacement of the heart valve may be necessary. The surgeon will discuss with you and your loved ones the use of a tissue valve (called bio-prosthetic) or a mechanical heart valve.

Which one applies to me?

Mechanical Valves

Mechanical heart valves, first developed in the 1960s, are made of plastic or metal. The mechanical heart valve is durable. Some patients hear a “clicking” sound with each heartbeat.

The valve is made from a material that is “foreign” to the body. Blood clots can easily form in and around the valve. For this reason, patients receiving a mechanical valve must take medicine to prevent blood clots for the rest of their lives.

Tissue Valves

Tissue heart valves are prepared generally from the hearts of pigs or cows. These animal heart valves look and perform similarly to human heart valves. The tissue heart valve is not as durable as a mechanical valve.

The body does not react as strongly to the tissue valve, so the blood is less likely to form clots. You will not need to take medicine to prevent blood clots for life.

Questions I have about my surgery:

___________________________________________________________________

___________________________________________________________________

___________________________________________________________________
## The Cardiac Team

During your stay at St. Mary’s General Hospital you will encounter many members of the health care/ multidisciplinary team. Some of these members will include:

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<th>Description</th>
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<td><strong>Cardiac Surgeon</strong></td>
<td>• Will meet with you before your surgery and perform the surgery. &lt;br&gt;• You may not see your surgeon daily following the surgery, but you will see him/her at your 4-6 week follow-up visit.</td>
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<tr>
<td><strong>Cardiac Anesthesiologist</strong></td>
<td>• Will see you before your surgery. &lt;br&gt;• Cares for you in the Operating Room, keeps you “asleep”, and manages your blood pressure during surgery. &lt;br&gt;• Is also responsible for all aspects of your care in the CVICU.</td>
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<td><strong>Multidisciplinary Team</strong></td>
<td>Depending on your needs you may also see:&lt;br&gt;• <strong>Occupational Therapist (OT)</strong> - reviews your ability to complete routine daily activities. &lt;br&gt;• <strong>Social Worker</strong> - assists in discharge planning, providing information on financial resources, and providing counseling on stress management and your emotional recovery. &lt;br&gt;• <strong>Dietitian</strong> - provides healthy heart diet instruction. &lt;br&gt;• <strong>Pharmacist</strong> - helps you to understand your new medicines. &lt;br&gt;• <strong>Respiratory Therapist</strong> - works with you in the CVICU to remove your breathing tube. &lt;br&gt;• <strong>Spiritual Care</strong> – assists with coping strategies and provides spiritual support to those in distress. Available, regardless of spirituality or religious beliefs, 24 hours a day, 7 days a week.</td>
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<td><strong>Nurse Practitioner (NP)</strong></td>
<td>• Works closely with the surgeon and medical team to coordinate and manage your care after surgery. &lt;br&gt;• You will see the nurse practitioner daily throughout your hospital stay.</td>
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<tr>
<td><strong>Physiotherapist (PT)</strong></td>
<td>• Helps you to complete breathing exercises after surgery. &lt;br&gt;• He or she will assist you to walk, complete the stairs, and teach you to get out of bed with minimal discomfort.</td>
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<tr>
<td><strong>Regional Cardiac Care Coordinator (RCCC)</strong></td>
<td>• Manages the details related to your surgical booking as you wait for cardiac surgery. &lt;br&gt;• Is a contact for you, your family, and your doctor(s) during the wait. &lt;br&gt;• Ensures you understand the plans for your cardiac surgery.</td>
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<tr>
<td><strong>Registered Nurses (RN)</strong></td>
<td>• Care for you 24 hours a day, while you are in hospital. &lt;br&gt;• Help you to meet your goals for recovery and going home. &lt;br&gt;• Provide you with the information you need to understand your recovery. If you have any questions or concerns, please talk with your RN at any time.</td>
</tr>
<tr>
<td><strong>Registered Nurse First Assist (RNFA)</strong></td>
<td>• A specially trained Registered Nurse working in the Operating Room. &lt;br&gt;• Will see you before your surgery to assess your limbs for removing the artery and/or vein. &lt;br&gt;• Completes hair clipping of your limbs and chest if necessary.</td>
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Some people will wait for surgery in hospital (either at SMGH, or another area hospital). Others will wait at home for their surgery. The average wait time for heart surgery can be days to months. It depends on each person’s condition.

Waiting for Surgery in Hospital

The medical staff will need to do a few things before your surgery. Here is what you can expect:

- A nurse practitioner or doctor will complete your medical history and do a physical exam.
- Your anesthesiologist will see you before your surgery.
- The nursing staff will go through this teaching booklet with you before surgery.

You may have some tests completed while you wait for surgery including:

- Bloodwork
- ECG
- Chest x-ray
- Nasal and rectal swabs (to check for antibiotic-resistant bacteria)
- Urine sample

Other healthcare specialists may need to see you before your surgery. Depending on your medical history, you may also have other tests.

Waiting For Surgery At Home

If you will be waiting at home for your heart surgery, your surgeon will arrange for you to have an appointment in the Pre-surgery Clinic. This appointment will take place within 6 weeks of your surgery date. You will receive the appointment information and some questionnaires and forms in the mail. You will need to fill out all of the forms and questionnaires before your clinic appointment.

You will find more information about the Pre-Surgery Clinic visit starting on page 17.

Chance of Cancellation

We will make every effort not to change your surgical date. There is always a chance, however, that it may change. Sometimes events occur without warning. If your surgical date needs to be changed, the RCCC or your surgeon’s office will let you know as soon as possible. They will arrange for a new date to be booked. Ensure that the Regional Cardiac Care Coordinator (RCCC) has the correct day and evening phone number(s) to reach you.
What Can I Do While Waiting for my Surgery at Home?

Activity

It is important to stay active in the days and weeks leading up to your heart surgery. Do not try to increase your activity level. Avoid activities that lead to shortness of breath or chest pain. If you were not physically active before, ask your family doctor before starting an exercise program before surgery. You may continue to work leading up to your surgery unless your surgeon tells you otherwise.

Limit your work to activities that do not cause angina, shortness of breath, or fatigue.

Physical activity will help your lungs and circulation. Being in better physical shape will make your recovery easier.

The “HeartWalk Workout” is an activity program developed by the Heart and Stroke Foundation of Canada. It is designed to help people with heart problems to get regular, healthy physical activity into their lives. To learn more about this program, please type this link into your Internet address bar:

http://www.heartandstroke.on.ca/site/c.pvI3IeNWJwE/b.3581963/k.4DAA/Healthy_Living__HeartWalk_Workout.htm

What If I Drink Alcohol?

Drinking alcohol before surgery can affect your recovery. You should stop drinking alcohol now! Make sure you tell the staff exactly how much alcohol you have had in the days leading up to your surgery. This will help the doctor, or nurse practitioner to adjust your medicines properly.

Alcohol withdrawal can cause:

- Agitation
- Confusion
- Nausea and vomiting
- Increased sweating
- Tremors
- Headaches
- Feelings of anxiety

Weaning your body from alcohol before surgery can also help with pain control and developing normal sleep patterns after surgery. You can find more information on the following website: http://www.ccsa.ca/Pages/default.aspx
What If I Smoke?

Smoking is a risk factor for heart disease. **If you smoke, it is important that you try to quit before your surgery. Ask your health care professional about medicine to help with your efforts to quit.**

There are many benefits to stopping smoking in the days or weeks before your surgery. These include improved healing and better lung function. In short, it will help improve your recovery. Continuing to be a non-smoker after your surgery will improve your overall health. It will help you to keep both the short and long term positive outcomes of not smoking.

For more information, contact: smokershelpline.ca or call 1 (877) 513-5333

What Should I Eat?

Continue to follow a Healthy Heart diet. You are encouraged to follow this diet after surgery. For information on the Healthy Heart diet, see page 53-54.

For other diet information and heart-healthy recipes, check out the Heart and Stroke Foundation of Canada website:

[http://www.heartandstroke.on.ca/site/c.pvI3IeNWJwE/b.3581737/k.C5E2/Recipes.htm](http://www.heartandstroke.on.ca/site/c.pvI3IeNWJwE/b.3581737/k.C5E2/Recipes.htm)
## What if My Condition Changes?

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<td>Change in angina pain</td>
<td>If you are having angina more often or severe than usual, it may signal a change in your heart disease.</td>
<td>• Contact your Cardiologist or Internist&lt;br&gt;• Your Cardiologist or Internist will contact the RCCC at St. Mary’s General Hospital.</td>
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*If you have unrelieved chest pain, call 911, or have someone drive you to the nearest Emergency Department. DO NOT drive yourself.*

| Develop a cold with a fever, or cough with phlegm, or any other type of infection | Infections need to be treated before surgery. | • Contact your family doctor and tell him/her that you are waiting for heart surgery.<br>• Your family doctor will contact the RCCC at St. Mary’s General Hospital about your condition if needed. |

| Injured in an accident (Such as a fall, workplace injury, car accident, etc.) | You may need to be properly assessed and treated before your surgery. These injuries may or may not affect your surgical date. | • See a doctor for your injuries.<br>• If you need to visit an Emergency Department or Urgent Care clinic, tell the staff you are waiting for heart surgery. Please ask for a report to be sent to the RCCC at St. Mary’s General Hospital. |

### Please contact the Regional Cardiac Care Coordinator if:

- There is a change in your condition that you are unable or unsure how to manage at home.
- You need to provide an update on your condition.

**Call (519) 749-6578, ext. 1936** during regular business hours, Monday to Friday, except for holidays.

Please leave a message if you are unable to reach the RCCC in person. Be sure to leave the correct day and evening telephone number(s) where you can be reached for the return call.
The Pre-Surgical Clinic

The goal of the Pre-surgical clinic is to help prepare you and your family for your upcoming surgery.

Plan to spend at least 4 hours at the clinic. Please bring 1-2 family member(s) or support person(s) with you to this appointment. You will receive a lot of information about your hospital stay and recovery.

On the day of your clinic visit, please:

• Eat and drink as usual. You may bring lunch with you if your appointment is before noon, or eat lunch before you arrive if your appointment is in the afternoon.
• Take your usual medicines.
• Wear loose-fitting, comfortable clothes. Wear socks instead of pantyhose.

Please bring the following items with you to the clinic:

☐ Completed forms and questionnaires
☐ Health card
☐ All of your medicines in their original containers. This includes any herbals, naturopathic, or vitamin products.
☐ If English is not your first language, please bring someone who can translate for you.

What happens during my clinic visit?

• You will see a short video that describes what you can expect during your hospital stay. The clinic staff will answer your questions, and help you plan for your recovery at home.
• The nurse will complete your health history. The nurse will also teach you the things you will need to do to prepare for surgery, and what you will need to do after surgery.
• You will see the anesthesiologist.
• You will have some tests completed, including:
  o Bloodwork
  o ECG
  o Chest x-ray
  o Nasal and rectal swabs (to check for antibiotic-resistant bacteria)
  o Urine sample
Getting Ready for Surgery

The weeks/days before surgery:

- Take your medicines as instructed by the nurses in the Pre-surgical Clinic (refer to the Medication lists on page 19).
- Stop shaving below the neck 2 weeks before your surgery date. Men can and should only shave their face.
- Pack according to the instructions on page 1.
- Remove all jewelry, including wedding rings, before arriving to hospital.
- Remove all nail polish from your fingers and toes. We recommend that you remove artificial nails for infection control reasons.

The night before surgery:

- Take a 15 minute shower.
- Do not eat or drink after midnight.
- Do not chew gum, eat hard candy, or smoke after midnight.
- Men may shave their face only. Women do not shave at all.

The morning of surgery:

- Have another 15 minute shower. Put on fresh, clean clothes after your shower.
- Do not wear make-up, perfume, or deodorant on the day of surgery.
- Brush your teeth, but do not swallow the water.
- Wear your dentures, eyeglasses, and hearing aids as needed. These will be removed before surgery. Bring all your cases and protective devices.
- Bring everything on the packing list (see page 1)
- Do not bring any valuables to the hospital

After your surgery, your family or support person(s) may bring your belongings to CVICU.
**Questions I have about getting ready for surgery:**

**Medicine Instructions Before Surgery**

The clinic staff will review all of your medicines with you during your visit. It is important to take all of your regular medicines unless otherwise instructed below.

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Medicines to take the morning of surgery (with a sip of water only):
How Long Can I Expect to be in Hospital After Surgery?

You can expect to be in the hospital for 5 days after surgery. Your family should arrive at 9:00 a.m. on the morning you are leaving hospital. This will allow them to take part in the teaching before you go home. You will need to plan for what going home will be like before you have your surgery. The activities you will be able to do when you first go home will depend on what you were able to do before surgery. You can expect to return to doing basic activities, such as: walking, climbing a flight of stairs, preparing light meals, and completing your normal morning routine.

It is important that you inform the nursing staff, early in your hospital stay if:

- You live alone or have no supports in the area
- You or your loved ones are unsure about your ability to cope at home
- You feel that you will need the services of the Community Care Access Centre (also known as CCAC or “Home Care”) or convalescent care.

Few patients need to go to a rehabilitation centre before going home. If you need this, staff will speak to you and your loved ones about it during your hospital stay.
Arriving at the Hospital

You may have your loved ones come with you on the day of surgery. Please arrive on time. When you arrive at the hospital, a volunteer will show you to the 2nd floor Day Surgery admission area. You will be registered by a clerk. Please be sure to bring your health card with you.

In Day Surgery, you will be shown to a stretcher area where you will change into a hospital gown. A nurse will come in to admit you, review your health history, medicines, and take your vital signs. The nurse will go over a pre-operative checklist with you.

When the nurse is finished, the Registered Nurse First Assist (RNFA) will come in to speak with you. He or she will ask you more questions. If you require hair clipping before your surgery, the RNFA will complete this task. The RNFA will guide you through the body wipe skin preparation (see page 22).

When the RNFA is finished it is almost time for you to go for your surgery. An operating room attendant will come to your stretcher, put an oxygen mask over your mouth and nose, and wheel you over to the operating room.

Your loved ones will be shown to the Intensive Care waiting room. They will be asked to take all of your belongings with them, as there is no place to store them in the Day Surgery area.

Privacy Code

The nurse will give you a privacy code number. Your family will have to repeat this number to staff when they want to obtain updates on your condition.

Give your privacy code only to those loved ones you wish to receive information on your condition from the health care team.

Your privacy code number is: _____________________
Skin Preparation and Hair Clipping

Pre-operative skin preparation reduces the risk of infection.

Your skin preparation will include 2 thorough showers, 15 minutes each. One will take place the night before your surgery and the other on the morning of your surgery. Please put on fresh, clean clothes, or a new hospital gown after your final shower.

Shortly before your surgery, the hair on your chest, arm(s) and leg(s) may need to be clipped by a nurse. After the hair clipping, there will be a complete body wipe using cloths that contain an antibiotic solution (chlorhexidine 2%). This body wipe may be done by you alone, or with help from a nurse or family member. The skin must be thoroughly dry before the wipe-down is started.

Please follow these body wipe steps in order:

**Cloth 1 and 2:**
Wipe each arm separately – use one cloth for each arm. Start at the fingers. Wipe both sides of the arm, up towards the shoulder. Do the underarm last. Put the cloth in the garbage.

**Cloth 3 and 4:**
Wipe each leg separately – use one cloth for each leg. Start from the top of the thigh. Wipe both sides of the leg, down to the middle part of the foot. Put the cloth in the garbage.

**Cloth 5:**
Wipe the front of your torso. Start at the base of your throat. Wipe down toward the groin area. Wash your groin area last. Do not wipe the tip of the penis, or the vaginal area.

**Cloth 6:**
A nurse or family member can wipe your back for you. Start at the bottom of the neck and work down to your buttocks. Do not wipe the rectal area.

It will take approximately 2-3 minutes for the solution to dry completely. After it is dry you will put on a clean hospital gown. Do not rinse, rub your skin with towels, or apply cream to your skin once the skin wipe-down has been done.

**Do not wipe the cloths near your face, ears, eyes, or the rectal or vaginal areas.**
During Your Surgery

The surgery will usually take 4-6 hours. It will depend on the type of surgery you are having. Your family will wait in the Intensive Care waiting area on the 2nd floor until your surgery is done.

When your surgery is finished, your surgeon will visit your family in this same waiting area to give a report of how the surgery went.

You will be taken to the Cardiovascular Intensive Care Unit (CVICU) to recover from your surgery. You can read more details about what happens after surgery on page 25.

Once you are settled in the CVICU, your family will be allowed to visit you all together for the first visit after surgery. After this, only 2 visitors will be allowed at the bedside at a time.

Questions my loved ones have for the Surgeon and staff:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
My Surgery:

Date: 

By Dr.: 

Surgery procedure:

[Diagram of a medical procedure]
After Surgery

After your surgery you will be transferred to the Cardiovascular Intensive Care Unit (CVICU). The intensive care team will stabilize and help you recover from the surgery. You will be kept asleep until you have warmed up and your vital signs are stable. You will be given medicines to keep you comfortable.

Your family will be allowed to visit for a short time before you wake up. They will get an update on how you are doing and the expected plan for your recovery while you are in the CVICU. All family members can come in for the first visit so they can hear the same information at the same time.

Please have your family give your belongings to the CVICU nurse. Have your family make sure the nursing staff has all of the correct contact number(s).

Please leave your valuables at home.

After the first visit, only 2 family members are allowed to visit for short periods at the bedside. Family members will need to stop and speak to the volunteer at the desk outside of the CVICU doors. The volunteer will ask CVICU staff if it is okay to come in and visit. If the volunteer is not available, your family can use the phone on the volunteer’s desk to call directly into the CVICU. Your family member will always need to provide the privacy code number to be allowed into the unit, or to receive information over the phone. Your privacy code can be found on page 21.

If you have a large family, please designate 1 family member (before your surgery) to act as spokesperson. This helps the intensive care team to give consistent information to the family. It also gives nursing staff more time to focus on taking care of you as you recover from your surgery.

You can expect to be in the CVICU for 24 hours. You will be transferred to the Cardiac Surgery unit on the 3rd floor (3 West) for the rest of your recovery period.

Delirium after Surgery

People who have had surgery are at risk for developing delirium during their recovery. You will receive an “On the Lookout for Delirium” brochure during your stay in the CVICU. This brochure will help you learn more about how delirium can affect someone after surgery and how it is treated. It also describes ways family members can help.
What to Expect While In the CVICU

- You will have a breathing tube in place, and it will be attached to a breathing machine (respirator). You will be given medicine to keep you asleep until you are able to breathe on your own. When this medicine is stopped, you will wake up with the breathing tube still in place. Your condition will determine how long the breathing tube stays in. The breathing tube is generally in for at least 4 hours. When the breathing tube is removed, your voice may be hoarse, and your throat may be sore for a few days.

- Your family can visit with you but you will not be alert yet. You will open your eyes for brief periods and may speak a little, but you will probably not remember that your family visited that day. You will be more alert the morning after surgery.

- You will be attached to a bedside heart monitor. It monitors your blood pressure, heart rate, and rhythm.

- You will have heart pacing wires below your sternal incision. If your heart rate is too slow, these wires can be attached to a temporary pacemaker to adjust your heart rate. These wires are removed before you go home from hospital.

- You will have an intravenous (IV) in your neck and 2 IVs in your arm. This allows the staff to quickly give you medicine and fluids, and to remove blood samples for testing. The IV in your neck will be removed within the first 2 days.

- You will have an incision on your sternum. Depending on the type of surgery, you may also have an incision on your arm(s) or leg(s). The dressings over these incisions will be changed after 48 hours, and then daily.
• You will have chest tubes below your sternal incision. These tubes help to drain extra fluid from the surgical area. The tubes generally remain in place for 1-2 days, depending on the amount of drainage.

• You will have a catheter tube in to drain urine from your bladder. The catheter will be removed when you are drinking well and draining enough urine (usually within 1-2 days).

• Your family may notice that your face, hands, feet, and/or legs appear swollen. This swelling is normal and happens because of the fluid that is given during the surgery. The amount of swelling may increase over the first couple of days after surgery. It will decrease by the time you are ready to go home.

• A physiotherapist will help you with different exercises (breathing and coughing, arm, and leg). He or she will help you to sit up at the side of the bed. It is important to move around as much as you can, and as soon as you can after surgery.
Pain Control

While you are in the CVICU, the nurses will give you pain medicine through your IV lines, until you are able to take it by mouth. In the first 24 hours, you will be given pain medicine regularly around the clock. After that, the nurse will ask you if you need pain medicine on a regular basis.

You will be asked to rate your pain on a scale from 0 - 10. “0” means you are feeling no pain and “10” means you are having the worst pain that you can imagine. Our goal is to keep your pain at “3 or less” at all times. We want you to be able to cough and move with relative comfort as you recover. If you are in too much pain, you will not be able to breathe fully or perform the exercises we will be giving you.

You will rate your pain using a scale like the one above. Let the nurse know the number, the intensity, the colour, OR the facial expression that best describes the pain you are having when moving or breathing deeply.

To help control your pain and healing, do not lift, push, or pull anything that weighs more than 10 pounds. We will encourage and assist you to splint your chest when coughing, sneezing, or laughing. You will receive a pillow after your surgery to help splint your sternum at all times. Hugging this pillow keeps your elbows into your body during activity. This will help to ease the pain, and protect your sternum.
Exercises in Hospital

Exercises are an important part of your recovery. In the CVICU, and throughout your hospital stay, the staff will teach you to complete breathing, arm, and leg exercises. They will also show you how to get out of bed while still protecting your sternum.

Breathing Exercises using the Incentive Spirometer

The staff will instruct you how to use the incentive spirometer when you sit at the side of the bed for the first time.

- Make a firm seal on the mouth piece and take in a slow, relaxed deep breath using your diaphragm. Try not to shrug your shoulders.
- Make sure you do not cover the holes at the bottom of the columns with your finger.
- Hold your breath for as long as you can. Then release.

You are encouraged to perform deep breathing 10 times every hour while you are awake for the duration of your stay in hospital.
Ankle Exercises

You will perform these while you are still in bed and then later when you are sitting in a chair. You should perform these every hour while you are awake.

**Up and Down:** Move your foot to point your toes towards your shin, and then move your foot to point your toes to the ground. Complete this action 5 times with each foot.

**Circles:** Make a circle moving your foot to the left, and then make a circle moving your foot to the right. Complete 5 circles in each direction. Repeat with the other foot.

Arm Exercises

**Shoulder Shrugs:** You can do this while sitting in a chair or standing. Circle your shoulders backwards and then forwards. Repeat this 5 times in each direction.

## Protecting your Sternum

### Sternal Precautions for Heart Surgery Patients who have had a Sternotomy

Your sternum is a large bone down the middle of your chest. If the surgeon has made an incision through your sternum during your surgery, this is called a **sternotomy**. This incision and the bone will need 3 months to heal completely. Moving around puts a lot of strain and pressure on this area. You will need to protect this area as it heals.

Follow these precautions for **6 weeks** to help your sternum to heal properly.

<table>
<thead>
<tr>
<th>Make sure that you <strong>DO</strong>:</th>
<th>Make sure that you <strong>DO NOT</strong>:</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Hug your chest with your pillow when coughing, laughing, and sneezing.</td>
<td>✗ Use your arms to assist with getting into or out of the bed or chair.</td>
</tr>
<tr>
<td>✓ Hug your chest with your pillow when changing position.</td>
<td>✗ Lift or carry your chest tube drainage box.</td>
</tr>
<tr>
<td>✓ Hug your chest with your pillow when rolling over.</td>
<td>✗ Tie the back of your own gown.</td>
</tr>
<tr>
<td>✓ Roll your body without pulling with your arms.</td>
<td>✗ Put both hands behind your back at the same time.</td>
</tr>
<tr>
<td>✓ Use your legs to adjust your position.</td>
<td>✗ Extend either arm behind your back beyond your shoulder.</td>
</tr>
<tr>
<td>✓ Raise only one arm at a time above your head.</td>
<td>✗ Lift both arms over your head at the same time.</td>
</tr>
<tr>
<td>✓ Complete your exercises as directed in the “Heart Surgery” guide and as directed by your physiotherapist.</td>
<td>✗ Lift or move the furniture in your room.</td>
</tr>
<tr>
<td>✓ Lean forward and use your legs to stand up.</td>
<td>✗ Lift, push, or pull anything that weighs more than 10 lb.</td>
</tr>
<tr>
<td>✓ You may move your own wheelchair if necessary using your feet.</td>
<td>✗ Lay on your side when in bed.</td>
</tr>
<tr>
<td>✓ Lay on your back when in bed.</td>
<td></td>
</tr>
</tbody>
</table>

**Please Note:** For **3 months** – NO heavy lifting and NO activities with large arm movements (e.g. golfing, swimming, etc.)
Protecting Your Sternum

In order to protect your sternal incision and sternum, it is important to follow these steps when changing positions. The idea is that you limit using your arms to move yourself around as much as possible. This will decrease your pain and prevent injury to your sternum.

Getting Out of Bed

- Raise the head of bed to a 20-30° angle.
- Hug your pillow to your chest.

- Move close to the edge of the bed.
- Bend your knees up and roll over onto your side.
- Bring your legs over the edge of the bed. Push (a little) with the elbow that is against the bed to help you sit up.
- Use your legs to help you – push them against the side of the bed as you sit up.

- Sit on the side of the bed and rest for at least 30 seconds to make sure you are not dizzy.
- Stand up.

Getting Into Bed

- Make sure the head of the bed is raised to a 20-30° angle to make it easier.
- Hug your pillow to your chest.
- Stand squarely in front of the side of bed. Feel the bed with the back of your legs.
- Lean forward - take a small ‘bow’ and lower yourself slowly to the bed.
- Sit on the edge of the bed.

- Lower your shoulder and head to the pillow while staying on your side.
- Lift 1 leg at a time onto the bed.
• When both legs are on the bed – Roll onto your back and position yourself straight in the bed.

Getting Up from a Chair

• **Hug your pillow** to your chest.
• Wiggle yourself forward with your hips to sit closer to the edge of the chair (or bed).
• Place your feet shoulder width apart with knees bent before you stand.

• Rock forward 3 times, bringing your “nose over your toes” while counting to 3.
• Stand up using your legs on ”3”.

Sitting down in a chair

• **Hug your pillow** to your chest.
• Stand squarely in front of the chair. Feel the chair with the back of your legs.

• Lean forward - take a small ‘bow’.
• Slowly lower yourself to sit on the chair.
When you arrive in your room on the Cardiac Surgery unit (3 West), you will see this board hanging in the room. We call this “Your Journey Home Board”.

This board will tell you and your family:

- The current date
- Your nurse’s name
- Your nurse practitioner’s name

Each day, your nurse and nurse practitioner will use this board to review the progress you are making towards going home. They will also review the expected activities, as well as the planned teaching topics for the day. This will help keep you and your health care team on track for ensuring that you are properly prepared to go home after surgery.
The First Day after Surgery

- Your breathing tube has been removed. Your throat might be a little sore. You will receive oxygen by nasal prongs or face mask. This will make sure you have enough oxygen to support the activities we ask you to do.

- Nurses will continue to monitor your heart rhythm and vital signs regularly.

- You will have blood work, an ECG, and a chest X-Ray done.

- The physiotherapist will help you with your breathing exercises. He or she will help you to sit up at the side of the bed and to transfer from the bed to a chair for your meals.

- You will complete your breathing exercises 10 times in each hour while you are awake.

- Your nurse will ask you regularly about your pain level and give you medicine for pain control. Your pain should be well-controlled at a level of 3 or less out of 10. Please ask for pain medicine if your pain level is higher than this.

- You will start taking sips of clear fluid at first. You will progress to a Healthy Heart diet when you can tolerate solids.

- The post-op team will teach and support you as you begin to return to normal everyday activities.

- You may be ready to go for your first walk in the hallway.

- The IV in your neck and one of the lines in your arm will be removed before you transfer to the Cardiac Surgery unit.

- The chest tubes may be removed today.

- You may be ready to transfer to the Cardiac Surgery unit (3 West) today.

If you or your loved ones have any questions or concerns, please remember to ask the staff about them.
The Second Day after Surgery

• You will be weighed before breakfast.

• The nursing staff will continue to complete thorough assessments and check your blood pressure, pulse, and temperature.

• Your nurse practitioner (NP) will complete a full physical assessment and discuss your progress with you and your family. Your NP will update the plan on the “Your Journey Home Board” to keep you and your family informed.

• You will continue to wear a portable heart monitor.

• The oxygen will be decreased as you recover. It will be removed when your lungs are fully expanded and you are up and walking.

• You will complete breathing exercises 10 times in each hour while you are awake.

• Your nurse will ask you regularly about your pain level and give you medicine for pain control. Your pain should be well-controlled at a level of 3 or less out of 10. Please ask for pain medicine if your pain level is higher than this.

• Your nurse will change all dressings. If there is no drainage, the incisions will be left open to the air.

• Your chest tubes may come out today.

• You will continue to progress to a Healthy Heart diet when you can tolerate solids.

• Staff will help you to:
  o Wash up and brush your teeth.
  o Sit in a chair for all your meals.
  o Walk in the halls at least 3 times today.

• The staff will discuss the plans for going home and give you a possible discharge date as they fill out the "Your Journey Home Board" near your bed. The staff will make sure you have the supports in place and that you are fully prepared for the day you go home.

If you or your loved ones have any questions or concerns, please remember to ask the staff about them.
The Third Day after Surgery

- You will be weighed before breakfast.
- The nursing staff will continue to complete thorough assessments and check your blood pressure, pulse, and temperature.
- Your nurse practitioner (NP) will complete a full physical assessment and discuss your progress with you and your family. Your NP will update the plan on the “Your Journey Home Board” to keep you and your family informed.
- You will have blood work taken.
- You will continue to complete breathing exercises 10 times in each hour while you are awake.
- Your nurse will ask you regularly about your pain level and give you medicine for pain control. Your pain should be well-controlled at a level of 3 or less out of 10. Please ask for pain medicine if your pain level is higher than this.
- You should be tolerating solid foods and eating a Healthy Heart diet.
- You will continue to sit in a chair for all of your meals.
- You will walk in the hallway at least 3 times today. The staff will let you know if you should have help to walk, or if you are safe to walk alone.
- Staff will help you to have a shower as soon as you are medically stable to do so.
- The “Your Journey Home Board” near your bed, will be updated so you and your family will know what to expect on that day.

If you or your loved ones have any questions or concerns, please make sure you speak with staff about them.
The Fourth Day after Surgery

- You will be weighed before breakfast.
- The nursing staff will continue to complete thorough assessments and check your blood pressure, pulse, and temperature.
- Your nurse practitioner (NP) will complete a full physical assessment and discuss your progress with you and your family. Your NP will update the plan on the “Your Journey Home Board” to keep you and your family informed.
- You will have blood work and an ECG done today. This will help monitor your progress toward going home.
- You will continue to complete breathing exercises 10 times in each hour while you are awake.
- Your nurse will ask you regularly about your pain level and give you medicine for pain control. Your pain should be well-controlled at a level of 3 or less out of 10. Please ask for pain medicine if your pain level is higher than this.
- You will continue to eat a Healthy Heart diet.
- You will continue to sit in a chair for all meals.
- Increase your activity daily. You will walk in the hallway at least 4 times today.
- The physiotherapist or nurse will help you to walk up a flight of stairs today.
- Your pacemaker wires may be removed today. The pacemaker wires must be removed before you can go home.
- The “Your Journey Home Board” near your bed, will be updated so you and your family will know what to expect on the day.
- You may go home today if your condition is stable. You will be given a prescription for your medicines. The nurse will provide some teaching to you and your family, to prepare you to go home.

If you or your loved ones have any questions or concerns, please make sure you speak with staff about them.
The Fifth Day after Surgery

- You will be weighed before breakfast.
- The nursing staff will continue to complete thorough assessments and check your blood pressure, pulse, and temperature.
- Your nurse practitioner (NP) will complete a full physical assessment and discuss your progress with you and your family. Your NP will update the plan on the “Your Journey Home Board” to keep you and your family informed.
- You may have blood work done.
- Your nurse will ask you regularly about your pain level and give you medicine for pain control. Your pain should be well-controlled at a level of 3 or less out of 10. Please ask for pain medicine if your pain level is higher than this.
- You will continue to eat a Healthy Heart diet.
- You will continue to sit in a chair for all meals.
- Increase your activity daily. You will walk in the hallway at least 5 times today.
- The physiotherapist or nurse will help you to walk up a flight of stairs today, if not done yesterday.
- Your pacemaker wires may be removed today. The pacemaker wires must be removed before you can go home.
- The “Your Journey Home Board” near your bed will be updated so you and your family will know what to expect on the day.
- You may go home today if your condition is stable. You will be given a prescription for your medicines. The nurse will provide some teaching to you and your family, to prepare you to go home.
- If you have had valve surgery, you may have to stay in the hospital longer. The dose of the medicine to prevent blood clots may need to be adjusted for your valve protection.

If you or your loved ones have any questions or concerns, please make sure you speak with staff about them.
Medicines

It is important that you understand when and how to take each medicine before you go home. The nurse will give you a medicine schedule. The schedule will guide you in which medicine to take, how much, and when.

It is very important that you fill your prescription the day you go home. You may not be on all of the same medicines or doses that you were on before your surgery. Your community pharmacist can make sure you only have the medicines you should continue to take. Please take all of your home medicines with you when you are getting your prescription filled. They should be in their original containers.

Do not start taking herbal, naturopathic medicines, or vitamins without talking to your family doctor or nurse practitioner (NP). Some of these products can interact with your prescription medicines, or change how they work.

The nursing staff will provide teaching about your medicines each day when you receive your pills. Our goal is for you to understand why you are taking each medicine and how it will work in your body. If you would like more information, please ask to speak with the clinical pharmacist. After you leave the hospital, your community pharmacist is another valuable resource for medicine information.

If you require a refill of your medication, please contact your family doctor or nurse practitioner.
How Do I Know I am Ready For Home?

☐ You are able to walk with or without a rollator walker

☐ You have completed enough stair climbing to access the needed areas of your home.

☐ You are able to shower with minimal help or supervision.

☐ Your pain is well-controlled.

☐ You have had a bowel movement.

☐ Your heart rate and rhythm have been stable.

☐ You have a good oxygen level.

☐ Your blood pressure is within normal range.

☐ You have a normal temperature.

☐ You are eating a Healthy Heart diet.

☐ Your incisions are healing well.

☐ Your blood work results are within expected range.

☐ You have viewed the Preparing for Home video

☐ You have received teaching about your medicines, blood work, and follow-up appointments from your nurse.
Cardiac Rehabilitation

Before you leave the hospital, staff will talk to you about taking part in a Cardiac Rehabilitation program after you go home. This program can help you achieve and maintain a heart-healthy lifestyle.

The program offers education and support to encourage heart-healthy habits. These habits will help you reduce your risk of a future cardiac event. The program team will work with you to improve your heart-healthy behaviours.

For patients in the Waterloo-Wellington region:

While in the program you will benefit from:

- Full cardiac assessment
- Group education classes
- Individual education
- Exercise stress test
- Personalized exercise prescription
- A 4 month Supervised physical fitness programs
- Nutrition counseling
- Smoking cessation advice
- Stress coping strategies

You can begin the classroom part of the program about 6 weeks after your surgery. You will likely leave hospital with an appointment date and time for this. The program will mail you a letter that confirms the date(s) and gives directions to the program location.

If your classroom sessions did not get booked before you left hospital, please contact:

**St. Mary’s General Hospital Cardiac Rehab**
50 Bathurst Dr., Waterloo, ON. N2V 2C5
**Phone: (519) 885-9517**

**Website:**

For patients outside of Waterloo-Wellington region:

If you are from outside the area, you will be given information about a program close to your home.
Is This Normal?

Why am I depressed or sad?

After the surgery, you will have “up and down” days. You may feel that progress is slow at times. It is normal to feel down, weepy or depressed at times. You may find it is difficult to concentrate. Feelings of sadness, irritability, fear, or anxiety are also common. Talk openly about your feelings with your family members and the health care team. Talking about your emotions will allow the staff and your family to help you to cope with them.

You may have these feelings for up to 6 to 8 weeks. Speak with your family doctor or nurse practitioner (NP) if your depressed feelings:

- Last longer than this.
- Start to interfere with your relationships.
- Interfere with your ability to do your everyday activities.

Why am I so tired?

After surgery, you may feel exhausted. This may be due to being less active, lack of sleep, medicines, or the surgery itself. Remember to increase your activity level gradually and rest when you are tired. This will help you regain your strength faster.

After heart surgery, each person will have a different level of energy. In hospital, the nurses and physiotherapist will help you to build up your level of activity. You will need to continue to build up your level of activity when you go home.

You may not feel you are more energetic each day. Judge your energy level weekly. Each week, you should feel as though you have more energy than the last. It is normal for it to take at least 4 weeks to gain back your energy.
Why do I have trouble falling asleep or staying asleep?

After heart surgery, some people have trouble falling asleep or staying asleep. Some people find they wake early in the morning. This change in sleep pattern can be caused by:

- Medicines you received during the surgery
- Pain or discomfort in the recovery period
- Anxiety
- Need to urinate more often during the night (also due to medicines)
- Vivid dreams

Your doctor or NP can prescribe pain and sleeping medicine to help you get a good night’s sleep. These problems with sleep may persist for up to 6 months. If you need a prescription renewed for pain or sleeping medicine, please see your family doctor or NP.

Why am I not having regular bowel movements?

After heart surgery, some people have bloating in their belly, rectal discomfort, or constipation. Constipation can be caused by:

- Narcotic medicines to control pain
- Lack of physical activity
- Dehydration
- Low intake of fibre in your diet

Symptoms may last until you are back to your normal activities. Your doctor or NP can prescribe stool softeners and laxatives to help promote regular bowel movements. If you need a prescription renewed for stool softeners or laxatives, please see your family doctor or NP.
Incisional Care

Whether your incision is on your sternum, arms, or legs, the care at home is the same.

- Shower daily.
- Wash over the incisions by allowing unscented soap and water to flow over them.
- DO NOT use a wash cloth directly on your incisions.
- Rinse the incisions completely.
- Pat the incisions dry with a clean towel.
- DO NOT soak the incision under water for 1 month. Avoid soaking in the bathtub, swimming, or using a sauna.
- DO NOT apply any creams, lotions, or vitamin E to your incisions.
- DO NOT leave the tape strips on longer than 10 days. If they fall off before 10 days, do not worry. You can leave them off. On post-op Day #10, remove any tape strips gently and slowly. Soak them off with warm water if needed.

It is **normal** that your incision may be:

- Slightly red and sore
- Uneven or bumpy
- Itchy
- Bruised or slightly puffy
- Numb or tingly in some areas
- Draining a small amount of clear, yellow fluid

**Radial (Arm) Graft Protection:**

- You should not have blood pressure or blood sample(s) taken from the affected arm for 6 months.
- You will be on specific medicine for 6 months to prevent spasm of the radial artery.

**Contact your Family Doctor if:**

- Your incision becomes warm to the touch, more swollen or reddened, or if it is draining more than usual.
- You have a temperature higher than 38° C (100.4° F), twice in a 24 hour period.

**Contact your Surgeon if:**

- You have new or widening gaps from the edges of your incisions.
- You feel or hear a “clicking” sound in your chest when you move your arms, cough, or sneeze.
Physical Activity

How to Manage With Low Energy after Heart Surgery

A balance of physical activity and rest is vital for your recovery. Too much physical activity will leave you exhausted and prevent healing. Too much rest can prevent your heart and muscles from getting stronger. Listen to your body. Balance your activity with your rest breaks.

When you go home, you will not have your usual energy level. Begin your physical activity at home at the level you were in the hospital. Set realistic goals for yourself. Follow the “Home Activity guidelines” in this book on pages 51, 52 and 53.

It is all about balance.
Use the 4 “P’s” to help manage your energy level.

<table>
<thead>
<tr>
<th>Plan</th>
<th>Pace</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan your day, your week, and your activities. Remember to schedule in rest breaks between your activities for balance. Be realistic about your energy level. STAIR CLIMBING is an active form of exercise. Plan your day to reduce how often you need to climb stairs. If you live on the main floor of your home but your only bathroom is upstairs, you may need to get a commode or urinal to reduce stair climbing when you first go home.</td>
<td>Pace yourself. You should be able to talk and breathe comfortably during your activities. Do not rush. Pace your activities by putting in many rest breaks.</td>
</tr>
</tbody>
</table>

| Prioritize |
| Make yourself and your activities a priority. Decide what is important for you and your recovery. Make yourself the priority so that you can heal and... |

| Position |
| Position your body in the most comfortable posture during an activity. This will reduce the energy you burn up. If you can sit to do the activity you will burn up less energy and you will be less tired when you are done. The energy you save can be used for another task. When SHOWERING, you may want to sit on a bath chair rather than stand. |

STOP

Stop any activity, including your exercises, if you develop:

- Chest pain that is similar to what you felt before surgery.
- Racing or fluttering heart beat with shortness of breath or feeling unwell.
- Difficulty breathing that does not get better with rest.
- A “clicking” feeling in your sternum (breast bone) when you move your arms, cough or sneeze.

If you develop any of these or other symptoms, refer to your “Symptoms after Heart Surgery” sheet for direction about who to contact for medical attention.
Exercises After Surgery

The physiotherapist has been involved in your recovery while you were in hospital. The following exercises are meant to help you as you continue on the road to recovery.

As you work through them, you should feel a gentle stretch in the muscles and joints. You should not feel any sharp pain. Begin by performing each exercise 5 times. As you are able, gradually increase to 10 times for each exercise, 2 to 3 times per day. Continue to perform these exercises until you see your surgeon.

Sitting in a comfortable chair, with your feet resting on the floor:

1. Neck Tilts

While looking straight ahead, slowly side-bend your neck so that your left ear moves toward your left shoulder. Repeat on your right side.

2. Neck Rotation

Turn your head slowly and look over your left shoulder. Repeat for the right side.

3. Elbow Circles

Touch your right shoulder with your right hand. Raise your elbow to shoulder level. Draw a large circle slowly with your elbow, first forwards and then backwards. Do not go past the midline. Repeat with your left elbow.
Sitting or standing with your feet shoulder width apart:

4. **Forward Arm Lifts**

Raise your right arm forward and above your head, then bring it back down to your side. Repeat same using your left arm.

5. **Sideways Arm Lifts**

Raise your right arm out to your side with your palm facing up. Raise your right arm above your head. Breathe in as you raise your arm and breathe out as your lower your arm. Repeat same using your left arm.

6. **Trunk Side Bends**

Place your feet shoulder width apart. Slowly slide your right hand down towards the floor, keeping your back straight. Return to your starting position and repeat, bending towards your left.

7. **Hand behind Back**

Reach with your left hand behind your back at your waist. Reach your hand up towards your shoulder blades. Repeat with your right hand.
# Home Activity Guidelines

**Beginning Level Activity – Weeks 1 to 2 at Home**

<table>
<thead>
<tr>
<th>Activity</th>
<th>May Do</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Showering</strong></td>
<td>Tabular entry 1</td>
<td>Tabular entry 2</td>
</tr>
<tr>
<td></td>
<td><strong>Shower daily</strong></td>
<td><strong>Very hot or cold water</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Use mild, unscented soap</strong></td>
<td><strong>Soap in a bath, hot tub or swimming</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Rinse shampoo away from incision(s).</strong></td>
<td><strong>Perfume, strongly scented soap</strong></td>
</tr>
<tr>
<td><strong>Household Activities</strong></td>
<td>Do only light duties such as dusting, setting table, or simple meal preparation</td>
<td><strong>Lifting greater than 5 to 10 pounds (if you had a sternotomy)</strong></td>
</tr>
<tr>
<td><strong>Recreational Activities</strong></td>
<td>Visit for short periods</td>
<td><strong>Heated discussions or arguments</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Enjoy sitting activities handcrafts, reading, TV, movies, playing cards</strong></td>
<td><strong>Long visits</strong></td>
</tr>
<tr>
<td><strong>Rest</strong></td>
<td><strong>A balance between physical activity and rest is crucial</strong></td>
<td><strong>Too many visitors – limit them to 1 or 2 per day</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Plan at least 2 rest periods each day, 30 to 60 minutes each</strong></td>
<td><strong>Visitors or distractions when you should be resting</strong></td>
</tr>
<tr>
<td><strong>Driving and Traveling</strong></td>
<td><strong>You may ride in a car</strong></td>
<td><strong>Driving</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Wear your seatbelt – it is the law.</strong></td>
<td><strong>Out of country travel</strong></td>
</tr>
<tr>
<td></td>
<td><strong>If the car has airbags in front of the passenger seat, sit in the back seat</strong></td>
<td><strong>Get medical travel insurance before leaving the province</strong></td>
</tr>
<tr>
<td></td>
<td><strong>For trips longer than 1 hour, get up and stretch your legs every hour</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Breathing Exercises</strong></td>
<td><strong>Breathing exercises 4 times per day, or as instructed</strong></td>
<td><strong>Do not exercise when you are feeling ill or tired</strong></td>
</tr>
<tr>
<td><strong>Post-op Exercise</strong></td>
<td><strong>5 times for each exercise, 2-3 times per day</strong></td>
<td><strong>Do not exercise outside during extreme weather conditions: hot or cold, wind, or high humidity</strong></td>
</tr>
<tr>
<td><strong>Walking &amp; Stairs</strong></td>
<td><strong>Walk in a shopping mall during bad weather</strong></td>
<td><strong>Slow your pace when walking up a hill or against the wind</strong></td>
</tr>
<tr>
<td></td>
<td><strong>You may climb stairs – plan your day so you don’t have to go up and down too often</strong></td>
<td><strong>Avoid hot showers or a sauna before or just after you exercise</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Take your time and rest as needed</strong></td>
<td><strong>Avoid heavy meals within 1 hour of exercising</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Walk 15 minutes, 2-3 times per day</strong></td>
<td><strong>When walking outside, do not walk the dog on a leash</strong></td>
</tr>
</tbody>
</table>
## Home Activity Guidelines

### Intermediate Level Activity – Weeks 3 to 4 at Home

<table>
<thead>
<tr>
<th>Activity</th>
<th>May Do</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Showering</strong></td>
<td>![Checkmark] Shower daily</td>
<td>![X] Sternal precautions still apply</td>
</tr>
<tr>
<td></td>
<td>![Checkmark]</td>
<td>![X] No sitting in the bottom of a tub</td>
</tr>
<tr>
<td><strong>Household Activities</strong></td>
<td>![Checkmark] Some household activities such as making the bed, dusting, or preparing meals</td>
<td>![X] Lifting greater than 5 to 10 pounds (if you had a sternotomy)</td>
</tr>
<tr>
<td></td>
<td>![Checkmark]</td>
<td>![X] Strenuous arm activities such as hammering, vacuuming, heavy scrubbing, or washing windows</td>
</tr>
<tr>
<td><strong>Recreational Activities</strong></td>
<td>![Checkmark] Visit friends</td>
<td>![X] Avoid strenuous upper arm activities such as golfing, raking, or bowling</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Take brief shopping trips and short outings</td>
<td>![X] Avoid strenuous upper arm activities such as golfing, raking, or bowling</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Putting a golf ball</td>
<td>![X] Avoid strenuous upper arm activities such as golfing, raking, or bowling</td>
</tr>
<tr>
<td><strong>Rest</strong></td>
<td>![Checkmark] Gradually shorten rest periods</td>
<td>![X] Avoid strenuous upper arm activities such as golfing, raking, or bowling</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Rest after meals and activities</td>
<td>![X] Avoid strenuous upper arm activities such as golfing, raking, or bowling</td>
</tr>
<tr>
<td><strong>Driving and Traveling</strong></td>
<td>![Checkmark] Check insurance coverage with your insurance company before leaving the province</td>
<td>![X] Driving until you see your cardiac surgeon</td>
</tr>
<tr>
<td></td>
<td>![Checkmark]</td>
<td>![X] Driving until you see your cardiac surgeon</td>
</tr>
<tr>
<td><strong>Post-op Exercise</strong></td>
<td>![Checkmark] 10 times for each exercise, 2-3 times per day</td>
<td>![X] Driving until you see your cardiac surgeon</td>
</tr>
<tr>
<td><strong>Walking &amp; Stairs</strong></td>
<td>![Checkmark] Continue to progress your walking program</td>
<td>![X] Do not exercise when you are feeling ill or very tired</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Walk 2 to 3 times per day for 30 minutes</td>
<td>![X] Do not exercise outside during extreme weather conditions: hot or cold, wind, or high humidity</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Walk in a shopping mall or indoors during bad weather</td>
<td>![X] SLOW your pace when walking up a hill or against the wind</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] May continue to climb stairs</td>
<td>![X] Avoid hot showers or a sauna before or just after you exercise</td>
</tr>
<tr>
<td></td>
<td>![Checkmark]</td>
<td>![X] Avoid heavy meals within 1 hour of exercising</td>
</tr>
<tr>
<td></td>
<td>![Checkmark]</td>
<td>![X] Do not use a treadmill until instructed to at Cardiac Rehabilitation program</td>
</tr>
<tr>
<td><strong>Sexual Activity</strong></td>
<td>![Checkmark] May resume if can comfortably walk up 2 flights of stairs (24-30 steps).</td>
<td>![X] Avoid if tired or tense</td>
</tr>
<tr>
<td></td>
<td>![Checkmark] Report the following symptoms to your doctor: chest pain during or after sex, palpitations, increased heart rate or shortness of breath lasting longer than 15 minutes after intercourse</td>
<td>![X] Avoid putting strain on your upper body</td>
</tr>
</tbody>
</table>
## Home Activity Guidelines

### Upper Level Activity – Weeks 5 to 6 at Home

<table>
<thead>
<tr>
<th>Activity</th>
<th>May Do</th>
<th>Avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Showering</strong></td>
<td>✅ Shower daily</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Household</strong></td>
<td>✅ Gradually resume all household activities</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>✅ Alternate strenuous with light tasks</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Recreational</strong></td>
<td>✅ Activities as instructed by Cardiac Rehabilitation team</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Activities</strong></td>
<td>✗ Avoid use of arms in large swinging motion for 3 months to allow the sternum to heal (e.g. golfing, swimming)</td>
<td></td>
</tr>
<tr>
<td><strong>Driving and</strong></td>
<td>✅ May drive short distances if cleared by your cardiac surgeon</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Traveling</strong></td>
<td>✅ May travel out of the country as long as your insurance will cover you. Check with your insurance company for coverage.</td>
<td>✗ Avoid heavy lifting</td>
</tr>
<tr>
<td><strong>Post-op</strong></td>
<td>✅ 10 times for each exercise, 2-3 times per day</td>
<td>✗ Avoid hot showers or a sauna before or just after you exercise</td>
</tr>
<tr>
<td><strong>Exercise</strong></td>
<td>✗ Avoid heavy meals within 1 hour of exercising</td>
<td>✗ Avoid prolonged walking in extreme weather conditions</td>
</tr>
<tr>
<td><strong>Walking &amp;</strong></td>
<td>✅ Continue to progress your walking program</td>
<td>✗ Avoid if tired or tense</td>
</tr>
<tr>
<td><strong>Stairs</strong></td>
<td>✅ Extend your walk to 1 hour, once per day</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Walking &amp;</strong></td>
<td>✅ Slow your pace when walking up a hill or against the wind</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Walking &amp;</strong></td>
<td>✅ Walk in a shopping mall or indoors during bad weather</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Walking &amp;</strong></td>
<td>✅ May continue to climb stairs</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Sexual</strong></td>
<td>✅ May resume if can comfortably walk up 2 flights of stairs (24-30 steps).</td>
<td>✗ Avoid tired or tense</td>
</tr>
<tr>
<td><strong>Activity</strong></td>
<td>✗ Report the following symptoms to your doctor:</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Return to</strong></td>
<td>✅ The length of time you will be off work depends on the type of job you have. Discuss the proper time to return to work full-time at your follow-up visit with the cardiac surgeon. Generally it is after 6 weeks.</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
<tr>
<td><strong>Work</strong></td>
<td>✅ The length of time you will be off work depends on the type of job you have. Discuss the proper time to return to work full-time at your follow-up visit with the cardiac surgeon. Generally it is after 6 weeks.</td>
<td>✗ Avoid putting strain on your upper body</td>
</tr>
</tbody>
</table>
Healthy Heart Diet

Food choices and eating habits can affect your blood pressure, blood cholesterol levels and belly fat. You can help manage the risk factors by following a healthy heart diet.

The 5F’s will help get you started on your Healthy Heart Diet:

**Fats**

*Trans fats* can damage your arteries. Choose heart healthy fats such as unsalted nuts/seeds, olive and canola oil and non-hydrogenated margarine. Choose skinless poultry, lean meats, along with low fat dairy products such as skim or 1% milk more often.

**Fish**

Certain types of fish are high in omega-3 fat. Omega-3 fats have many benefits in heart health. Enjoy fish such as salmon, herring, sardines, and trout 2-3 times per week.

**Fruits and Vegetables**

Fruits and vegetables are high in fibre and a great source of vitamins and minerals. Aim for 4-5 servings of fruits and 4-5 servings of vegetables every day. ½ cup = one serving.
Choosing high fibre foods is good for your heart and overall health. Choose legumes, 100% whole grain breads, nuts, seeds, high fibre cereals, pastas, and brown rice.

Portion control is the key. Practice moderation and balance – keep food portions in check! To help you make better food choices throughout the day and maintain healthy food portions:

- Eat at regular times
- Avoid skipping meals.

Aim to have balanced meals by filling ½ of your plate with vegetables, ¼ of your plate with meat, and ¼ with a whole grain.

While you are in hospital, you will receive further heart healthy diet information. If you have specific concerns, a dietitian is available for individual teaching. Comprehensive diet teaching and an individual assessment will be provided in the cardiac rehabilitation program.

If you have questions about your diet or need to speak to a dietitian after you go home, contact:

Eat Right Ontario  
www.ontario.ca/eatright  
1-877-510-5102

For other diet information and heart-healthy recipes, check out the Heart and Stroke Foundation of Canada website:

www.heartandstroke.com