A Patient and Family Guide to
Heart Surgery
Welcome to Providence St. Peter Hospital Regional Heart Center

We welcome you and your family to the Providence St. Peter Hospital Regional Heart Center.

Our team of physicians, nurses, caregivers and support personnel strive to provide each patient with the highest quality and safest medical care. We believe that each patient is an active participant in their care and should know what to expect with heart surgery. We also recognize that family and friends play an important role in recovery. That is why we developed this heart surgery guide for patients and families. We want you and your family to understand what care you'll be receiving before, during and after your surgery. We encourage all of you to ask questions and express any concerns you may have during your stay.

Our dedicated team is here to serve you.
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Your Heart
Coronary Artery Disease

Coronary arteries supply oxygen-rich blood to the heart. When damage occurs to these arteries, plaque may build up within the artery walls — a process known as atherosclerosis. Plaque is a fat-like substance in the blood made of cholesterol. As plaque builds up, arteries can narrow or become completely blocked, decreasing the flow of oxygen-rich blood to the heart. Plaque can also tear and cause a blood clot to occur, which may lead to complete blockage of blood flow to the heart. Damage to arteries can be caused by a number of risk factors, which are listed on this page.

Angina

When arteries become narrow and cannot supply the heart with enough oxygen-rich blood, symptoms can develop that are referred to as angina. Symptoms may include pressure, burning and tightness in your chest. You may also experience pain in your arms, neck, jaw and back. And shortness of breath, nausea, lightheadedness and sweating may occur, too. Angina can happen when the heart requires more oxygen — during activity, for example. Symptoms should go away with rest or prescribed medication. However, if symptoms persist, you may be having a heart attack.

Heart Attack or Myocardial Infarction

When arteries become severely narrowed or completely blocked, the heart does not receive enough oxygen-rich blood, causing irreversible damage to the heart muscle. This damage is called myocardial infarction — more commonly known as a heart attack.
Heart Valves

The heart is a muscle that pumps blood through your body. It has four chambers — an atrium and ventricle on the right side, and an atrium and ventricle on the left. The right side of the heart receives blood that is low in oxygen and delivers it to the lungs. The left side of the heart receives blood from the lungs, where it has picked up oxygen, and pumps this oxygen-rich blood into the body. In addition, your heart has four valves that help blood move through the heart chambers in one direction, while preventing it from leaking backwards. The valves on the right side of the heart are called the tricuspid and pulmonary valves. The valves on the left side are known as the mitral and aortic valves.

Heart Valve Disease

The valves most commonly affected by heart valve disease are the mitral and aortic valves. Rheumatic fever, birth defects, infection or damage to the heart muscle that controls the valve may prevent it from functioning normally. The valves may narrow, called stenosis, which limits blood flow through the valve. The valve may also leak, referred to as regurgitation, which allows blood to flow backwards through the valve. When valves do not work correctly, less blood is pumped through the heart, which has to then work harder to pump blood through the body. Eventually this can result in an enlarged heart and lead to heart failure.
Atrial Fibrillation and “Electrical” Problems

Specialized cells in the heart, called pacemaker cells, send electrical signals that cause the heart to pump. These cells and signals are part of the heart’s electrical system. Sometimes, however, this system can become damaged.

Coronary artery disease, birth defects, illness and damage to the heart can lead to problems with this electrical system. Damage can cause the heart to beat irregularly. One common irregular rhythm is atrial fibrillation, during which the heart may beat too fast, chaotically and irregularly. When this happens, the heart cannot pump enough blood to the body. For some patients, atrial fibrillation can be treated with surgery.

Types of Cardiac Surgery

**Coronary Artery Bypass Surgery (CABG)**
If you have coronary artery disease, your physician may decide that a CABG procedure is the best treatment for you. During a CABG, your surgeon will connect, or “graft,” a healthy artery or vein to the blocked coronary artery. The grafted artery or vein bypasses (goes around) the blocked portion of the coronary artery. This creates a new route through which blood can flow.

Arteries used for a graft are the internal mammary artery (located in the chest) and the radial artery (found in the arms). The vein used is called the greater saphenous vein (located in the legs). At Providence St. Peter Hospital, most CABG procedures are performed without a heart-lung machine. This type of procedure is called off-pump surgery and allows the heart to continue beating during surgery. Off-pump surgery lowers the risk of complications and leads to a quicker recovery.

**Heart Valve Repair or Replacement**
Your surgeon may repair your valve or replace it with a mechanical or tissue valve depending on your age, lifestyle and/or health.

**Modified Maze Procedure**
This procedure is performed as part of cardiac surgery and is a surgical treatment for atrial fibrillation. Scar tissue is created with radio waves or ultrasound energy to block the abnormal electrical signals that cause this rhythm problem.

**Other Defects**
Your physician may recommend cardiac surgery for other conditions that are not as common as those listed above. We will provide you information if your surgery is not listed.

**Endoscopic Vein Harvesting**
This is a minimally invasive procedure that involves making a small incision, or incisions, in the leg to access the saphenous vein to use for a graft during bypass surgery.
Preparing for Surgery
Preparing for Surgery

Admission

Depending on your medical condition, cardiac surgery may be done on an elective basis (meaning you don’t need it immediately). If this is the case, surgery will be scheduled in advance by your physician. However, if you have already been admitted to the hospital with an acute (very serious) cardiac condition, surgery will be done immediately or scheduled while you are in the hospital. In either case, it is important to plan ahead for your surgery whenever possible.

Planning Ahead

During your stay you will be seen by a discharge planner who will help you and your family plan for discharge (the time when you leave the hospital after surgery). However, we would like you to start planning even before you come to the hospital.

Please bring, or have a family member bring, a list of all medications you are currently taking, including over-the-counter and herbal medications. Your physician will need this in order to review all of your medications before you leave the hospital. Your surgeon, cardiologist, or primary care doctor may have asked you to not take certain medications before your surgery. Please include these on your medication list. You will also need to list when you last had a flu and/or pneumonia vaccine.

Your family or friends should plan to be available the morning of discharge. They will need to listen to discharge instructions, pick up any medication you may need, and drive you home. For at least the first week home (and possibly a second week, too), you will need someone to be with you all of the time, including at night. This may be difficult for family or friends, but you will need their help.

After surgery we will ask you to monitor your weight and temperature. If you do not have a scale or thermometer at home, please consider purchasing one. If you are unable to get a scale, let your nurse know in order to discuss options with you.

Smoking Cessation

- If you smoke, it is important that you stop before your surgery. Smoking will make your recovery more difficult.
- If you need help to stop smoking, your nurse can provide support and information and can contact the appropriate support services at your request.
- In compliance with federal and state laws, Providence St. Peter Hospital prohibits smoking by patients and visitors anywhere on the hospital campus.
Advance Directives

You will be asked if you have an advance directive when you are admitted to the hospital and, if yes, to provide a copy. Advance directives include two forms:

Durable Power of Attorney for Health Care
This is a written document allowing you to name a person who will make medical decisions for you if you are unable to do so.

Living Will
This is a written document that gives directions about your health care decisions if you are unable to communicate temporarily or permanently.

Advance directive forms are available at Providence St. Peter Hospital. If you need help in understanding these forms, we will contact members of the Spiritual Care Services staff who can talk to you about them.

Spokesperson

Your friends and family will want to know how you are doing during your stay. We recommend you select a spokesperson to be the primary person to talk with physicians and nurses. This person can then relay information back to family and friends, which allows us more time to focus on your care. While you are in the Critical Care Unit immediately after surgery, this will be especially important. Normally the person selected as your durable power of attorney for health care will also serve as your spokesperson.
Fall Prevention

Illness, medication and surgery can put you at higher risk of falling. We ask that you wear nonskid slippers that fit well. Do not get up on your own until your nurse or therapist has said it is OK to do this. We also ask that families and friends avoid getting you up until your nurse or therapist has given approval.

What to Bring

Please leave your valuables and medications at home. Pack a small bag of personal items and comfortable clothes to wear home. You will not need this bag during surgery, so have your family or a friend bring it after surgery if possible. Also, if you use a CPAP machine, please bring it with a record of your settings. And if you wear glasses, hearing aids or dentures, please put them in containers to bring with you, and we will provide a label. You will need these items in the morning before surgery begins, but we may ask your family to hold them for you during the actual surgery.
At Home Before Surgery

If your cardiac surgery is elective (not immediate), you will be scheduled for a pre-admission clinic appointment by your surgeon’s office. At this appointment a registered nurse will help prepare you for surgery and let you know where and what time to arrive on the day of your surgery. If you have not already had lab work drawn, an EKG, or a chest X-ray, this will happen during your appointment time. You will also be given antibacterial soap to shower with the night before surgery.

In addition, you may receive a heart pillow and instructions on how to splint your chest with it after surgery. You may also be introduced to an incentive spirometer, which is a tool used to help you take deep breaths after surgery. If you do not receive these items at your surgeon’s office, we will give them to you, along with instructions on using them, when you are admitted to the hospital.

In the Hospital Before Surgery

If you have already been admitted to the hospital, your nurse will offer you a selection of patient education videos on our Access TV, including one about cardiac surgery. We will instruct you on how to use the heart pillow for splinting your chest after surgery as well as how to use an incentive spirometer, which helps you take deep breaths after surgery. Your nurse will prepare you for surgery and have you clean with an antibacterial soap. It is important that you get a good night’s rest prior to surgery, so we may encourage visitors to leave early.

Important Information Before Surgery

- Do not eat or drink anything after midnight the evening before surgery. Brush your teeth with a small amount of water.
- Do not take any medication the morning before surgery unless prescribed by your surgeon. If this is the case, only swallow a small sip of water when you take the medication.
- Do not wear hairspray. Wear hair loose with no clips, barrettes or pins.
- Remove all makeup and nail polish before surgery.
- Remove jewelry such as wedding rings, watches and body piercings. Leave these items at home or have your family take them home.
- Shower with antibacterial soap the evening before surgery and wash your hair.
Day of Surgery
Day of Surgery

Preoperative Unit

If you are coming from home, go through the main entrance of the hospital and to the admitting desk. The admitting clerk will help you with the admission process. You will be taken to the preoperative unit. If you have already been admitted to the hospital, you will be taken to the preoperative area one to two hours before your surgery. You may have a limited amount of family or friends in this area for a short time.

Preparation for surgery will be done in the preoperative area. Hair may be clipped or shaved from your chest and arms. Your anesthesiologist, a doctor who uses medication to put you to sleep during surgery, will meet you and review your health history. The anesthesiologist will place special lines in your body in order to monitor you throughout surgery and give you medication. Once this has been done, your family and friends will be asked to wait in the surgical waiting area.

Operating Room

Once in the operating room, you may already be asleep. The anesthesiologist will give you general anesthesia – medicine that will place you in a deep sleep. Once the anesthesia takes effect, special tubes and lines will be placed in your body to help the anesthesiologist monitor you and give you medication during surgery. You will also have a tube that helps you breathe. Below is more information about the tubes and lines that will be placed in your body:

- An endotracheal tube is a breathing tube inserted in your airway through your mouth. This tube is connected to a breathing machine called a ventilator, which will breathe for you during surgery and for a short time afterward.
- A central line is a large intravenous (IV) catheter that is usually placed in your neck to monitor venous pressures and give you medications.
- An arterial line is a catheter placed in the radial artery at the wrist. It continuously monitors your blood pressure and draws blood samples for lab tests.
- A urinary catheter is a small tube placed through the urethra into your bladder. It is attached to a plastic tube and drainage bag that collects urine.
Day of Surgery (continued)

Family and Friends: Getting Through a Long Day of Waiting

- Please do not worry if surgery is taking longer than you expected. Even after you leave for the waiting room, preparation of your loved one for surgery continues.
- Visitors are asked to stay in a surgical waiting area where a nurse will check in with you regularly to keep you updated.
- Once surgery is done, the surgeon will look for you in the surgical waiting area to let you know how things went.
- After surgery it will take time for your loved one to transfer to the Critical Care Unit (CCU) and settle in. It is about one or two hours before visitors can see the patient. This is a good time for families to eat or get something to drink.
- Next to the CCU, there is a waiting area with a phone. Family members and friends can use this phone to check and see when their loved one is ready for visitors. A member of the Spiritual Care staff usually takes family back for the first visit.
- If you want to stay overnight while your loved one recovers in the hospital, affordable lodging is available at the Sunshine House. Located on the hospital campus, it is designed for families of those receiving medical treatment. We can provide information for you if you are interested.

Surgery

During surgery your cardiac surgeon will make an incision down your chest. Your breast bone, also called your sternum, will be divided in order for the surgeon to get to your heart. At the end of surgery, your sternum is wired back together and will heal. We will give you instructions to help with this healing process.

Your cardiac surgeon will also place some drains and lines in you during surgery to help with recovery. Note: For some patients, surgeons use minimally invasive surgical techniques, which are different than standard techniques. If this is the case for you, your surgeon will discuss this prior to surgery.

Following are explanations about other terms related to your surgery:

- Chest tubes are plastic tubes placed into your chest during surgery. They are connected to a plastic drainage system that drains fluid from the surgical area for a short time after surgery.
- Drains, such as a Blake drain and other small drains, will be placed in your incision to drain fluid produced the first few days after surgery. These drains are soft, small flexible tubes inserted through a very small hole in the skin. They may be placed in your arms and legs.
- Temporary pacemaker wires are small, thin wires placed on the surface of your heart and which exit from your skin. They are temporary and may be attached to a pacemaker for a short time.
- An arterial line to monitor your blood pressure will be placed in your wrist.
- A large IV, called a central line, will be placed in your neck to monitor pressures and give you medication.
- A tube that drains urine from your bladder, called a Foley catheter, will be placed in your urethra.
After Surgery
You will move to the CCU after surgery

The CCU nurses are trained to help you recover immediately after surgery. When you go to the CCU, you will still be asleep and you will have tubes and lines in your body. As you wake up, the endotracheal tube may still be in place. You will not be able to speak, but your nurse will anticipate your needs and will ask you “yes” and “no” questions.

Once you can breathe on your own, the breathing tube will be removed. This usually happens one to five hours after surgery, but will be different for each patient. When the breathing tube is out, your nurse will encourage you to take deep breaths and cough every hour. This is very important because it helps keep your lungs clear so you do not develop pneumonia.

It is normal to feel thirsty and have a sore throat after surgery. You will be able to have ice chips as soon as your nurse feels it is safe. You will then progress to a regular meal. Your nurse will be monitoring you to make sure your pain is under control and you are warm enough. We also monitor blood sugars on all patients after cardiac surgery, and you will notice your nurse poking your finger often to check your blood sugar. We do this because your recovery will be better if your blood sugar is kept in a normal range.

In the Critical Care Unit (CCU)

What Family Can Expect

- Once the patient is settled in the CCU, one to two visitors may visit for short periods. This is an important time to utilize a spokesperson, who can update other family members and friends.
- The patient will have many tubes and wires in the beginning after surgery.
- The patient may also still have a breathing tube. “Yes” and “no” questions are best in the beginning.
- There will be lots of monitoring equipment and alarms surrounding your loved one. The nurse will be working closely with the patient to remove these.
- The patient may look pale and puffy, and may still be tired or confused from anesthesia. This is all normal.
- The nurse will answer any questions you may have, so please do not hesitate to ask.
- Plants, flowers and balloons are not allowed in the CCU.
- We will ask you to wash your hands or use hand sanitizer when entering and leaving the patient’s room.
Once you are awake as well as sitting up and moving, you will be transferred to the Intermediate Care Unit (IMCU). The IMCU is a continuation of care from the CCU, and the nurses here are trained to take care of heart surgery patients. The nurses will work closely with you to help you recover and prepare you for discharge. They will continue to monitor and assess you often.

**Monitoring**

A portable cardiac monitor will be attached to your chest in order to monitor your heart rate and rhythm at all times. This is called telemetry and sometimes you will hear people refer to the IMCU as the telemetry unit.

The nurses will also be regularly checking your blood pressure, heart rate and temperature. You will have your blood drawn for lab tests and chest X-rays taken if needed. How much you drink and how much you urinate will be measured. This helps us, along with your daily weight, know how your heart and kidneys are doing. We will provide containers for you to urinate in, so we can measure your urine. We will also measure how much you drink by the number of glasses you are served, and we will remind you to tell us if you have had something extra to drink. We do not want to miss anything!

All cardiac surgery patients are on IV insulin for the first seventy-two hours after surgery. The nurses will check your blood sugar often. This may happen as often as every half hour if needed. If your blood sugar stays within a normal range, your recovery and healing will be better.

**Pain**

You may have pain medication every three to four hours. This medication is used to help control your pain and discomfort. It is important that pain is controlled so you can rest, deep breathe, cough and walk. It is best to request pain medication before your pain becomes too intense. To assess your pain and discomfort, your nurse will use a numeric pain scale. This helps the nurse know when it is time to give you pain medication as well as determine if the pain medication is working. A score of 0 means you have no pain, and a score of 10 means you have severe pain. We will instruct you on using your pillow to splint your chest to help with discomfort when moving and coughing.
Breathing
It is important to re-expand your lungs after surgery and keep them clear, which helps prevent pneumonia. This is why we will instruct you to deep breathe, cough and use your incentive spirometer every hour.

Chest Tubes and Drains
These tubes and drains will be removed as soon as your drainage/leakage is minimal. This is usually within the first few days after surgery, but can be different for each patient.

Urinary Catheter
This will be removed the first or second day after surgery. We try to remove it as soon as possible to prevent infection. We will monitor you closely to make sure you can urinate without problems after the catheter is out.

Activity
An important part of recovering is getting up and moving. Your sternum is healing, so the nurses and therapists will instruct you on how to protect your sternum while you move and do everyday activities. They will also help you increase your activity level and will take several short walks with you each day. Because activity is very important, the nurses and therapists will be monitoring this closely and updating your physician on your progress. If you or your family has concerns, please let us know.

Diet and Appetite
You will have a special diet ordered by your physician. Our nutrition and dietetics department offers Cascade Cuisine room service for each meal. You may order your meals when you are ready. The nurse will ask you to call her before you eat so she can assist you and check your blood sugar. You may find that your appetite is poor. This happens and makes it sometimes difficult to eat.

Nutrition is an important part of recovery, so we will encourage you to eat a little at each meal. The nurses will check to see if you have ordered and will assist you in placing your order if needed. Your family is welcome to get a tray from the Cascade Cuisine cafeteria and join you. Located on the second floor of the hospital, the cafeteria is open from 6:30 a.m. to 8:00 p.m.

Sleeping
You will need frequent rest periods during the first days after surgery, but we will encourage you to limit your sleep during the day so you can sleep at night. Monitors and interruptions from staff, as well as a strange environment, can prevent you from getting a good night’s sleep. Our staff will make every effort to limit noise and interruptions. If you have problems sleeping, please tell us so we can help.

Constipation
This can be caused by anesthesia, inactivity, changes in fluid intake and medication. We monitor this closely while you are in the hospital and give you a stool softener. If needed we will give you a laxative. We also want you to communicate with us and let us know if you have not had a bowel movement before discharge.
Going Home
Discharge from the hospital
Discharge Planning

Discharge planning should start before surgery

If you plan on returning home right after surgery, you will need someone with you all of the time for the first one or two weeks. This includes at night, too. The person driving you home will need to be available the morning of discharge, and you will need someone to fill medication prescriptions for you the day you leave the hospital. If you wear oxygen at home, you will need to have your portable oxygen available for your ride home.

During your stay in the hospital, a discharge planner will visit you and help you plan for your discharge. We encourage you and your family to ask questions. If any of you have concerns, please let us know. Your healthcare team will work together to identify and anticipate any special needs you might have. They will communicate these to you and your discharge planner.

Each patient and family is unique and may have different challenges and needs. By identifying these early, we can help you have a successful and smooth discharge. We have also included information in this notebook about common concerns as well as home care. We will provide you with written discharge instructions and a written discharge medication list before you leave the hospital. We will place these documents here in this notebook, in the “Important Information” section.

Discharge Checklist

☐ Do you have a ride that can be at the hospital before 11 a.m. on the day of discharge?

☐ Do you have someone who can fill your medication prescriptions the day of discharge?

☐ Do you have someone who will be with you all of the time for the next one to two weeks, including at night?

☐ Do you have medical equipment at home that needs to be at the hospital before discharge (such as portable oxygen)?

☐ Do you have a scale and thermometer at home?

☐ Do you have comfortable clothes and nonskid shoes to wear home?
What to Expect When You Leave the Hospital

Common Concerns

Recovery is gradual and may vary from person to person. Despite these differences, there are some common issues patients will likely experience. They include:

Mood swings
It is normal to have mood swings after surgery. Some people describe this as having “up and down” days. Other people say they feel very emotional, and they cry or get frustrated easily. These feelings are not uncommon and improve as you recover.

Things that will help you deal with mood swings include adequate sleep, nutrition and support. However, if you are feeling continuously down for two or more weeks, talk to your physician.

Sleeping and Rest
Sleep and rest are an important part of recovery. When you first return home you will find that everyday things, such as bathing and getting dressed, make you tired. You may even feel like sleeping if you become overtired.

To avoid feeling overly tired, spread your activities throughout the day and plan to take frequent rest periods in between them.

Do not sleep during these rest periods. Instead take a short nap in the middle of the day. This way you can start restoring your normal sleep pattern, which may have been disrupted after surgery.

Trouble sleeping at night or only being able to sleep for a couple hours at a time is common. This will improve as you restore your normal sleep pattern. General discomfort can contribute to not sleeping well. In this case, taking your pain medication prior to going to bed is recommended.
Pain and Discomfort
Mild to moderate discomfort is normal for a few weeks after surgery. Remember to take your pain medication throughout the day and at bedtime if needed. If you have little or no pain, you do not need to take your pain medication. However, don’t wait until you are in a great amount of discomfort before taking pain medication.

Normal discomfort that you may experience after cardiac surgery includes muscle pain or tightness in your shoulders and upper back, between your shoulder blades. A heating pad set on low may help this, but do not place it on your incisions.

It is important to not let discomfort limit your activity. Pain medication in the first few weeks will help you with discomfort as you gradually increase your activity.

Patients whose internal mammary artery was used during surgery may experience numbness and tingling on the side of their chest, which may feel uncomfortable but will gradually improve.

Appetite
Temporary changes in your sense of smell and taste may cause you to have a poor appetite for several weeks after surgery. Adequate nutrition to heal is important, so do not skip meals. Instead try to eat small, frequent meals throughout the day.

Constipation
After heart surgery you may have problems with your bowel function. Pain medication and inactivity can contribute to this. As you increase your activity and get back to a normal routine, this will improve. If constipation is a problem you may take a stool softener or laxative.

High-fiber foods such as fruits, vegetables and whole grains will help to prevent constipation, if your diet allows.

If you go multiple days without having a bowel movement and this is different from your normal pattern, or if you have nausea and vomiting with constipation, call your physician.

Swelling
It is not uncommon to have swelling in your legs after you leave the hospital, especially if you had veins removed from your legs during surgery. Elevate your legs two to three times daily. Normally a recliner is not adequate for this. Instead, rest by lying on a couch or bed with your feet elevated on pillows. Avoid sitting in one position for long periods of time. Also avoid crossing your legs, because this affects circulation. If the swelling does not improve, or becomes worse, let your surgeon know.
Discharge Instructions

Medications

At the time of discharge, you will receive a written list of what medications you should take after you leave the hospital. For any new medications, you will get a written prescription. These prescriptions should be filled at the time of discharge because you will need to take medication the evening you return home. It is important that you do not take medications that are not listed on your discharge list. We make every effort to review all medications you were taking before admission. Some of these will be discontinued by your surgeon because of changes due to heart surgery. If you were taking a medication before surgery that is not on the list now, and you think you should still be taking it, call your doctor or let us know before you leave the hospital.

Breathing

For the first week after leaving the hospital, continue to do the deep breathing exercises you were shown in the hospital. Using the incentive spirometer, take ten slow, deep breaths. Do this four to six times daily. As you continue doing this, you’ll notice you can take deeper and deeper breaths as you go.

As you take deep breaths, cough and clear your lungs. Remember to support your chest with your heart pillow when you cough. This helps lessen the movement of your sternum as it heals. If you do not have your pillow nearby, cross and press your hands against your chest.

Daily Monitoring

Daily Weight
Keeping track of your weight each day helps to monitor for fluid retention. Weigh yourself each morning before you get dressed and before you eat breakfast, but after you have gone to the bathroom. If you gain two or three pounds in a twenty-four hour period, call your surgeon. Keep track of your daily weight and bring this information to your first doctor's appointment.

Daily Temperature
Taking your temperature once a day helps to monitor for infection. Take your temperature in the afternoon. Wait fifteen minutes after you’ve had something to eat or drink, otherwise it will not be accurate. If your temperature is more than 101.5 degrees F, call your surgeon.
Walking

Walking will help you regain your strength and improve your health. Start out at your own pace and take at least four short walks a day. Increase the length of your walks as you are able. Once you reach thirty minutes, you can reduce the number of walks. You should be able to take deep breaths and speak in short sentences while you are walking. If you can’t, slow down or take a break.

Other items to remember when you are walking:

- Warm up by walking slowly in the beginning of your walk and gradually increasing your pace.
- Walk on a level surface to start, and wear comfortable nonskid shoes.
- Walk outside when you can, avoiding extremely hot or cold temperatures.
- Use caution if there is smoke or other environmental hazards that could cause shortness of breath.
- You may climb stairs and hills unless your physician has told you not to.
- Shortness of breath or excessive fatigue are signs of overexertion. Slow down your pace if this is the case.
- Stop any activity immediately if you feel severe shortness of breath, chest pain, dizziness or notice irregular heartbeats. If the symptoms do not subside within ten minutes, notify your physician.

Gradually you will feel stronger and will be able to return to normal activities.
Sexual Activity

Sexual activity can resume when you feel comfortable. For many people this is about two to four weeks after going home. If you have concerns about this, do not be afraid or embarrassed to ask your physician.

Driving

Driving may be resumed three weeks after surgery. Until then, you may ride as a passenger and wear your seatbelt. If you are driving for long distances, stop the car every hour and walk around for 10-15 minutes. This is to prevent blood clots from forming in your legs.

Lifting

Your sternum (breast bone) takes time to heal. During this time you need to take precautions so you do not place strain on your sternum. Avoid lifting, pushing or pulling 10 pounds (about the weight of a gallon of milk) after surgery for six weeks. This means you’ll need to avoid many common activities such as vacuuming, moving furniture, mowing the lawn, carrying children or carrying groceries.

You may move your arms as normal in order to do activities such as shampooing your hair and washing your body. Light housekeeping, dusting, doing dishes or setting the table are also OK as long as they do not strain the sternum. After six weeks you can increase how much you lift, push or pull by 5 pounds a week, as long as you are comfortable and your surgeon has given you the OK.

Initially after surgery you may hear an occasional clicking noise or feel a clicking sensation in your chest. As your sternum heals, this will disappear – usually within two weeks. If it continues, or gets worse, let your surgeon know.

Work

It usually takes about six weeks before you can return to work. However, this may vary from person to person. Check with your physician before returning to work.
# Daily Activities Chart

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Incision Care

If you notice any of the following signs and symptoms regarding your incision, you need to call your doctor:

- Increased redness or swelling around the edge of an incision
- Increased tenderness or pain at the incision sites
- New or increased drainage from incisions
- Skin edges pulling apart and gaping open at the incision line
- A temperature over 101.5 degrees F

Daily Care

The day after you get home remove all dressings. The thin narrow paper strips that cover some of your incisions are called steri-strips. Leave these on until they fall off on their own.

Use soap and water to wash all incisions on your chest, arm and legs, including the areas where any tubes were located. Showering is preferred. Do not sit or soak in a bath tub. Avoid vigorous scrubbing of the incisions. Pat incisions dry with a clean towel. Continue this until all incisions are healed and then you may resume your normal routine.

If there is no drainage/leakage from an incision, that incision may be left uncovered. If you do see drainage, cover the incision with sterile gauze after you shower. Remove dressings daily when you wash your body, and then replace them with new gauze if needed. If you have a very small incision that is leaking, it is OK to use a band-aid as long as it covers the incision.

Do not apply any lotions, creams, oils or powders on your incisions unless prescribed by your surgeon. Keep your incisions protected from overexposure to sunlight during the first year after surgery. They can sunburn easily.
Who to Call When

Urgent Problems

The surgeon’s office number is 360.493.4510.

After office hours and on weekends, the same number will connect you to an answering service that can reach the surgeon on call when needed. If you experience any of the problems listed here, call your surgeon.

- Weight change of 2 to 3 pounds in 24 hours
- Increased leg and ankle swelling
- Extreme fatigue
- Persistent, frequent harsh coughing
- New or increasing shortness of breath
- Sudden weakness or dizziness
- Persistent nausea, vomiting or diarrhea
- Temperature higher than 101.5 degrees F
- Incisions that are reddened, swollen or warm to the touch
- New or increased leakage from an incision
- Persistent bleeding from an incision
- You become confused or you, or your family, think you are behaving differently than when you left the hospital
- You have a rapid heart rate, greater than 120 beats but less than 150, that does not slow to a normal rate of 60-100 beats after five minutes of rest

Who to Call When

Needs Immediate Attention

If you experience any of the problems listed here, go to the emergency department or call 9-1-1.

- Sudden numbness, especially on one side of your body
- Fainting spells
- A sudden severe headache
- Severe shortness of breath that is not relieved after five minutes of rest
- Chest pain, tightness or discomfort that is similar to your pain before surgery (angina-like), and not incisional pain
- A heart rate faster than 150 beats per minute, especially if you are also short of breath or having chest pain
- Coughing up bright red blood
Cardiac Rehabilitation

Cardiac rehabilitation helps patients recover to a full and active life after heart surgery.

**Phase I**
Treatment begins in the hospital when patients are recovering from a heart attack, surgery or other cardiac problem. A cardiac rehabilitation nurse will see you while you are in the hospital. Minimal activity and education are the focus.

**Phase II**
Soon after patients leave the hospital, our cardiac rehabilitation staff works with them to improve endurance and overall health through closely monitored exercise and classes.

**Phase III**
Maintaining heart health and preventing further problems is the goal of Phase III rehabilitation. Exercise plans are based on each patient’s goals, needs and health status.

**Phase IV**
Many patients continue to participate in rehabilitation for months and even years after a heart attack, surgery or other treatment. In fact, some Phase IV patients have been involved in our program for more than 10 years, participating in weekly classes and continuing to gain valuable insights from our dedicated, caring staff.

Our full range of cardiac rehabilitation services help patients:
- Gain confidence
- Get much-needed emotional support
- Rebuild strength and stamina
- Learn to work within their limits
- Enjoy life

For more information, call our Cardiac Rehabilitation program at 360.493.7050.

It is important to lead a heart healthy lifestyle to reduce your risk for cardiac problems in the future. The American Heart Association recommends seven factors that improve health and quality of life.

- Do not smoke
- Maintain a healthy weight
- Engage in regular physical activity
- Eat a healthy diet
- Manage blood pressure
- Take charge of cholesterol
- Keep blood sugar, or glucose, at healthy levels
Diet and Nutrition Tips for Heart Surgery Recovery

When you are discharged, you will receive a written diet. For most patients this will focus on a diet with limited fat, low cholesterol and no added salt. However, many of our patients have other medical conditions, so your diet will be specific to your needs. Depending on your situation, a registered dietitian may talk to you while you are in the hospital, or we may recommend you see a certified diabetic educator. We encourage that you and your family members ask any questions you may have about diet and nutrition.

In addition to helping with your overall recovery, nutrition is an important part of incision healing. It is particularly important to include high-protein foods in your meals, which are key in helping your wound heal. You should eat at least four small meals per day in order to heal and regain your energy. Although your appetite may be poor at first, it will improve with time.

Below are general guidelines for the amount of protein you need each day, based on your weight:

- 110-130 pounds ........................................................ 60-70 grams
- 140-160 pounds ........................................................ 75-80 grams
- 170-190 pounds ...................................................... 90-100 grams
- 200-220 pounds .................................................... 110-120 grams
- 230-250+ pounds .................................................... 125+ grams

Healthy Lifestyle (continued)

Our goal as a cardiac team is to not just care for you while you are in the hospital, but also to help ensure you have a healthy future.

We will provide education about a heart healthy lifestyle and provide you with handouts on smoking cessation, cholesterol, diet, blood-sugar control and other issues you may be facing. In addition, you will be visited by a cardiac rehabilitation nurse while you are still in the hospital.
Healthy Lifestyle (continued)

Mended Hearts

Mended Hearts is a nonprofit support organization for people with heart disease, including individuals recovering from heart attacks, angioplasty or open heart surgery, and their families. With your permission a member of Mended Hearts will stop and see you while you are in the hospital.

For more information about heart healthy nutrition, please visit our web site at:


Once you’re there, go to the Heart Surgery section.
Important Information