



WELCOME TO **South Texas Health System**

Thank you for trusting us with your care. This manual will help you learn more about your heart and the procedures and treatments you will receive while you are at our facility. Our goal is to help you understand how to take good care of your heart and to provide you with information on staying healthy when you return home.

This guide is yours to keep and use throughout your recovery. It contains valuable information; we encourage you to use it while you are admitted and at home following your discharge.

The physicians at South Texas Health System encourage you and your family to ask questions and voice concerns about your condition and your treatment. This guide includes sections where you can write your questions so that you can remember to share them with your heart team. There is also room to write their answers and responses down so you will have that information available to you at any time.

The physicians at South Texas Health System are committed to helping you be an active participant on your road to recovery and to keeping you healthy after your discharge. We look forward to working together with you and your family now and in the future.



Section 1: Open Heart Surgery A Day-to-Day Checklist

The day before surgery.

The day before your scheduled procedure, you can expect the following:

- ✓ A pre-surgery assessment, blood work, ECG and chest X-rays will be performed and the staff will review your health history.
- ✓ You will receive written information about your scheduled procedure.
- ✓ You may watch a video about open heart surgery.
- ✓ You will meet with a nurse who will review your procedure and you can ask questions about what to expect while you are admitted and about your recovery.
- ✓ The staff will instruct you on the importance of deep breathing, coughing and using an incentive spirometer.
- ✓ The anesthesiologist or a member of the surgical team may meet with you, or this visit may occur on the day of surgery.
- ✓ The evening before surgery, you may take a shower.
- ✓ If you smoke, you will be asked to dedicate yourself to not smoking again.

The day of surgery.

The day your surgery is scheduled, you can expect the following:

- ✓ You will have to skip breakfast so your stomach is empty.
- ✓ You will be taken to the operating room and the staff will prepare you for surgery.
- ✓ Family, friends and visitors will be asked to stay in a waiting room during the procedure.

The surgical procedure.

You can expect the following during and after your surgery:

- ✓ Surgery can last 3 to 6 hours.
- ✓ You will recover in the Intensive Care Unit (ICU), where the cardiac staff will monitor you closely.

- ✓ The surgeon will meet with your family after your surgery and update them.
- ✓ When you wake up, you will have tubes connected to you so the staff can monitor your conditions. The tubes may include:
 - A breathing tube inserted in your mouth (you will not be able to talk while this is in place).
 - Drainage tubes in your stomach, chest and bladder.
 - Intravenous tubes in your neck and arms.
 - Wires on your chest.
- ✓ Your hands may be restrained so that you do not dislodge the tubes.
- ✓ The heart team will turn you from side to side every few hours to help prevent bedsores.
- ✓ You will be asked to remain as calm as possible when you are awake.
- ✓ The breathing tube will be removed as soon as you can breathe on your own and follow commands.

The first 24 hours after surgery.

During the first 24 hours following surgery, it will be important to do the following:

- ✓ Breathe deeply.
- ✓ Cough.
- ✓ Use the incentive spirometer.
- ✓ Let the nurse know if you are in pain.
- ✓ Dangle your feet over the edge of the bed, with help from the nursing staff.
- ✓ Sit up in a chair and walk short distances, with assistance from the staff.
- ✓ Remain calm when the tubes are removed.
- ✓ Wear support stockings that aid in blood circulation in your legs.
- ✓ Drink fluids a few hours after the breathing tube is removed and move to a heart healthy eating plan.
- ✓ Allow the nurse to bathe you and clean your incisions.
- ✓ Get out of bed at least three times during the first 24 hours after surgery.

The second day following surgery.

As recovery continues, the staff will increase your activity level, in addition:

- ✓ Oxygen may be decreased.
- ✓ Continue to cough, breathe deeply and use the incentive spirometer.
- ✓ Sit in a chair for meals and take a walk at least four times a day.
- ✓ Avoid crossing your legs.
- ✓ More tubes may be removed.
- ✓ Dietary restrictions may be removed and you will begin a regular heart healthy diet.
- ✓ Remember to let the nurse know when you are uncomfortable.

The third day following surgery.

As recovery continues and you get stronger, you will become more active:

- ✓ You will be asked to walk with assistance at least four times a day for two to three minutes each time.
- ✓ You must continue to cough, breathe deeply and use the incentive spirometer up to 10 times each hour.
- ✓ You will be asked to hold a pillow to your chest when you cough or sneeze to support and protect your chest and the incision.
- ✓ The staff will review home needs, including diet, medications, outpatient cardiac rehabilitation and other physical activities.
- ✓ The cardiac team will answer questions you have about your recovery and discharge, including special needs and support systems.
- ✓ Let the staff know if you are in pain.
- ✓ Monitoring equipment and medical tubes will continue to be removed.
- ✓ You may be discharged from the Cardiac Care Unit to another unit in the facility.

The fourth day after surgery through discharge.

As your recovery progresses, you will begin to feel stronger:

- ✓ You will be asked to walk farther and more often, using good posture and deep breathing.
- ✓ Continue to cough, breathe deeply and use the incentive spirometer 10 times each hour.
- ✓ Continue to hold a pillow to your chest when you cough or sneeze to support your chest and protect the incision.
- ✓ Monitor your pain and let your nurse know if you need pain medication.
- ✓ Your discharge planning will continue and the cardiac team will prepare you for discharge and review diet and exercise requirements.
- ✓ You may see a video, "Preparing for Discharge."
- ✓ You will schedule a follow-up appointment with the surgeon and the cardiologist.
- ✓ Depending on your rate of recovery, you may be discharged on the fourth day after surgery or shortly after that.

Your discharge.

Sometime on or after the fourth day following your surgery, you will be sent home. You will be reminded to:

- ✓ Make sure you have a thermometer and a scale at home to monitor your temperature and weight.
- ✓ Practice getting in and out of a chair or bed safely, using precautions to protect the surgery site and the incisions.
- ✓ Use the incentive spirometer and continue to hold a pillow when you cough or sneeze.
- ✓ Take prescribed medications. It is important to purchase your medications from the same pharmacy to ensure there are no dangerous drug interactions.
- ✓ Develop an ongoing recovery plan that includes attending your follow-up appointments.
- ✓ Participate in an outpatient cardiac rehabilitation program when the doctor recommends it.

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:



Section 2: The Cardiac Team

Surgeon*: Performs your heart surgery and will follow up on surgery-related concerns during your recovery.

Cardiologist/Internist*: Provides advanced diagnostic services and treatments that help predict, diagnose and treat your cardiac condition.

Registered Nurse: Monitors, plans, implements and evaluates your care, provides patient education and coordinates your care with members of the cardiac team. Certified nursing assistants (CNAs) may assist registered nurses in providing your care.

Cardiac Nurse: Provides education, discharge planning and information on the importance of cardiac rehabilitation in increasing your strength and stamina and in enhancing your heart health.

Case Manager: Provides counseling and education, helps plan for your discharge and ensures a support system is in place to respond to your needs and ensure your safety, comfort and successful recovery at home.

Surgical Team: Supports and assists the surgeon during the surgical procedure and includes anesthesiologists, surgical nurses, physician's assistants and medical technicians.

Respiratory Therapist: Directs you in developing proper breathing techniques using mechanical ventilators, oxygen therapy, inhaled medications and breathing exercises to help avoid complications, such as pneumonia.

Physical Therapist: Supports your physical recovery and teaches you techniques to build strength and endurance. Therapists work with nurses to help you get out of bed and walk and instruct you on proper movement techniques to support healing.

Registered pharmacist: Provides medications prescribed by your physicians, ensures medication safety related to drug interactions and answers questions about medications and dosages.

Registered Dietician: Works with you and your caregivers to ensure you are getting the nutrition you need to recover properly and provides education on good eating habits.

Pre-Admissions Nurse: Evaluates you prior to your surgical procedure and helps you prepare for your surgery so you will know what to expect.

Financial Counselor: Assists with coordinating medical insurance benefits and responds to concerns and questions you have about insurance coverage or claims.

Chaplain/Spiritual Leader: Provides spiritual guidance and support while you are in the facility.

You (and Your Family or Caregivers): Important members of your care team that provide personal support before surgery and after your discharge from the facility.

For your information.

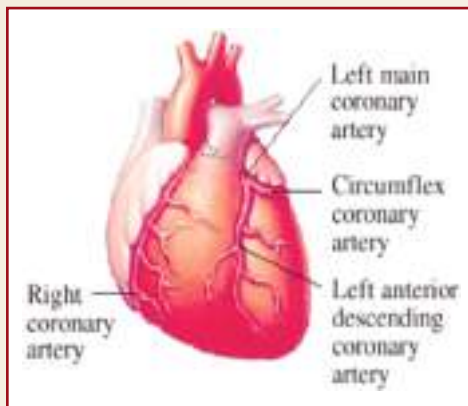
Questions or concerns while in the facility or at home?

Notes/Things to remember:

* Physicians are not employees or agents of this facility.



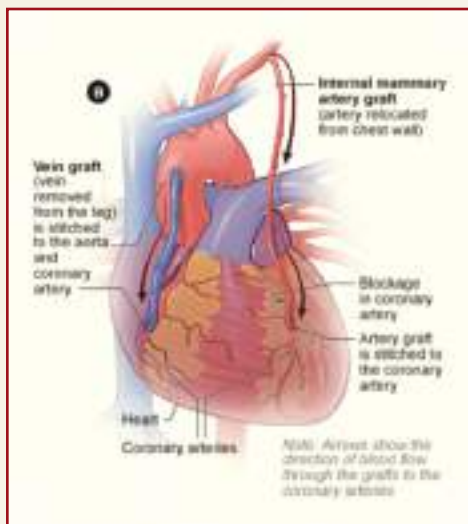
Section 3: What is Heart Surgery?



Heart Bypass Surgery

When coronary arteries that supply the heart with blood become blocked, the blockage can disrupt the flow of blood and oxygen to other parts of the body. Symptoms of a blockage may include pressure in the chest, weakness and pain down an arm.

When there is a blockage, bypass surgery may be recommended.

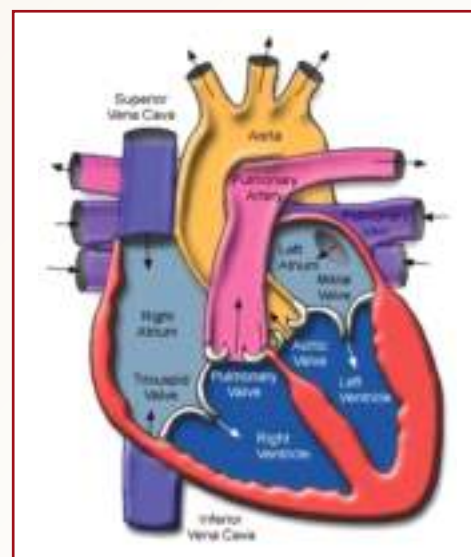


Bypass surgery involves taking a vein from the leg or an artery from the chest wall and attaching it to the coronary artery below the blockage. This allows the blood to detour or bypass the blockage through a new artery and reopens the flow of blood to the heart. If the heart artery blockage is in the front of the heart, the surgeon may be able to use an artery from the chest wall. If the blockage is in another area of the heart, a vein from the leg may be used and two or three short incisions will be made on the leg to remove a vein.

Heart Valve Surgery

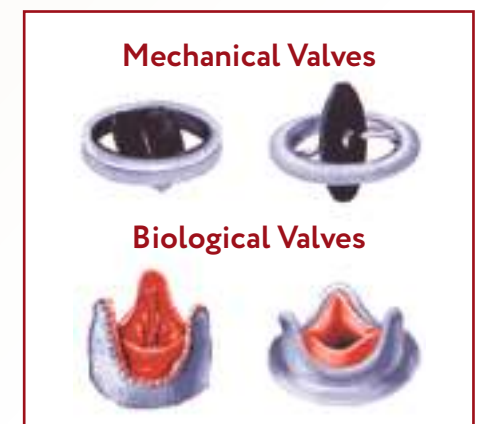
There are four one-way valves in the heart that enable the blood to flow through the heart. If a valve malfunctions and does not open or close properly it must be repaired or replaced.

Heart valve surgery allows surgeons to repair or replace damaged valves using either human or animal tissue or a mechanical device. Your surgeon will discuss options with you and make a recommendation on which procedure is best for you.



Depending on the type of surgery and valve used, you may require ongoing medication management to reduce the formation of blood clots.

Following valve repair or replacement surgery, you may experience an irregular heartbeat, which can be regulated with medication. If your heart rhythm slows following surgery, a temporary pacemaker may be connected until your heart muscle heals.



Precautions after Heart Surgery

Initially, you will recover in the Intensive Care Unit (ICU) or Cardiac Care Unit (CCU). You will not be allowed visitors until you are settled in your room. You will have tubes, intravenous and monitors connected following the surgery and every effort will be made to remove them as soon as you are stable. These include:

- A breathing tube in your mouth. When you can follow commands and breathe well on your own, the breathing tube will be removed. This may happen as early as a few hours after surgery.
- A drainage tube inserted below your ribs. This tube may be in place for a few days and will be removed when there is no further drainage at the incision site.
- Intravenous (IV) in your neck measures pressure around the heart and monitors the amount of fluid you need. This IV will remain in place up to two days.
- A catheter to drain your bladder, which will remain in place up to two days.
- It is common to utilize a pacemaker to help regulate the heartbeat. Pacer wires may be inserted into the heart at the time of your surgery and a temporary pacemaker may be connected. The wires will be removed as soon as they are no longer needed.
- A catheter or port in your wrist is used to measure your blood pressure and to draw blood for lab work. The port may remain in place for two days.

In addition to the equipment needed to monitor your physical condition, support equipment may include:

- A warming blanket
- An intra-aortic balloon pump – if required your cardiac team will explain its use in depth.

Stability and Mobility following Surgery

You will be monitored continually throughout your recovery. The medical devices will be removed as soon as you are stable. Our goal is to have you sit upright as quickly as possible, often within a few hours after the breathing tube is removed. We will ask you to sit on the side of the bed until you build your strength and endurance enough to sit in a chair. Our goal is to have you sit in a chair three times each day for a period that could last as long as 90 minutes. As your strength and stamina increases, we will help you take short walks. A few days after your surgery, you will begin walking with assistance. Our goal is to walk with you at least four times each day. More frequent, shorter walks are better than one or two longer walks.

You will be instructed to hug a pillow to your chest when you cough, sneeze or move. The pillow supports your chest, protects the incision and lessens the discomfort you may have.

If you are uncomfortable or feel pain or pressure, let your nurse know. The cardiac team will ask you to rate your pain or discomfort on a 10-point scale. Let the team know if the pain level increases at any time so that you can receive pain medication.

Nutrition following Surgery

When the breathing tube is removed and you can swallow, you may have ice chips. The day after your surgery, you may begin a liquid diet and slowly advance to a regular, heart healthy diet.

Sternal Precautions

Surgeons opened your chest bone, or sternum, to perform your cardiac surgery. To protect the incision and allow the bone to heal properly, your care team will teach you proper movement techniques and other ways to help you heal safely.

Remember to hug the pillow you were given after your surgery. The pillow will keep the chest and incision safe as they heal. It may take six to eight weeks for the bone to heal. Consult your physician before resuming physical activity of any type.

Following are guidelines to follow that may promote healing:

1. Do not raise your elbows above your shoulders for four weeks after surgery.
2. Do not lift more than 10 pounds (the weight of one gallon of milk).
3. Do not push or pull anything with your arms, including a vacuum or broom.
4. Do not use your arms as a support for your weight as you stand or sit for the first two to four weeks after surgery.

5. Do not stretch or reach your arms to the side of your body.
6. Always use the log roll technique to get into and out of bed.
7. Use your cardiac heart pillow for support when you cough, sneeze, or laugh.
8. Avoid any motion that puts a strain on your arms or chest.
9. Do not reach over your head or bend down to pick up any object. If you have pets or small children, sit so that they can climb onto your lap on their own. Do not bend down to pick them up.

Special Care after Heart Surgery

After surgery, it is important to breathe as deeply as possible and fill your lungs completely. Nurses will assist you in the use of a spirometer, which you will use to measure your breathing and oxygen volume. You may use the spirometer 10 to 12 times each hour while awake for **six weeks after your surgery**. To use the spirometer, exhale and breathe out all of your air. Put the spirometer mouthpiece in your mouth and breathe in, as if you are using a straw. Take a slow deep breath.



Coughing is essential because it helps prevent pneumonia and keeps the lungs clear. Patients often avoid coughing because it can be painful; however, it is important in your recovery because it helps prevent problems. When you cough remember to hug your pillow, then take two deep breaths in through your nose and out through your mouth. Then take a third deep breath in and cough while you are breathing out. Deep breaths strengthen and deepen the cough.

Hug your pillow any time you sneeze or laugh or when you stand or sit for the first few weeks following surgery. This will help support your chest so that it does not hurt as much. Remember to breathe when you move, walk, sit or stand. Holding your breath will make your chest hurt more.

For your information.

Questions or concerns while in the facility or at home?

Section 4: Diabetes and Your Recovery

Diabetes or high blood sugar can increase the risk of complications after surgery. Infection in the incision area is more common when a person's blood sugar is higher than 180mg/dL. Proper diet, weight and exercise can help prevent complications.

Medication

After you leave the facility, you must take all medications prescribed by your physician, including diabetes medication. It is helpful to establish a routine that enables you to manage your medications. Use the daily log included in this manual or keep your own log with blood sugar measurements.

Blood Glucose Monitoring

A fasting blood sugar level should be 80 to 130 mg/dL and less than 180 mg/dL two hours after the start of a meal. Keep a daily record of your blood sugar and share the results with your doctor or endocrinologist. Discuss blood sugar goals and targets with your doctor before you leave the facility.

Diet

The following recommendations can help you heal faster:

- Eat well-balanced meals that include a variety of foods, such as fresh fruit and vegetables, protein (preferably broiled or grilled chicken or fish) and whole grains.
- Limit foods with high fat content, saturated fats and trans fats (red meat, dairy products and processed foods). Read food labels for fat content. Use cooking sprays, skim milk and low fat cheese.
- Limit foods high in cholesterol, such as red meat and shellfish.
- Restrict sodium intake to 1500 mg each day and do not add salt to food. Food that is canned contains high amounts of sodium, read labels for sodium content.

Exercise

- Exercise and physical activity can help lower blood sugar. Always check your blood sugar level before and after exercise.

- Check with your surgeon, cardiologist and physician before starting an exercise program. Your physician may recommend an outpatient cardiac rehabilitation program and will provide important information about precautions and safety.
- When your doctor says that it is okay to exercise, choose an activity that you enjoy and start slowly. Do not lift anything heavier than 10 pounds or reach up with your arms over your head for the first six weeks following your procedure.

FAQs

When should you call your doctor?

1. Review the reasons listed in Section 9, "When to call your doctor."
2. If you are vomiting or have diarrhea that lasts more than six hours.
3. Any time your temperature is higher than 100.4 during the first six weeks after your procedure.
4. If it has been longer than six weeks since your procedure and your temperature is above 100.4 for two days and you do not think you are getting better.
5. If your blood sugar stays higher than 180mg/dl for seven days.
6. **If your blood sugar is higher than 500mg/dl, seek immediate medical attention.** (American Diabetes Association)

In case of an emergency, call 911 or get to the nearest emergency room.

Remember to keep all follow-up appointments with your primary doctor, your heart surgeon and your diabetes specialist. You should make an appointment with each of these doctors within the first weeks following your procedure.

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:

Section 5: Common Medications Taken After Surgery

Following is a list of common medications that your physicians may prescribe:

- **Ace inhibitor or ARB:** to control blood pressure and congestive heart failure. Ace inhibitors have many different names, but often end with “**pril.**” ARB or angiotensin receptor blockers also have different names and often end with “**artan.**”
- **Anticoagulant:** to reduce blood clots, often called a “blood thinner.” Individuals who undergo heart valve replacement or repair surgery or who have irregular heart rates may take an anticoagulant. If your doctor prescribes an anticoagulant you will need regular blood tests to monitor the effects of the medication. Diet can affect blood levels and you will have to follow dietary precautions when you take this medication to ensure that your blood is within normal clotting ranges.
- **Aspirin:** to help reduce clotting and protect blood circulation. Aspirin can interact with some medications, therefore your physician will advise you when and if you should take aspirin. Many over the counter medications have aspirin in them, it is important to read labels carefully and look for the words “Salicylate” or “Salicylic acid” in the content list. Tylenol or “acetaminophen” may be taken. Always talk with your physician if you take any aspirin products.
- **Beta blocker:** to help reduce blood pressure, preserve the heart muscle and keep the heart rhythm regular. It also helps blood vessels expand to improve blood flow. Beta blockers usually end with “**lol.**”
- **Diuretic:** also known as a “water pill,” it helps rid the body of excess fluid. When there is extra fluid in your body, your heart has to work harder. When a diuretic is prescribed you will have to monitor your sodium intake carefully because sodium makes the body retain excess fluid.
- **Statin:** a cholesterol-lowering medication helps protect the heart from further damage. When you take a statin, your physician also may recommend a low cholesterol diet.

It is very important that you take all of the medicines the doctor orders for you. You should use the same pharmacy to fill your prescriptions, especially if you are prescribed medications from more than one doctor. Your pharmacist can monitor all of the medications you take and ensure there are no adverse drug interactions.

Do not stop any medicines without first talking with your doctor. If you had medications prescribed prior to your procedure, ask your doctor if you should continue taking them after your cardiac procedure and after you leave the facility.

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:



Section 6: Going Home

There are many things to remember and consider when you go home. Most importantly, recovery and rehabilitation from a heart attack or heart surgery requires a balance between rest and activity. The day you leave the facility should be a day of rest.

Try to establish a regular routine that includes activity and rest. Be sure to “listen to your body.” If you feel tired, rest. Be patient with yourself and give yourself time to heal. Your body underwent tremendous stress and trauma. Resume activities gradually and make sure you are well rested before you begin any activity.

Always stop any activity when you feel tired.

Feelings of frustration or depression are normal and are usually short term. If these feelings continue more than one week, contact your doctor.

Things to remember

Remember to follow your sternal precautions to allow your chest bone time to heal.

- DO NOT push or pull anything, including a vacuum, rake, broom or stroller for at least six weeks after your procedure.
- DO NOT hold your breath or strain yourself during activity.
- DO take slow deep breaths, even when you use the restroom.
- DO talk with your physician if you are not able to move your bowels. A stool softener or laxative or even a slight change in diet to include more fruit or vegetables may help.
- DO “listen to your body.” If you are tired, rest. If you hear a pop or clicking sound in your chest, you are doing too much.
- DO NOT lift any more than 10 pounds for the first four to six weeks after surgery.
- DO NOT pick up children or pets, sit down and let them climb onto your lap.
- DO NOT exercise for one hour after you eat.
- DO remember to rest. The time just after lunch is a good time to rest. When you rest elevate your legs and feet and do not use rest time to return phone calls or entertain friends or family. Allow yourself one or two rest periods each day.
- DO keep temperatures constant and moderate. Temperature changes can cause a change in your blood pressure. Hot cars or showers may cause your blood pressure to drop and you can feel dizzy or lightheaded. Keep the water temperature in the shower warm, not hot, and sit down when you feel dizzy or lightheaded.
- DO have someone start the car and turn on the air conditioning if the car is hot.
- DO NOT drive for at least six weeks after your surgery or until your doctor tells you that it is safe. Talk with your doctor when you think you are ready to start driving again.
- DO NOT take a tub bath, use a Jacuzzi or swim until the incisions are completely healed.
- DO take a shower until all incisions are completely healed. You may use a chair in the shower. The water should be warm, about 100 degrees, not too hot or cold.
- DO USE unscented soap when you shower and wash incisions gently. Rinse the soap off thoroughly. You may prefer to have your back face the shower and let the water run over your shoulders onto your chest.
- DO use a clean washcloth and towel every day.
- DO NOT use lotions or creams on the incision until it is completely closed.
- DO wear the support hose you were given in the facility for the first six weeks after your surgery. You may take them off at night to sleep, but remember to put them on in the morning as soon as you finish bathing.



- DO NOT bend down when you put on your support hose. You may need assistance for the first few weeks because pulling the stockings on may be too much exertion for your chest.
- DO wash your support hose every few days and when they get soiled. If you notice your feet are swelling by the end of the day, continue to wear them. If you are going to take a long trip (bus, train, car or plane) you should wear the stockings.
- DO wear loose, comfortable clothing. DO NOT wear clothes that are tight or binding.
- DO bring your feet up to you when putting on the support stockings, socks or shoes. DO NOT bend over to put on shoes or socks. You may use a footstool if it helps.
- DO wear a comfortable bra. It may be more comfortable to wear a bra all the time for the first few weeks after your surgery.

Some pain in the chest or breastbone and leg, if there is an incision there, is normal, along with pain or tightness in your shoulders, neck or back. Your physician may prescribe pain medication.

If pain occurs when you take a deep breath or cough, continue taking the pain medication. When you control your pain, you will be able to breathe more deeply and you will feel better. Within a few weeks, most people find over the counter medications can control the pain. Check with your physician about which over the counter pain medication you should take.

***Remember, any pain with shortness of breath or chest tightness should be reported to your doctor right away!**

In an emergency, call 911 or go to the nearest emergency room.

Whenever possible, have your prescriptions filled before your discharge or immediately after you leave the hospital to ensure you do not miss a dose.

It is important that you take all the medications as ordered by your doctor.

Have all of your prescriptions filled at the same pharmacy, even if prescribed by different physicians, so the pharmacist has a complete list of medications you take and can monitor drug interactions. Be sure to tell your doctor about over the counter non-prescription supplements you may take. Always have a current list of your medications with you and include the name of the medicine, the dosage you take and when you take it.



If you have trouble sleeping, it should gradually return to normal. Some helpful hints to help you sleep better are

- Use pain medication as prescribed.
- Go to bed at the same time every night.
- Avoid alcohol or caffeine.
- Sleep in a recliner if it is more comfortable.

Stop Smoking

If you smoke, STOP. The most important thing you can do after heart surgery is to stop smoking. Smoking and breathing second-hand cigarette smoke may cause the arteries to spasm or close. Your arteries are particularly sensitive to smoke for several months following surgery. DO NOT SMOKE when you return home and encourage everyone around you to quit or ask them to stop smoking around you.

If you need help to quit, please let us know.

Resuming Sexual Activities

Once you feel comfortable, it is considered safe to resume sexual activity. Sexual activity is considered moderate exercise similar to climbing 20 to 25 stairs. Remember

safety precautions and do not use your arms to support your weight for six weeks. If you have questions about resuming sexual activity, ask your physician.

Traveling Safely

It is safe to ride in a car as a passenger any time following your discharge. If you are sitting in a car for more than one hour, stop and walk around for a few minutes to help maintain circulation. It may be helpful to place a small pillow under the seat belt where it crosses you're your chest to prevent the belt from rubbing the incision. If you can, turn off the air bags to protect your chest. If you cannot turn off the airbags, it is safer to ride in the back seat. Do not cross your legs when you are sitting in the car.

Exercise Safely

When your doctor tells you it is safe to exercise, begin by taking short walks each day, on a level surface and when its not too hot or cold. If the outside temperature is above 90 degrees or under about 40 degrees, walk inside, at a store or mall.



Section 7: Cardiac Nutrition Guide General Heart Healthy Guidelines



Now that your heart has been repaired, it is important to live a healthy lifestyle and develop healthy eating habits. Following are guidelines:

Limit saturated and trans fats:

- The Dietary Guidelines for Americans recommend that less than 10% of calories come from saturated or trans fats. Replace saturated or trans fats with monounsaturated and polyunsaturated fats. Saturated and trans fats can clog arteries and put you at risk for a heart attack.
- Foods high in saturated fats include fatty meat; chicken or turkey skin; bacon; sausage; whole milk; cream and butter.
- Trans fats are in margarine, shortening, fried and packaged food made with hydrogenated oils.

Identify healthy fats:

- Omega-3 fats are heart healthy fats and include walnuts, canola or soybean oil and flaxseed oil. You can eat these in small amounts.
- Monounsaturated and polyunsaturated fats are a better choice than saturated fat, but still add calories.
- Eat fish twice a week. Healthy choices are salmon, tuna, mackerel and sardines.



More healthy choices:

- Limit salt or sodium intake to 1500 milligrams each day according to The Dietary Guidelines for Americans. Do not add salt when cooking or at the table. One teaspoon of salt has about 2300 milligrams of sodium.
- Limit processed foods because they are high in sodium.
- If you take fish oil supplements, the American Heart Association recommends 1 gram of omega-3 each day.
- Limit the amount of daily cholesterol to 200 milligrams each day. Foods high in cholesterol include egg yolks, fatty meats, whole milk, cheese, shrimp, lobster and crab. Do not eat more than three egg yolks in a week.
- Increase the amount of fiber you eat: women should eat 25 grams each day and men should eat 38 grams each day according to The Dietary Guidelines for Americans.
- Eat five servings of fruits and vegetables each day. Choose a variety of vegetables in a rainbow of colors: dark green, red and orange.
- Increase lentils and legumes (beans), which are low in fat.
- Make sure one half of the grains you eat are whole grains.



Be Aware of Food Labeling

Reading food labels will help you make healthy food choices.

Be aware of each section on the label, including:

- **Serving size:** Information on the label pertaining to calories and nutrition is for one serving. The package may have more than one serving. Check to see what the label calls one serving.
- **Calories:** Choose foods that help you get the nutrition you need without going over your daily calorie level.
- **Total fat, saturated fat, trans fat:** Choose foods with less than 5 grams of total fat in a serving. Try to pick foods with heart healthy fats (monounsaturated and polyunsaturated). Choose foods that have less than 3 grams of saturated fat or trans fat in a serving.
- **Sodium:** Look for low sodium options. Guidelines suggest no more than 1500 milligrams of sodium each day. Remember canned food and processed food is high in sodium.
- **Dietary fiber:** Guidelines recommend that you choose food with at least 5 grams of fiber in a single serving.
- **Total carbohydrates:** If you have diabetes, remember to count the carbohydrates you eat and stick to your diabetes meal plan.

Tips for Cooking a Heart Healthy Diet

Eating healthy is a life change that can benefit the entire family. If you have a favorite recipe, turn it into a heart healthy recipe by replacing unhealthy ingredients with healthy ones. If you love pizza, a heart healthy alternative is whole grain crust, crushed tomatoes with spices, low fat cheese and vegetable toppings. If you have a favorite food that is not heart healthy, make it a rare treat and eat only a small serving. This way you are satisfied, but have not undone all your hard work.

Following are some ideas on how you can make your diet heart healthy:

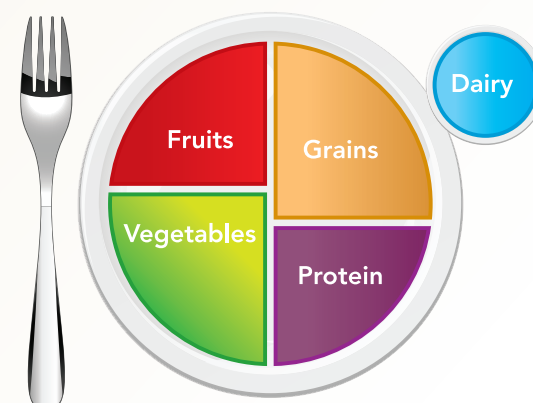
- Select lean cuts of beef and pork, round or loin cuts.
- Take the skin off poultry.
- Trim visible fat from meat.
- Bake, broil, grill, stew or stir fry.
- Drain fat from ground beef or rinse the meat in the sink after it is cooked.
- Use lower fat dairy products, such as milk and cheese.
- Use egg whites or egg substitute.
- Use cooking spray instead of oil when possible.
- Use healthy oil in limited amounts, such as olive oil, canola, soybean, corn oil or sunflower oil.
- Avoid cooking with butter, lard or margarine.
- Reduce salt and flavor food with spices.

Tools to Help Reduce Total Calories and Fat

*Plate method:**

- Fill half your plate with fruit and vegetables.
- Fill one-quarter of your plate with lean protein (approximately 4 ounces).
- Fill one-quarter of your plate with whole grains (about 1 cup).
- Drink 8 ounces of low fat or skim milk.

* From the United States Department of Agriculture
www.ChooseMyPlate.gov offers healthy eating suggestions and ideas.
For more recipes and healthy ideas, visit the American Heart Association
website at www.heart.org.



Food Recommendations

Food Group	Foods Recommended	Foods NOT Recommended
Grains	Whole grain breads and cereals, oats, barley, whole wheat or other whole grain pastas, brown rice, low-fat crackers, unsalted pretzels	High fat bakery products, doughnuts, biscuits, croissants, muffins, pastries, pies, cakes, cookies
Vegetables	Fresh or frozen are best, or canned without added salt or fat	Fried, added butter, cheese, cream cheese
Fruit	Fresh or frozen are best, or canned in natural juice or Lite syrup	Canned in heavy syrup or served with cream
Milk	Nonfat (skim), low fat, 1% milk or buttermilk; nonfat or low fat yogurt, cottage cheese or sour cream; low fat cheese	Whole milk, 2% milk, whole milk yogurt, ice cream or sour cream, cream, half and half, cheese or cream cheese
Meat and other protein foods	Lean cuts of beef or pork (loin, leg, round, extra lean ground beef), skinless poultry, fish, venison or other wild game; dried beans or peas; nuts in small amounts; meat alternatives made with soy or vegetable protein; egg whites or egg substitute	High fat cuts of meat: ribs, t-bone steak, regular ground beef; bacon; sausage; corned beef; cold cuts; hot dogs; organ meats, liver, brains, sweetbreads; poultry with skin; fried poultry or fish; whole eggs and egg yolks
Fats and Oils	Unsaturated oils (olive, soy, peanut, sunflower, canola); soft liquids, margarines or vegetable spreads; Lite or low fat salad dressing; seeds and nuts in small amounts; avocado	Butter; stick margarine; shortening; lard; partially hydrogenated oils; tropical oils (coconut, palm, palm kernel oils)

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:

Section 8: Resuming Normal Activities

As you continue to heal and regain your strength, you can gradually begin to resume your normal activities.

First Six Weeks:

- Light housekeeping: dusting, setting the table, washing dishes, folding clothes. DO NOT bend down to pick things up or raise your arms over your head.
- Light gardening: potting plants, trimming flowers. DO NOT bend down, pick things up or raise your arms over your head.
- Needlework, reading.
- Cooking meals. DO NOT lift heavy skillets or packages of food.
- Climbing stairs.
- Small mechanical jobs.
- Shopping. DO NOT lift heavy items, bend down to pick anything up or raise your arms over your head.
- Attending sports events, church, movies, and restaurants.
- Ride in a car. DO NOT drive a car, wait for permission from your physician.
- Walking, treadmill, stationary bike. DO NOT swing or move your arms.
- Combing or shampooing hair. DO NOT raise your arms over your head.
- Playing cards or games.

Six Weeks to Three Months:

- Continue activities you began during the first six weeks.
- Return to work part-time if your job does not require lifting with permission from your physician.
- Heavy housework: vacuuming, sweeping, laundry.
- Heavy gardening: mowing lawn, raking leaves.
- Ironing.
- Business or recreational travel. Be sure to move or walk around every hour.
- Fishing and boating. You may be in water if the incisions are healed completely.
- Light aerobics. DO NOT lift weights.

- Walking a dog on a leash is allowed
- Driving a small car or truck if approved by your doctor.

After Three Months:

- Continue activities you began during your first three months.
- Heavy housework: scrubbing floors.
- Heavy gardening: digging.
- Shoveling snow.
- Sports activities if approved by your physician, including soccer, football, softball, baseball, tennis, bowling, golfing, swimming if incisions are healed completely, water skiing, skydiving, hunting.
- Jogging, bicycling, weight lifting, push-ups, rowing machine, stationary bike with arm movement.
- Motorcycle riding, jet ski, snowmobile activities.

Remember DO NOT lift more than 10 pounds during the first six weeks after surgery and no more than 15 pounds until further instructions from your physician.



Things to remember when you go home.

- Weigh yourself each morning after you use the bathroom and before you have anything to eat or drink.
- Call your doctor if you gain two pounds in a day or five pounds in a week.
- Take your temperature each morning and call your doctor if it is higher than 100.4 degrees Fahrenheit.
- Look at all your incisions daily until they are completely healed and check for redness or drainage.
- Use your spirometer 10 times each hour while you are awake until you are back to being active (about six weeks).
- Take four walks each day and slowly make them longer and farther. Take good, deep breaths while you walk and avoid talking so you can focus on your breathing. You should not be out of breath when you walk.
- Take a shower or sponge bath. Gently wash the incision site with soap and water, rinse it thoroughly and gently pat it dry. Use a clean towel and washcloth each day.
- Leave your incisions exposed to the air unless there is drainage. To keep any drainage off your clothes, cover the incisions loosely with a clean bandage.
- Wear support stockings every day, except while you sleep or bathe, for 6 weeks or longer if your legs continue to swell.
- Wear support stockings for long trips in a car, train, bus, or plane, or any time your legs will be bent and lowered with limited activity for a long period.
- Balance activity with rest periods and do not get overly tired.
- Complete the daily log from this manual each day. Put it in a location where you will see it and where you will not forget to complete it.
- Take your daily log to your doctor appointments.

References: Guidelines for Cardiac Rehabilitation and Secondary Prevention Programs, American Association of Cardiovascular and Pulmonary Rehabilitation, Fourth Edition. For additional information about coronary artery disease, please visit WWW.STS.ORG

Cardiac Rehabilitation

Cardiac rehabilitation is a focused, supervised exercise program specifically designed for individuals recovering from cardiac bypass, heart valve, heart transplant or other surgical procedures. A team of physicians, nurses, exercise physiologists and nutritionists will develop an individualized cardiac rehabilitation program to fit your needs. The team will work closely with you to establish an appropriate level of activity and to educate you about how much activity you should do at each phase of your recovery. Cardiac programs may run for 12 weeks and include 60 minutes of activities each time you attend your rehabilitation program.

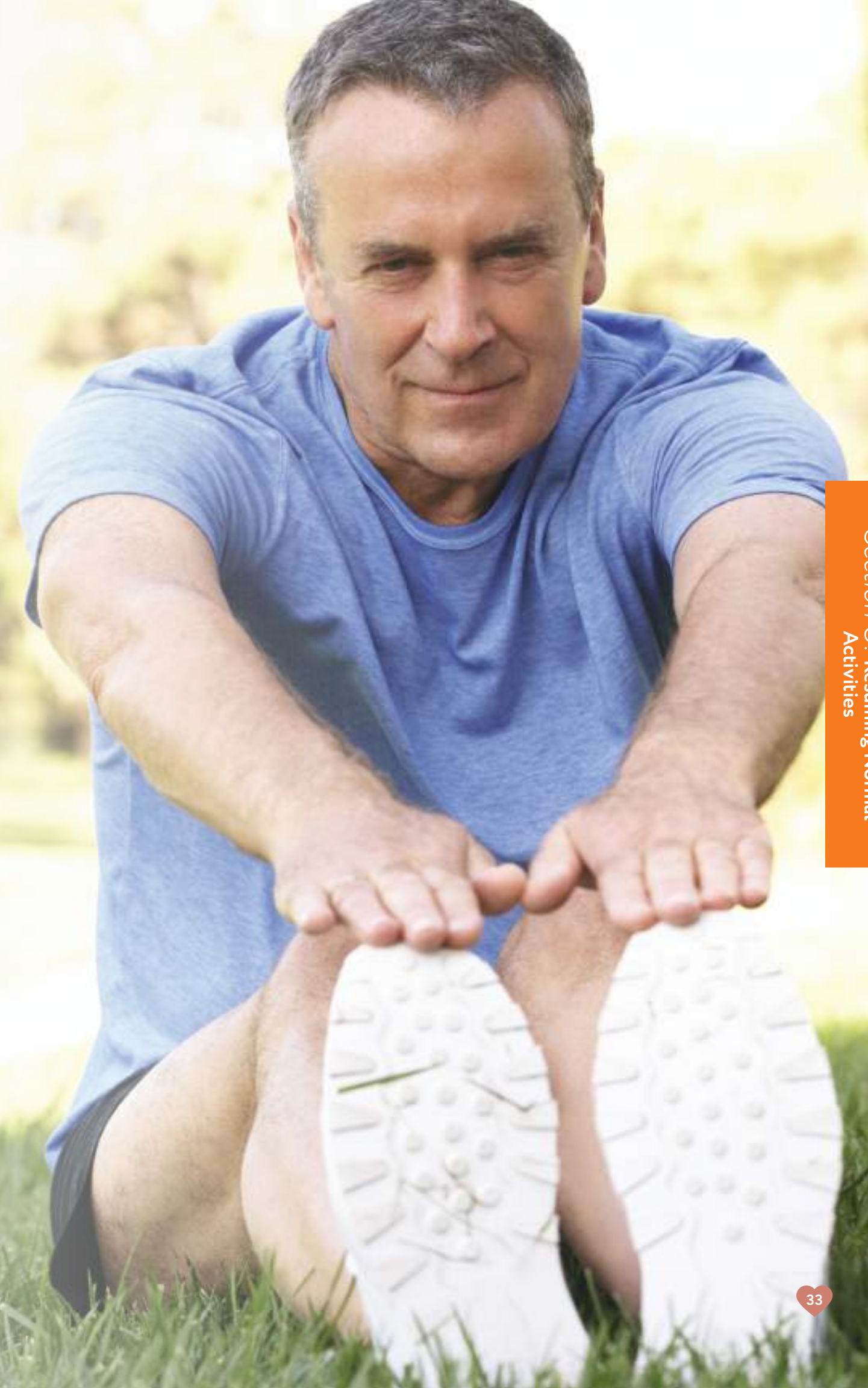
Outpatient Cardiac Rehabilitation Programs

South Texas Health System Heart
1900 S. "D" Street
McAllen, TX 78503
956-994-2000

South Texas Health System Edinburg
1102 W. Trenton Road
Edinburg, TX 78539
956-388-6000

There are four phases of cardiac rehabilitation:

- **Phase I:** Begins shortly after a cardiac event, while you are still in the facility. It includes light, supervised exercise, such as walking and stair climbing, as well as education to help you identify risk factors associated with diet, medication, exercise, sexual activity and regular daily activities.
- **Phase II:** Begins with outpatient cardiac rehabilitation and usually requires a physician referral and careful monitoring of your heart, blood pressure and oxygen level. Phase II may begin three to six weeks after your discharge from the facility and helps you regain strength and stamina so that you can return to normal activities; educates you about making heart healthy lifestyle changes; reduces fear and anxiety about increasing activity or exercise. During Phase II you may participate in individual and group sessions that focus on medication review, stress management and safe activities. Your partner or family members are encouraged to attend the education sessions with you.
- **Phase III:** Is a continuation of Phase II. Depending on your recovery, a physician may refer you directly to Phase III, which includes an ongoing exercise program; lifestyle changes to help prevent a progression of heart disease; techniques to monitor heart rhythm, heart rate and blood pressure before, during and after exercise. During Phase III you will take a more active role in tracking your activities.
- **Phase IV:** Is a wellness program that helps you continue improving your lifestyle. During Phase IV you will exercise three or more times each week on your own without supervision.



Stretch Before and After Exercise

Stretching is important before and after exercise. Stretching should be gentle and not cause any pain. Stretching warms up the muscles so they do not get sore. Remember to hold each stretch for at least 15 seconds and breathe deeply and slowly.

Following are some good leg stretching exercises:



Stand behind a chair and hold the back of it. Take a short step forward with one leg and raise it up a few inches off the floor. Lean forward until you feel a gentle stretch on the back leg. Repeat with the other leg. Do not bounce or put weight on your arms.



Sit on the floor and bend one leg slightly. Lean forward until you feel a stretch in the back of the leg. Do not push or bounce. Repeat with the other leg.

For a more challenging leg stretch, lie on the floor and bend your knees. Place one ankle on top of the knee on the other leg and gently pull the leg forward. Do not pull with your arms. Repeat with the other leg.



Stand behind a chair and hold the back of it. Bend the back leg behind you and grasp it with your hand. Feel the stretch in the front of the leg you are bending. Repeat with the other leg.



5 Lie on the floor and bring one knee up to your chest and hug it with your arms. Do not pull on the leg or bounce. You will feel a stretch in the front of your leg. Repeat with the other leg.



Reach one arm across your body and gently bring it toward you with the other arm. Do not pull. Repeat this with your other arm. Do not reach up so that your elbows are higher than your shoulders.

Warm up before and after you walk and remember when your physician tells you to begin an exercise routine, start slowly and gradually increase the length and duration of your exercise. If you walk, start by walking the same distance you did in the facility. Gradually take longer walks and add one minute to the length of the walk each day until you reach a maximum of 20 minutes. Your heart rate or pulse should not go up by more than 30 beats a minute when you walk. Continue the gentle exercise until your physician recommends outpatient cardiac rehabilitation.

Following are instructions on how to take your pulse:

- Turn your left hand palm-side up and place the first two fingers of your right hand along the outer edge of your left wrist just below where your wrist and thumb meet.
- Slide your fingers toward the center of your wrist. You should feel the pulse between the wrist bone and the tendon.
- Count your pulse for a full minute and make note of your pulse on your home log.

Remember to keep track of your walks in the daily log in this manual. Logging your exercise allows you to see your progress.

For your information.

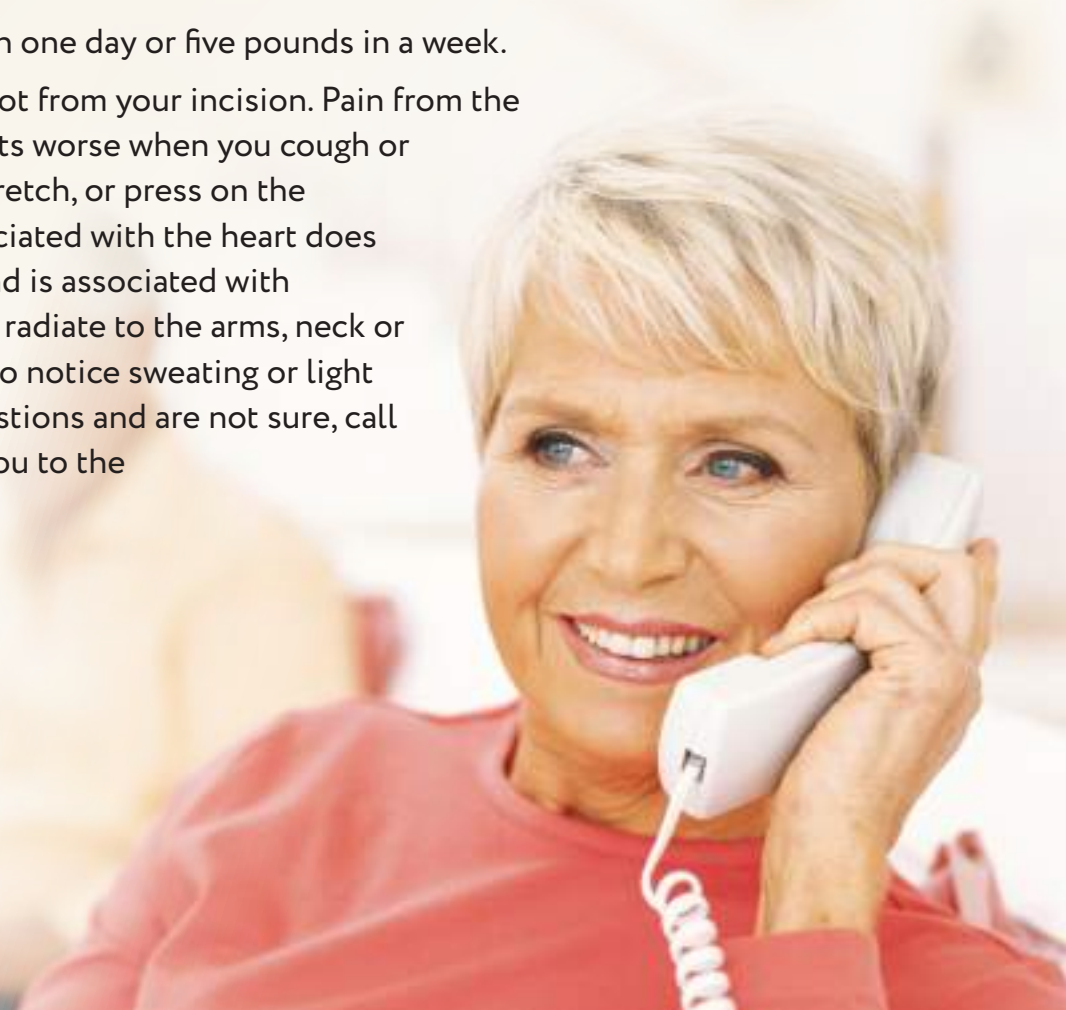
Questions or concerns while in the facility or at home?

Notes/Things to remember:

Section 9: When to Call the Doctor

Remember to call the doctor when you notice changes in your health or if the following occurs:

- Pain in your shoulder, arm, elbow, back, neck, or jaw that is not related to your surgery.
- Your temperature is over 100.4 degrees Fahrenheit.
- There are signs of infection, such as new or increased swelling at the surgical site; increased warmth, soreness, or redness at the incision site; new or increased drainage or a change in color from clear/yellow to cloudy, red, green, or black.
- You notice a bad odor coming from your incision.
- Shortness of breath, or feeling out of breath even at rest.
- A racing heart or an irregular heart rate.
- Side effects from any medication, or if you are having trouble taking medication.
- Nausea or vomiting.
- Prolonged dizziness or a lightheaded feeling.
- Extreme fatigue.
- Pain in either calf.
- Weight gain of two pounds in one day or five pounds in a week.
- You have chest pain that is not from your incision. Pain from the incision usually occurs or gets worse when you cough or breathe deeply, when you stretch, or press on the breastbone. Chest pain associated with the heart does not occur with movement and is associated with shortness of breath and may radiate to the arms, neck or upper abdomen. You may also notice sweating or light headedness. If you have questions and are not sure, call 911 or have someone drive you to the nearest emergency room.



Have Important Information Available

If you need to call your doctor for any reason, have the following information ready:

Your name: _____

Date of your surgery: _____

What surgery you had: _____

Describe your problem: _____

When did the problem start: _____

How long has it lasted: _____

What were you doing when the problem started: _____

What makes it worse: _____

What makes it better: _____

Describe any drainage from your incision: _____

List the medications that you are taking, including dosages and when you take it:

Allergies you have: _____

Temperature: _____

Heart rate: _____

Weight: _____

Blood pressure (if possible): _____

Blood sugar (if you check your blood sugar): _____

Pharmacy name: _____

Pharmacy phone number: _____

Section 10: Patient/Family Home Log



Daily Activity Log for Open Heart Surgery Patients

Week 1

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Dates:							
Heart rate <i>(call the doctor if below 60 or above 110 beats per minute at rest/ check blood pressure if able)</i>							
Weight <i>(call doctor if you gain 2 pounds in a day, or 5 pounds in a week)</i>							
Temperature <i>(call doctor if above 100.4 F)</i>							
Incisions <i>(call doctor if redness, swelling, tenderness, or drainage occurs)</i>							
Support stockings <i>(remove when bathing or sleeping)</i>							
Incentive Spirometer <i>(10 times each hour)</i>							
Walks <i>(walk indoors when it is hot)</i>	Start with the length walk you were taking when you left the facility, then add 5 minutes every few days until you reach a 20-minute walk.						
Walk							
Walk							
Walk							
Walk							

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:

Daily Activity Log for Open Heart Surgery Patients

Week 4

	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
Dates:							
Heart rate <i>(call the doctor if below 60 or above 110 beats per minute at rest/ check blood pressure if able)</i>							
Weight <i>(call doctor if you gain 2 pounds in a day, or 5 pounds in a week)</i>							
Temperature <i>(call doctor if above 100.4 F)</i>							
Incisions <i>(call doctor if redness, swelling, tenderness, or drainage occurs)</i>							
Support stockings <i>(remove when bathing or sleeping)</i>							
Incentive Spirometer <i>(10 times each hour)</i>							
Walks <i>(walk indoors when it is hot and drink fluids!)</i>	You should not be out of breath with walking, take slow deep breaths. You can take 2-3 walks each day if you wish, since they are longer.						
Walk							
Walk							
Walk							
Walk							

For your information.

Questions or concerns while in the facility or at home?

Notes/Things to remember:
