



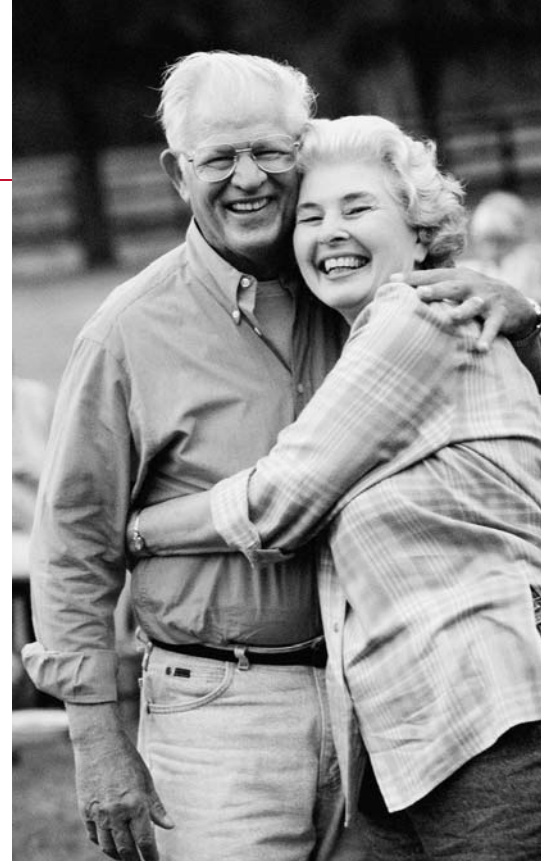
Cardiothoracic Surgical Associates

HCA Virginia Health System

An HCA affiliate



Cardiac Surgery Post-Operative Instructions



The Next Step

Congratulations. Your surgery is over and you're on the path to recovery. This booklet will help you transition back to a healthy lifestyle by outlining steps you should take in order to recover as quickly as possible. We hope that by answering your questions, it will alleviate any anxieties that you may have, allowing you to concentrate fully on your recovery.

If at any time, you should have a question or concern not addressed in this guide, call your physician's office listed on the inside back cover of this booklet.

Please Read Carefully and Follow Instructions

On the Day of the Discharge

Contact the office location of the doctor you have been seeing prior to surgery to make an appointment for a follow-up visit. You may use the same number anytime between your day of discharge and follow-up visit if you need to speak to a nurse.

Day of Appointment

Bring any tests with you. Our office has scheduled the tests you will need. Eat lunch before leaving home.

All Patients

Bring your insurance cards to the office. Bring all medications or list of medications you are currently taking.

Recovery from Cardiac Surgery

The average recovery period (before resuming your pre-surgery activities) is from 8 to 12 weeks. Remember everyone is different and each person will recover at their own pace. Recuperation will also depend upon your state of health before surgery. Your body needs plenty of time to heal and rebuild. While you are in the hospital, lack of sleep, decreased activity, different medications, and the stress of surgery itself all slow the body down.

Additionally, heart surgery affects your emotions. After your surgery, you may experience mood swings. You may notice that you feel "let down" or depressed and sometimes even become tearful or cry for no apparent reason. Irritability, anxiety, recurrent dreams, loss of memory and a lack of concentration are all common findings after heart surgery. These things are normal and will get better with time.

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Activity

Increase your activity daily based upon your own endurance. In order to optimize the progress you are making in your recovery, a daily schedule of your activity is recommended. Design a routine and stick to it each day.

Many patients have difficulty sleeping at night, this is a common problem. It is important that you have quiet rest-times, but you should minimize sleep in the daytime.

You will eventually be able to resume most of your pre-surgery activities. Initially, however, some of your activities will be restricted. The list is intended to give you guidelines on the type of activities you may and may not participate in upon your return home. The restricted activities apply to ALL patients until approved by the cardiac surgeons - which is usually when you return for your post operative visit.

Allowed Activities

- Walking; Arm exercises; Stairs
- Minor household chores including:
light dusting, setting the table, washing/drying dishes, cutting vegetables, folding clothes, preparing a sandwich, making a bed
- Light work at a computer
- Minor household repairs
- Showers
- Potting plants
- Writing letters
- Sewing/needlework
- Golf (putting practice)
- Fishing (no casting - from a bridge or bank)
- Ride in a car for short distances (stretch legs every hour)
- You may walk outside (weather permitting)

Temporarily Restricted Activities

- Tub baths
- Lifting anything greater than 5 pounds including:
small children, pets, large pocketbooks or briefcases, wet laundry from the washing machine, grocery bags
- Opening and closing stuck windows
- Opening and closing car doors, shopping store doors or sliding glass doors
- Moving furniture; Opening jars
- Vacuuming
- Raking the lawn; Mowing the lawn (push mower & riding mower)
- Driving any motor vehicle
- Gardening
- Tennis (singles or doubles)
- Scrubbing the floor or dishes; Reaching to overhead shelves
- Fishing (casting); Golf
- Work
- Stationary bicycle; Jogging; No jogging on a treadmill
- Hunting

The time frame for many of the restrictions will vary. When you visit your surgeon discuss your activity and restrictions with him.



Walking

Continue your hospital walking program upon discharge. Your heart will get stronger as you **gradually** increase the distance and pace at which you walk. Initially you should walk on a flat surface as this demands less energy. This may require that someone drive you to a mall or a track to walk.

There are a few things you should keep in mind when walking: **wear comfortable shoes, avoid temperature extremes** (less than 32 degrees F or greater than 85 degrees F), and **avoid strong winds**. It is better to walk in the early morning and late afternoon if you are going to walk outside. Remember to **rest** if you are **tired, short of breath, or dizzy**.

Rest

Just as activity is important to your recovery, so is rest. Plan two 30 minute rest periods in your day, preferably one in the late morning and one in the late afternoon. It is not necessary that you go to bed, rather sit back in a chair with your legs elevated. Try to rest in a place where there are no other distractions such as the television or phone. It is also important that you get a good night's sleep. Try to sleep 8-10 hours every night.

Incentive Spirometry

Continue to use your incentive spirometer while at home. You should use this **at least 4 times a day (10 breaths each time)**. This will help to keep your lungs clear. Remember to use a pillow or your teddy bear to splint your incision when you cough.

Stairs

Activity up and down stairs requires greater effort than walking, but is allowed when you go home. There is no specific number of stairs you can or cannot attempt - again this depends on your comfort level. For your own safety, have someone at your side the first few times you climb stairs and as you increase the number of stairs you climb. If you are **tired, short of breath or dizzy, stop** and sit on the stairs until you have recovered. You will continue to get stronger and more independent each day.

Sex

Many people have concerns about resuming sexual activities after cardiac surgery. In general, you may resume intercourse when you can climb two flights of stairs or walk 4 blocks without developing chest pain, shortness of breath, or fatigue. These activities require about the same amount of energy as sexual intercourse.

It is particularly important for you to avoid putting stress on the breastbone closure. Certain positions, such as side-lying, may be more comfortable initially. It is also recommended that you avoid the following situations when engaging in sexual activity: being overly tired or upset; haven't eaten a large meal within the past two hours; consuming more than 1 to 2 alcoholic drinks; or being with an unfamiliar partner.

Remember, some shortness of breath is normal with sexual intercourse and, as with any activity, you should stop and rest if you develop chest pain or become overly tired.



Cardiac Rehabilitation

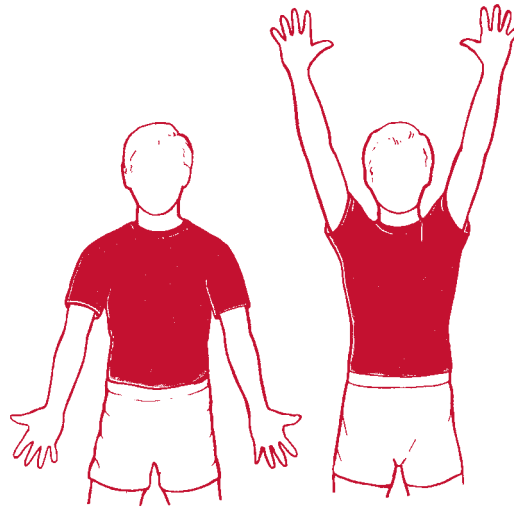
Cardiac Rehabilitation is an excellent program to help you gradually return to your pre-surgery activity level and to assist you in permanently modifying your lifestyle to promote healthy living. There are several programs in the area. Ask your surgeon or cardiologist about a program near you.

You need to give yourself a chance to completely recover from surgery prior to beginning this program. In addition, you must get the approval of your cardiac surgeon at your post-discharge appointment and your cardiologist. You may be required to get a stress test and an EKG prior to participating in a cardiac rehabilitation program.

Arm Exercises

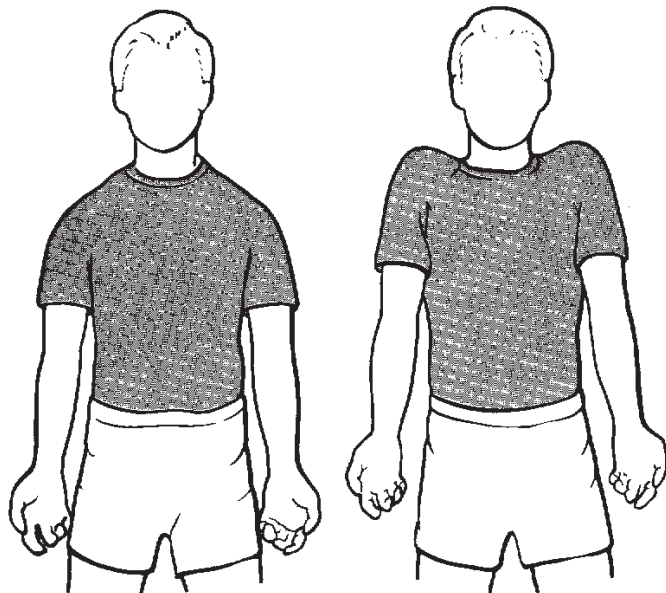
It is important that you continue your daily arm exercises **in addition** to your walking program. These exercises help to not only return your upper body strength, but also **reduce incisional discomfort** in your chest. The following illustrates the exercises to be continued at home.

- 1 Keeping elbows straight, raise both arms overhead, reaching for ceiling.
- 2 Pull elbows behind back.
- 3 Keeping elbows straight, raise both arms overhead, bringing palms together.
- 4 Pull shoulders up towards ears, keeping arms relaxed.
- 5 Look over left shoulder, turning from waist. Then turn and look behind you over your right shoulder.
- 6 With hands at sides, lean first to left side and then to right.



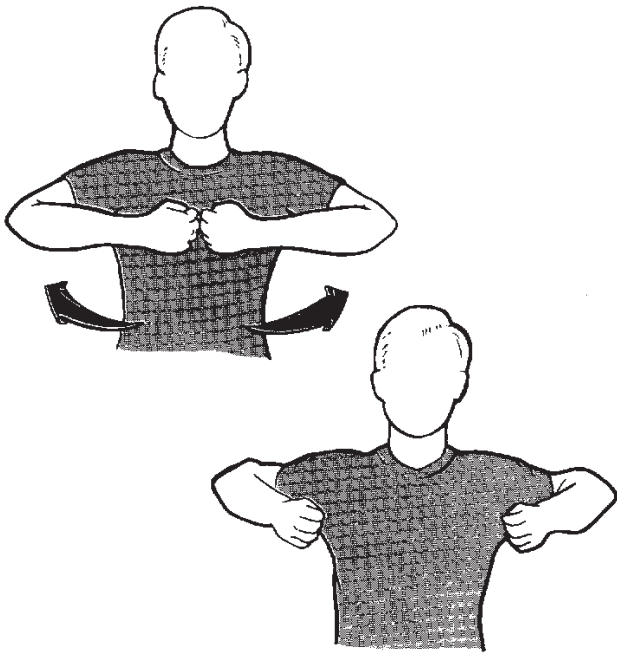
1

Keeping elbows straight, raise both arms overhead, reaching for ceiling.



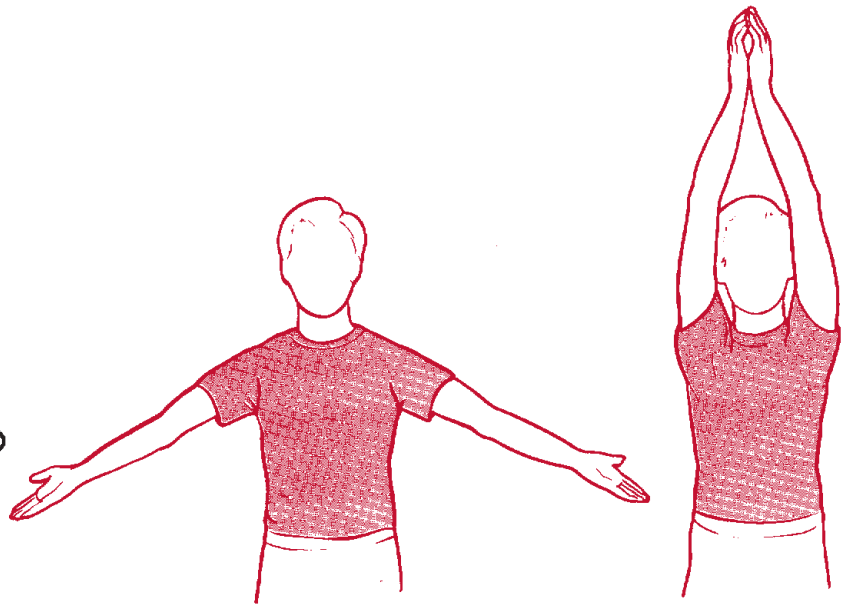
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Pull shoulders up towards ears, keeping arms relaxed.



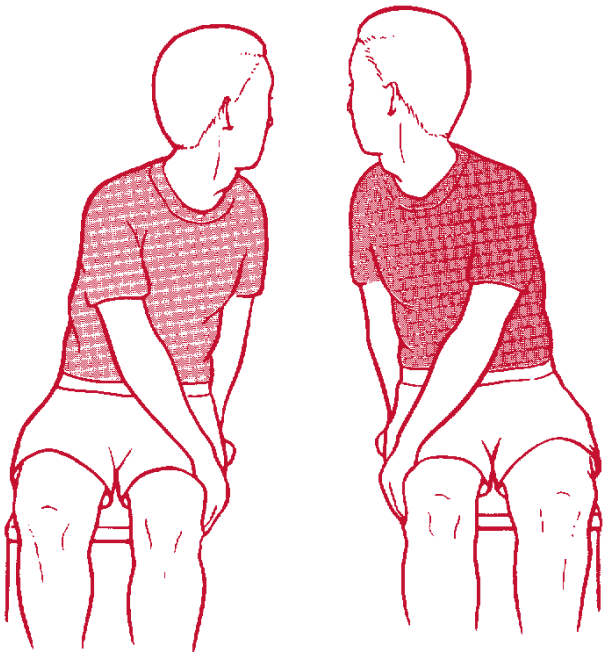
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Pull elbows behind back.



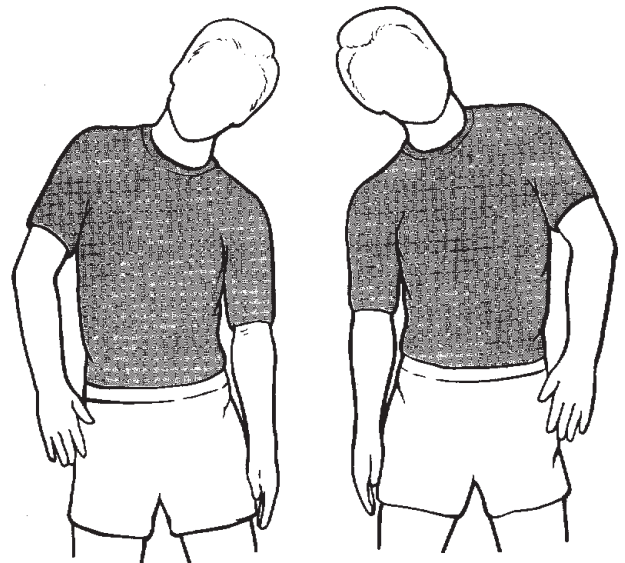
3

Keeping elbows straight, raise both arms overhead, bringing palms together.



5

Look over left shoulder, turning from waist. Then turn and look behind you over your right shoulder.



6

With hands at sides, lean first to left side and then to right.



Diet

After surgery it is quite common to have a poor appetite. While this is normal, it is very important that you eat to gain strength and promote healing. Here are a few tips to help you increase your caloric intake while your appetite is depressed.

Alcohol

Moderate use of alcohol after surgery is acceptable (1 oz. hard liquor, 6 oz. wine, one 12 oz. beer). However, during your recovery period, you should limit alcohol intake since it interferes with many of the medicines you will be taking. Alcohol should never be mixed with pain, sleeping, or anti-anxiety medications. You must wait at least four hours after taking this type of medication before consuming alcohol.

- Try eating frequent small meals at the table throughout the day rather than the traditional three large meals. Keep nutritious snacks close at hand, such as yogurt, fruit, peanut butter and salt-free crackers
- If hot foods do not appeal to you, try eating cold foods such as: sandwiches, chicken or tuna salad, puddings, fruited Jello, cottage cheese, peanut butter, yogurt or milkshakes
- Make sure the liquids you drink are a source of nutrition, such as juices or milk, rather than diet soda and coffee
- If you are having a lot of trouble healing, feel free to relax dietary restrictions: you need calories to heal
- Dietary Supplements may help; these include things like Ensure, Carnation Instant Breakfast and Sustacal; all can be found at the grocery store

Nutritional education will be provided by a registered dietician during your cardiac recovery class. She will instruct you on the diet prescribed by your physician. Most cardiac patients will be asked to follow a diet similar to the American Heart Association diet which is low in total fat, saturated fat, and cholesterol, with a moderate salt restriction. Salt should be limited to cooking, but not added to food at the table.

Incisional Care

Caring for your incisions properly is very important. Clean your incisions daily with a warm, soapy washcloth, rinse completely and pat dry with a clean towel. Do not use any lotions, ointments or powders on the incisions until they are completely healed.

You may notice some itching, redness, bruising, soreness or numbness surrounding your incision. This is part of the normal healing process. Additionally, there may be some swelling or a lump at the top of your chest incision. This, too, is normal and should disappear within a few months. Preventing infection of your incisions is vital. For this reason, if you notice any of the following signs and symptoms you should call the surgeon's office:

- *Increased redness*
- *Excess swelling*
- *Drainage (any type), esp. from the long incision on the chest**
- *Pain or tenderness*
- *Warm or hot to touch*

*Exception: You may notice a small amount of drainage from the drain sites on the chest. This is not too unusual. Keep them clean and dry. You may cover them with a band-aid to protect your clothing.

It is very common to have some leg swelling where the vein was removed. You should elevate the leg above the level of the hip. Do this as much as possible. It may also be helpful to put a pillow under the leg when you sleep.

Temporary Discomfort

Musculoskeletal Pain

Some feelings of discomfort are normal after you return home. You may experience **shoulder, neck and back pain**. This is temporary. This may be attributed to the surgery itself as well as the positioning of your body during surgery. You may try a heating pad applied at 15-minute intervals to help relieve some of your discomfort.

Chest Wall Discomfort is also common after cardiac surgery. Patients who have had their mammary artery used for grafts may experience more soreness than those who have had leg or vein arms used. This is because the mammary artery is taken from the chest wall. Daily arm exercises and good posture will help reduce your pain. Your discomfort may also be lessened by Extra Strength Tylenol, pain medication, and time.

Increased Sensitivity in your chest and legs (if your vein was taken from there) is also a common sensation after surgery. Take comfort in the knowledge that it will subside with time. You may also experience hot and cold flashes which eventually disappear.

Constipation

Changes in bowel habits are common after surgery. Exercise, water, fruit and fiber are the best remedies to prevent and/or relieve constipation. If these are ineffective, you may use whatever was successful at home before surgery. Do obtain relief, however, as it is harmful for you to strain.

Visual Disturbances

Many people experience blurred vision despite wearing their glasses. Your eyesight should return to its pre-surgery state in a few weeks.

Insomnia

Unfortunately, difficulty sleeping is common after surgery. Since it may be due to incisional discomfort, it is helpful to take pain medication prior to going to bed. If you are still restless, you may try going to bed later at night as the daytime naps may be interfering with your nighttime sleep.

Abnormal Feelings

Pain that is not normal and needs to be brought to the attention of your surgeon is **angina**; that is, pressure or pain in your chest that may be spread to your neck, jaw, or arms. This may or may not be accompanied by difficulty breathing, nausea, or perspiration. This is different from incisional pain and is not relieved by pain medication. **Call the office anytime nitroglycerin is required to relieve your chest pain.**

Medications

Most people require some medications while they are recovering from cardiac surgery. Instructions about your medications will be given to you before you leave the hospital. You should always keep a list of your medications in your wallet, including the name, dosage, and how many times a day each one is taken.

Take your medications only as they are prescribed. **Do not take any medications that you were taking before surgery unless specified by the cardiac surgeon.** It is not always necessary to take all of the medications that you were on before surgery when you go home. Remember to bring all of your medications with you to your office visit.

Pain Medication

You will notice that the longer you are home, the less you will need pain medication. Try to take Extra Strength Tylenol during the day and gradually limit the use of pain medication to bedtime. You may also try using Ibuprofen, unless you have a history of ulcer disease.



Risk Factor Modification

Atherosclerosis is a fatty build-up in your arteries which ultimately restricts the blood flow to your heart. Bypass surgery improves the blood flow to your heart muscle, but, remember, it is not a cure for coronary artery disease.

It is very important for you to maintain a lifestyle that will support a healthy heart. Specific risk factors have been identified and have been shown to contribute to the development of atherosclerosis. Age, sex and heredity are risk factors that are uncontrollable. However, the risk factors that you can control are: cigarette smoking, high blood pressure, elevated cholesterol, diabetes, obesity, lack of exercise and excess tension or stress.

Stop Smoking

Smoking is one of the worst things you can do to your heart and lungs. Studies have shown that smoking causes the blood vessels to become narrow; it increases the heart rate and blood pressure; and it lowers the amount of oxygen in your blood. This also means that you should avoid being around people who are smoking.

Control Blood Pressure

High blood pressure puts added strain on your heart. Proper blood pressure control through medications, a low salt diet and exercise is important.

Low Fat, Low Cholesterol Diet

Follow a low fat, low cholesterol diet to prevent fatty build-up in your arteries.

Diabetes

Manage your diabetes carefully under a physician's care. Careful control of your blood sugar helps to slow the progress of atherosclerosis.

Obesity

Being overweight puts added stress on the heart. Consult your physician about safe and effective ways to lose weight.

Lack of Exercise

Regular exercise strengthens the heart muscle, decreases the heart rate and blood pressure, and also helps to maintain or lose weight. Check with your cardiologist before beginning exercises other than walking.

Stress

Studies continue to show that excess stress is related to the development of heart disease, but the exact mechanism is unknown. Avoiding or learning how to cope with stressful situations is important. Physical exercise and relaxation techniques may be useful.

Day of Discharge

The day to leave the hospital has finally arrived! There are a few things that may make this transition a little easier.

Although you may feel 100%, it is important to keep in mind that you will still fatigue much more quickly than before surgery. This becomes very apparent for most people the day they go home. It is helpful to close your eyes for 30 minutes and rest after you get yourself ready for discharge in the morning. If you are uncomfortable, ask for Tylenol or pain medication prior to leaving the hospital. Make sure you take your heart pillow or teddy bear out of the hospital with you and place it between your chest and seat belt in order to splint your chest and protect you from any bumps in the road.

If your drive home is greater than 1 hour, get out of the car and stretch your legs every hour.

Once you are home, don't overdo it the first day. Take a nap. It is also wise to restrict visitors the first day since they can be exhausting.

Records to Keep

Temperature

Check your temperature twice a day. You should call the surgeon's office anytime your temperature reaches 101 degrees. If your temperature is between 100 degrees and 101 degrees you should take your temperature every 4 hours. If it stays above 100 degrees for a full day, you should also notify the doctor's office.

Weight

Weigh yourself daily, each morning before breakfast. Wear the same amount of clothing each time. Keep a record of your daily weights. If you notice a rapid weight gain, that is, 5 lbs. or more in 2-3 days, you should call the office. This type of weight gain is due to fluid, not body weight.



Important Information for Valve Repair/Replacement Patients

Name and Type of Valve Replaced:

Recovery from heart valve surgery is similar to that of bypass surgery, however, there are a few important differences.



Prevention of Valve Infection

Infection of the inner lining of the heart or the heart valves is called bacterial endocarditis. You **must** take precautions to protect your new heart valve from infection. This means you should have an antibiotic prescribed prior to **any** invasive procedures. This includes:

- *All dental procedures (cleaning, filling, removing teeth, root canals, gum work, treatment of mouth ulcers)*
- *Any major or minor surgery Procedures such as bronchoscopy, biopsy, or cystoscopy*

It is recommended that you follow the American Heart Association protocol for antibiotic coverage. You will receive a card with this information. **It is very important for you to tell any doctor, dentist, or health care professional that you have had heart valve surgery and need protective antibiotic coverage.**

Always call your physician if signs or symptoms of infection develop. These include:

- *Coughing up yellow or green-tinged sputum*
- *Burning, frequency, urgency, or difficulty urinating*
- *Fever that lasts for more than 2 days and is accompanied by chills, weakness and general feeling of poor well-being*
- *A fever is considered to be a temperature of greater than 100 degrees*

Anticoagulants (Blood Thinners)

Some patients will be taking a blood thinner, such as Coumadin, following their valve replacement. Coumadin is a drug that reduces the possibility of blood clots forming inside or around an artery, vein, or heart valve. While you are in the hospital, we will check your blood frequently to see how long it takes to clot. This test is called a PT, Prothrombin Time, or INR, International Normalized Ratio. The results of this test determine our daily dose of Coumadin. When you are discharged from the hospital it will be necessary to continue to monitor your blood clotting time. We will give you specific instructions on the day of the discharge as to when you have to get your blood checked again and how much Coumadin to take each day. Some important guidelines to follow when you are taking Coumadin are as follows:

- *When to take:* Take your Coumadin after your evening meal on the days prescribed
- *When to go to the laboratory:* On a weekday morning; you will be notified as to the exact day; do **not** postpone your test without notifying our office
- *Be Available:* After you have taken the blood test, stay by your phone between 2:00 and 4:00 p.m. and wait for our office to call you
- *Dosage:* On the day of your test, if we do not call you before 4:00 p.m., call our office; do not take any Coumadin until you have talked to someone in our office to get your dosage

Common Complaints After Heart Surgery

COMMON SYMPTOM

RECOMMENDED ACTION

Difficulty Sleeping	May use Benadryl* 50 mg. at bedtime
Nausea	Eat small frequent meals Drink Carnation Instant Breakfast (use sugar-free if diabetic) Call the Cardiac Surgery office if nausea persists or you develop vomiting
Indigestion	May use Mylanta* If persists, call Cardiac Surgery Office
Constipation	May use laxative of choice (for example, Milk of Magnesia*, Dulcolax suppository*, or Fleets enema*) Drink adequate fluid, as stated in nutrition packet
Diarrhea	Use Kaopectate* If persists, call the Cardiac Surgery office
Feet and/or ankle swelling	Keep feet elevated when sitting, wear support hose Continue to check your weight every day and call if you have gained 5 pounds over 2 or 3 days
Shortness of breath	Decrease salt intake and call doctor; you may need a change in the dosage of your medication
Pain in the upper back, shoulder blade or back of the neck	May use heating pad, Tylenol*
Leg pain	May use Darvocet or Tylenol* as needed Do ankle exercises when sitting in bed Continue walking to decrease stiffness
Numbness along incision	This is normal
Oozing, drainage from chest tube site	Clean with soap and water, cover with a band-aid every day Remove the band-aid when the oozing stops
Development of a cold/cough	May use Dimetapp* for a cold or Robitussin DM* for a cough
Mood swings/feeling "blue"	Mood swings are normal after surgery; you may feel irritable and even become tearful and cry for no reason; these sad feelings will improve with time; contact your physician before your two week visit if you feel your emotional recovery is not progressing as it should <i>*A prescription is not needed: you can purchase these medications at any drug store</i>