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Discharge Instructions

As with any inpatient or outpatient procedure, it is important for you to know what you can expect when you return home. That is why we begin the discharge education process when you are admitted to the hospital. Each of our floors has a case manager assigned for discharge planning, insurance questions and management, and other community needs. There is also a social worker assigned to each of our floors to help discharge patients to skilled nursing facilities (if needed).

Here is your case manager and social worker contact information:

Case Manager: _____ Phone: _____

Social Worker: _____ Phone: _____

Daily Self-Check

- Weigh yourself every morning before you eat or drink and after you have urinated. Wear the same amount of clothes each time you weigh. If you gain more than four pounds in two days, call your surgeon. Record daily weights on the chart provided on page 18.
- Take your temperature every morning before you eat or drink. Call your surgeon's office if your temperature is over 101 degrees. Record your daily temperature.
- Monitor and record your blood pressure and heart rate daily.
- Practice the coughing and deep breathing exercises you have learned in the hospital at least four to five times a day for two to three weeks after discharge.
- Hug your pillow to protect your chest incision when coughing.

Call Your Doctor if You Have:

- A temperature higher than 101°.
- Drainage, redness or increased pain or swelling from your incisions.
- Shortness of breath that does not go away with 15 minutes of good rest.
- Weight gain greater than four pounds in two days.
- A blood sugar reading greater than 170mg/dl for more than a week OR two consecutive blood sugar readings over 300 mg/dl when taking your blood sugar at home. Call your family doctor.
- Changes in heart rhythm causing your heart to beat too fast, too slow or to skip. A fast heartbeat might cause an uncomfortable feeling in your chest. You will usually feel very dizzy if your heart is beating too slowly. If your heart skips a beat, it usually feels like a thump in your chest.
- Chest pain similar to the pain before surgery (for coronary bypass patients).
- Any sign of infection in your incisions, including:
 - Any new drainage from your chest incision.
 - Any new drainage from your leg incision.
 - Increased redness, swelling or warmth around your incision.
 - Increase in the opening of your incision.
 - Temperature of 101° or greater (check daily). Expect a temperature to be 98.6° - 100° for the first two weeks.
 - Chills.
 - Pus or a foul odor coming from your incision.
 - Elevated blood sugar readings.

Incision Care

- Wash hands with soap and water for 15 seconds before incision care.
- Wash each incision gently (do not scrub). Rinse off soap and pat incisions dry with a clean towel.
- You may clean incisions in the shower with antibacterial soap (liquid Dial or generic is recommended). Let the water hit your back and run over shoulder to cleanse your chest incision. Do not let the water directly hit your incision.
- If you have steri-strips (white tape strips on your incision), allow them to come off by themselves. Do not remove them; they will usually come off in five to six days.
- If you have staples you will have a follow-up appointment at the doctor's office in about 10 days from the date of the surgery to have them removed.
- Do not apply ointments, oils, creams, salves, lotions or powder to your incisions unless ordered to do so.
- Do not touch or pick at your incisions.
- Expect to have numbness and itching around the incision site(s).
- Some swelling in the operative leg is common and may take up to several months to resolve (elevate while resting). You may also have a swollen knot at the top of the chest incision.

Things to Avoid

Avoid crowds for the first two weeks to limit your exposure to infections.

- NO TOBACCO (smoking, dipping or chewing). If you need help, talk to your nurse and/or doctor about aids to help you quit.
- Try to avoid all caffeine. If you drink caffeine, limit your intake to one or two cups a day and with the goal of eliminating all caffeine. Caffeine can have negative effects on your heart and blood pressure.

Activity Guide

After major surgery, it takes time to get your strength back and it takes six to eight weeks for your breastbone to completely heal. Remember that heavy lifting hinders the healing process. Here are other useful tips:

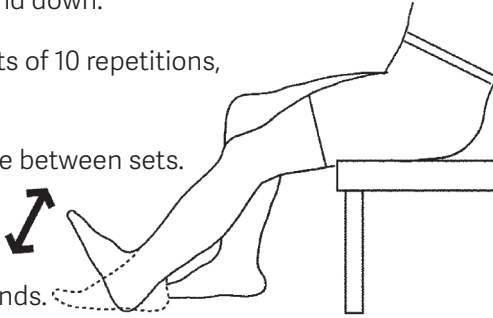
- Do not lift more than 10 lbs. for the first six weeks. (e.g., a gallon of milk).
- No pushing or pulling with arms, as this can put pressure on your breastbone and prevent healing.
- It is OK to slowly climb stairs if you are steady. Take rest periods if needed.
- Elevate your legs above the level of your heart to help reduce swelling when sitting for long periods of time.
- Do not cross your legs when sitting or lying down for at least four weeks. Crossing your legs can prevent good circulation.
- Do not drive until your surgeon tells you it is OK (usually after three to six weeks, depending upon your health condition) and until you are no longer taking pain medication. It is OK to be a passenger, but always wear a seat belt.
- Returning to work is based individually upon the nature of employment (desk job vs. manual labor), the severity of your disease and your activity tolerance. Toward the end of your discharge, your physician will be better able to set a specific date for return to work based upon your progress.
- Shower daily with lukewarm water. DO NOT use hot water as this can make your blood vessels open up and lower your blood pressure. No baths or soaking in water for one month post-surgery or until approved by your surgeon.
- Check with your surgeon at your follow-up appointment to determine when you can resume sexual activity.
- When resuming sexual activity, avoid positions that strain your upper arms and chest.

Increasing Activity

Here are warm-up exercises you can do before you walk (10 times each leg).

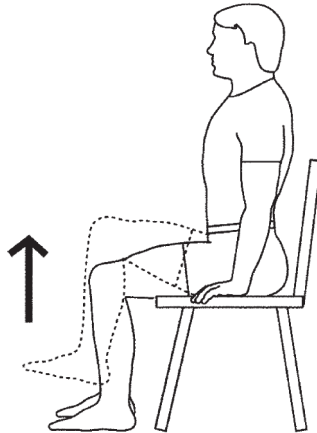
Ankle Pumps

- Sit with knees at 45 degrees .
- Move foot up and down.
- Perform two sets of 10 repetitions, once a day.
- Rest one minute between sets.
- Perform one repetition every four seconds.



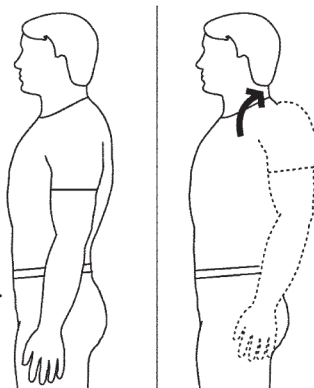
Marching Exercises

- Sit in chair with feet on floor,
- Alternately lift and slowly lower legs.
- Perform two sets of 10 repetitions once a day.



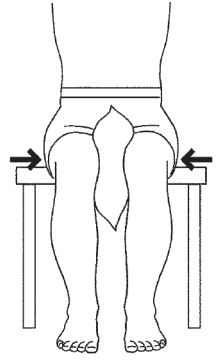
Shoulder Shrugs

- Stand or sit, raise shoulders upward toward ears, and roll backwards.
- Return to start position.
- Perform two sets of 10 repetitions, once a day.
- Rest one minute between sets. Perform one repetition every four seconds.



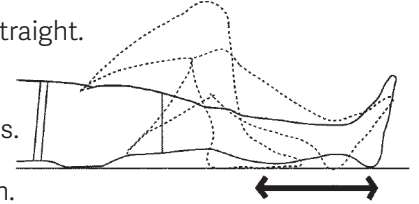
Sitting Leg Squeeze

- Sit in chair or on firm surface with towel roll or pillow between knees.
- Squeeze legs together and hold for five seconds.
- Do not hold breath.
- Perform two sets of 10 repetitions, once a day.



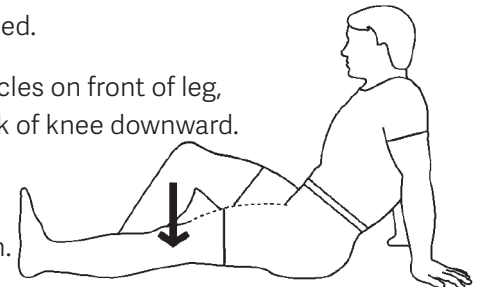
Heel Slides

- Lie on back with legs straight.
- Slide heel to buttocks and hold for 10 seconds.
- Return to start position.
- Perform two sets of 10 repetitions, once a day.
- Rest 20 seconds between sets.



Quad Set

- Sit with leg extended.
- Tighten quad muscles on front of leg, trying to push back of knee downward.
- Hold five seconds.
- Do not hold breath.
- Perform one set of 10 repetitions, once a day.
- Hold exercise for 10 seconds.
- Begin a walking program on level ground. If you walk outside, avoid extremely hot or cold temperatures. You should be able to talk while you walk. If you cannot, slow your pace.



Walking Guideline Example

Week one (begins while in the hospital): Walk five minutes at least four times per day.

Week two: Walk 10 minutes three times a day.

Week three: Walk 15 minutes two times per day.

Week four: Walk 20 minutes two times per day.

Energy Conservation

The primary method of modifying tasks after open-heart surgery is the use of energy conservation. Consider that your cardiovascular system is healing and is not strong enough yet to resume normal daily activities.

At this point you do not have the luxury of going at your full pace and then “catching your wind.” You must plan tasks and rest breaks in advance of a multi-step task. (Note: Each patient recovers differently. Your doctor and therapists will give you specific recommendations as you progress regarding duration of activity.)

One example is showering. You may gather the needed items, then rest five minutes; sponge bathe or sit while showering (not too hot!), then rest with your towel around you; dress, then rest for an hour or two. Be sure to use pursed-lip breathing during your activities and be aware of options for resting as you go, just in case you experience any symptoms. You may be able to lean against a wall or support yourself on a countertop or table surface to give yourself the rest you need.

During any activity, you must maintain awareness of any symptoms such as chest tightness, change in sputum color/consistency/amount, fever, excessive fatigue, ankle swelling or shortness of breath. These symptoms require attention and immediate rest.

Please take time to consider your daily routine and the time and distance required for those activities. Develop ways in which you may alter these activities to conserve energy.

As you recover you will have more energy and more breathing capacity. The following is a reasonable self-care task progression to consider. All timelines are approximations:

- Week one: Have assistance to and from bathroom with items gathered for you. Be aware of strain during bowel movements and protect your chest accordingly. Perform dressing and grooming seated after items are set up for you. Self-feed prepared meals.
- Week two: Go to the bathroom and shower independently. Dress in sitting position. Obtain items for grooming and perform grooming in an alternating

sitting/standing position. Self-feed and begin to assist in brief, simple kitchen tasks. Rest as needed.

- Weeks three and four: Walk to the bathroom consistently, groom in standing position (resting against a wall or supported by a hand on counter as needed). Take a non-vigorous shower with tepid-to-warm water. Rest 20-30 minutes after each task.

As you increase your activity level, remember these principles:

- Breathing helps movement and movement helps breathing.
- Increase your activity level and positioning as you are able, without becoming short of breath.
- Perform activities slowly, using gentler motions than you normally would.
- You will have periods of “energy” and periods of “fatigue.” These are not setbacks; they are the ups and downs of healing. You cannot speed up the healing process by going harder and faster during tasks. You must respect shortness of breath, fatigue and chest discomfort, and rest accordingly. Be prepared for days when you don’t feel as well and allow yourself to rest and regain stamina.
- Use both hands whenever possible to perform a task. This keeps your incision safe and uses less energy, too. You may support yourself with one hand while performing a task with the other, but be careful to keep the shoulders somewhat forward to protect your incision.

Positioning

- Change positions frequently, keeping arms close to your body to protect your incision. Changing positions every 30 minutes to an hour promotes circulation.
- The more upright your position, the more beneficial it is for your breathing and circulation.
- When you do a task that compresses the chest (such as arms forward while washing hair or tying shoes), EXHALE. When expanding the chest (standing straight after task), INHALE.

Self-Care Tasks

Many of the tasks we do each day can quickly fatigue post-operative patients. Here are some tips to help you:

Dressing

- Gather items needed and put them in reach of the chair you use.
- Use the “over-the-head” method for all shirts (even button shirts) by keeping arms close to the body and bending slightly forward (inhale) to put over head. This limits chest stretch and overhead movements that will increase the volume requirements on the heart.
- To remove your shirt, bend forward slightly. Reach the collar with elbows forward and pull right over your head. Inhale while bending.
- While sitting down, pull your underwear and pants over your feet up to your thighs so that you only have to stand once to pull them up. You may bend forward to manage shoes/socks, but keep the arms close to the body and AVOID holding the chair arm with one hand while putting on socks with the other hand.

Bathing

- During your first week home, it is best to have someone bathe your back. Progress by bending slightly forward, closing in shoulders, and reaching to only one side at a time with the corresponding hand. Maintain awareness of incision tightness.
- Initially use tepid water for bathing, slowly progressing to slightly warmer water. Note: Hot water can alter circulation significantly. Begin by sitting to shower and progress to standing. Lean against the wall if you become short of breath.
- Allow the water to run over the incision area (not hit it directly) and do not scrub.

Kitchen/Laundry

- Observe lifting precautions (10 lbs = milk jug).
- Be aware that when your arms are over your head, there is an extra load on the cardiovascular system. Do not sustain that position or use it repetitively.
- Move frequently used items to countertop or table surfaces.
- When opening the refrigerator, bring your shoulders forward and brace with one hand in front of you, pulling with the other.
- Avoid scrubbing; instead, put warm soapy water on a stain or surface and wipe gently later.
- Be aware of one-handed techniques when reaching into cupboards, the washing machine, dishwasher etc. Keep both hands forward as much as possible and observe lifting limitations.

Vehicle Entry/Exit

- Back up to the passenger seat.
- Bend forward with arms in front of chest to sit.
- Roll entire body as you move your legs into the car.
- Reverse the technique to exit the car.

Emotions

Many lifestyle changes that occur as a result of having open-heart surgery can have a direct impact on your emotions. Here are some tips to keep in mind:

- Try to be positive. There will be days of high energy and of fatigue - even days of feeling blue or angry, all of which are a part of the physical and emotional healing process that takes place following heart surgery.
- If you are feeling emotionally overwhelmed, seek professional help. A trained counselor can help you cope more adequately with your concerns. Consult your physician for more information.
- Seeking support by talking with others who have experienced similar circumstances can be reassuring. Covenant Health’s cardiac rehabilitation program and Mended Hearts (www.mendedhearts.org) can offer support.

Dietary Information

Food Labeling

Whether you follow a special diet or simply want to “eat healthy,” the food label is a helpful tool for choosing the right foods. The front of the label is your starting point, with the product name and statements that describe the nutritional qualities of the product. These statements may be nutrient claims or health claims. Nutrient claims may be low-fat, high-fiber and cholesterol-free. Health claims link a nutrient or food to the risk of a disease or health-related condition, such as cancer.

Getting All the Facts

“Nutrition Facts” is the place to go to see how a food fits into your total daily diet. Here’s how to use “Nutrition Facts.”

Ingredient Labeling

A list of ingredients is required on almost all foods. Ingredients are listed in descending order by weight. This helps you get an idea of the proportion of an ingredient in a food. Artificial colors must be listed by name in the ingredient list. Also, the total percentage of juice in a beverage that claims it contains fruit or vegetable juice must be stated on the label.

Defining the Terms

All terms listed below are based on standard serving sizes established by labeling regulations. These standards are known as Reference Amounts.

“Free”

- Calorie-free: less than 5 calories
- Sugar-free: less than 0.5 grams of sugar
- Sodium-free or salt-free: less than 5 milligrams of sodium
- Fat-free: less than 0.5 grams of fat
- Cholesterol-free: less than 2 milligrams of cholesterol

“Low”

- Low calorie: less than 40 calories
- Low sodium: less than 140 milligrams of sodium
- Very low sodium: less than 35 milligrams of sodium
- Low fat: 3 grams or less of fat
- Low in saturated fat: contains 1 gram or less of saturated fat
- Low in cholesterol: 20 milligrams or less of cholesterol and 2 grams or less of saturated fat

“Light/Lite”

Product with 1/3 fewer calories or 50% of the fat of the reference food. Sodium content of food is reduced 50%. For main dishes “light sodium” means the food is “low” in sodium.

“Fat-Free”

Product must be low-fat or fat-free. Claim must accurately state amount of fat per 100 gram serving.

“Healthy”

A food that is low in fat and saturated fat, has 480 mg or less of sodium per serving and contains at least 10% of the Daily Value (DV) for one of the following nutrients: vitamin A, vitamin C, protein, calcium, iron or fiber.

“More”

Food contains at least 10% more of a given nutrient.

“Lean” or “Extra Lean”

Used to describe fat content of meat, poultry, seafood and game meat.

- “Lean” is less than 10 grams of fat, less than 4 grams of saturated fat and less than 95 milligrams of cholesterol per serving and per 100 grams (3.5 oz).
- “Extra lean” is less than 5 grams of fat, less than 2 grams of saturated fat and less than 95 milligrams of cholesterol per serving and per 100 grams (3.5 oz).

“Good Source”

Food contains 10% – 19% of the Daily Value (DV) of a given nutrient.

“Reduced, Less, Fewer”

Nutritionally altered products must contain 25% or less of a nutrient or calories than the regular or referenced product and 2 grams or less of saturated fat.

“High,” “Rich In” and “Excellent Source”

Food contains 20% or more of the Daily Value (DV) of a given nutrient.

| Nutrition Facts | |
|---|----------------------|
| Serving Size 1/2 Bar (34g) | |
| Servings Per Container: 2 | |
| Amount Per Serving | |
| Calories 200 | Calories from fat 70 |
| % Daily Value* | |
| Total Fat 7g | 11% |
| Saturated Fat 3.5g | 18% |
| Cholesterol 5mg | 2% |
| Sodium 70 mg | 3% |
| Total Carbohydrate 30 g | 10% |
| Dietary Fiber 6g | 24% |
| Sugars 1g | |
| Sugar Alcohol 8g | |
| Protein 4g | 8% |
| *Percent Daily Values are based on a 2,000 calories diet. | |

Nutrient amounts of one serving

Total Fat, Cholesterol, and Sodium are maximums.

Serving sizes are in household and metric units

% Daily Value gives a general idea of how the amount of nutrient in a serving fits into a 2,000 calorie diet.

Carbohydrate and fiber values are minimums.

Take Control of Your Sodium

Limiting your sodium intake may help control any condition in which you retain extra fluid, such as high blood pressure, heart failure or kidney disease. If you are taking a blood pressure medicine or a water pill, it is still important to eat less salt.

Sodium is Found in Most Foods

It may be natural or added during processing or cooking. To know if prepared foods have sodium added, read their food label. Look for words such as salt and sodium. The following will help you identify foods that are high in sodium. It also provides easy guidelines to help you limit your sodium intake.

Meats, Poultry, Fish, Eggs, and Meat Substitutes

Limit to five ounces per day (1oz = 60 mg sodium).

CHOOSE

Meat, fish, poultry, shellfish: fresh or frozen, cooked without salt.

- Low-sodium or regular tuna that has been rinsed in water and drained.
- Peanut butter, unsalted
- Tofu
- Eggs
- Low-cholesterol egg substitutes
- Frozen entrees with a starch and vegetable should not exceed 300 mg sodium.

DO NOT CHOOSE

- Cured or processed meats: corned beef, Canadian bacon, bologna, cured ham, luncheon meats, sausage, dried chipped beef, hot dogs (regular and "1/3 less sodium")
- Canned chicken, salmon, shrimp, sardines or meat
- Peanut butter, salted
- Textured vegetable protein (TVP) products
- Canned entrees such as stews, noodles or pastas

Milk and Yogurt

Limit to two servings per day (1 serving = 150 mg sodium).

CHOOSE

- Milk: reduced-fat, low-fat, fat-free, chocolate, powdered, evaporated (1 cup)
- Yogurt: plain or fruited (1 cup)
- Low-sodium processed cheese (e.g., Alpine Lace® sliced cheeses) (1 oz)
- Swiss or Mozzarella cheese (1 oz)

DO NOT CHOOSE

- Buttermilk
- All natural cheeses except those listed above
- Processed cheeses (American, cheese spread, cheese food)
- Cottage cheese

Vegetables

CHOOSE

- Canned vegetables, with no added salt
- Raw vegetables
- Fresh or frozen vegetables, cooked without salt
- Instant mashed potatoes, omit salt when preparing
- No added salt or salt-free tomato or vegetable juice
- Tomato sauce, no salt added
- Tomato paste, no salt added

DO NOT CHOOSE

- Canned vegetables
- Baked beans
- Sauerkraut
- Pickles and pickled vegetables
- Frozen seasoned vegetable dishes
- Coleslaw and potato salad, unless homemade, without salt
- Tomato or vegetable juice
- Tomato sauce
- Tomato puree

Fruits and Juices

CHOOSE

- All are acceptable

Breads, Cereals, Grains and Crackers

Limit to five servings per day (1 serving = 150 mg sodium).

CHOOSE

- Yeast breads and rolls (small)
- Bagel (½)
- English muffin (½)
- Tortilla, wheat (1 - 8 inch)
- Pita (½)
- Doughnuts, yeast (1)
- Crackers, unsalted tops (5)
- Melba toast (4)
- Dry cereal (less than 140 mg per serving), except those listed under "no limit"
- Popcorn: homemade, unsalted; microwave, unsalted
- Pretzels, unsalted

DO NOT CHOOSE

- Refrigerated dough
- Danish pastries
- Toaster pastries
- Bagels with salt toppings
- Biscuit mix
- Cornbread mix
- Commercially seasoned stuffing
- Frozen waffles
- Crackers with salt tops
- Pita
- Muffin
- Popcorn: commercially seasoned or microwaved with salt
- Snack chips, pretzels or crackers with salt

No limit

- Hot cereal, cooked without salt
- Dry cereals
 - Puffed rice or puffed wheat
 - Shredded wheat
 - Wheat germ
 - Low-sodium cornflakes
 - Low-sodium crispy rice
- Crackers
 - Low-sodium crackers
 - Unsalted matzo
- Tortillas, corn
- Pasta, noodles, or rice, cooked with no added salt

Fats

CHOOSE

- Oil or shortening
- Cream cheese, low-sodium
- Cream, dairy and non-dairy
- Sour cream
- Low-sodium salad dressing (commercial or homemade)
- Imitation whipped topping
- Margarine, unsalted (1 tsp)
- Mayonnaise, low-sodium

DO NOT CHOOSE

- Tartar sauce
- Bacon, bacon fat, "1/3 less sodium" bacon
- Gravy: canned, jarred or packet
- Salt pork
- Dips
- Salad dressing: regular, lite or fat-free
- Mayonnaise, regular

Soups

CHOOSE

- Low-sodium canned soups
- Homemade soups and broth, with no added salt
- Low-sodium soup bases

DO NOT CHOOSE

- All soups and broth, unless low sodium
- "1/3 less salt" soups
- Dehydrated soup mixes

Desserts and Sweets

CHOOSE

- Nuts, unsalted
- Sugar, honey
- Jam or jelly
- Syrups: maple, corn, chocolate, etc.
- Cranberry sauce
- Candy
- Gelatin
- Ice cream, sherbet or frozen yogurt
- Popsicles
- Homemade without salt:
 - Pie (1/8 – 9" diameter)
 - Pudding (1/2 cup)
 - Cookies (2)
 - Custard (1/2 cup)

DO NOT CHOOSE

- Olives
- Nuts with salt
- Cheesecake
- Instant pudding mixes
- Cake (1/16 – 9" diameter)

Beverages

CHOOSE

- Coffee and tea
- Carbonated beverages
- Mineral water

DO NOT CHOOSE

- Cocoa beverage mixes
- Sport beverages (such as Gatorade®)
- Soft drinks and punch

Condiments

CHOOSE

- Herbs and spices without salt, (e.g., onion and garlic powders), horseradish powder, vinegar, Mrs. Dash®, Mrs. Dash Marinades®, Tabasco® sauce
- Balsamic vinegar
- Limit to one serving per day:
 - Mustard (1 tsp)
 - Ketchup (1 tsp)
 - Worcestershire sauce (1 tsp)
 - Salsa (¼ cup)

DO NOT CHOOSE

- Salt, herb and spice blends containing salt
- Balsamic vinaigrette, commercially prepared
- Monosodium glutamate (MSG)
Note: MSG has no taste so it is not detected in foods!
- Soy sauce
- Teriyaki sauce
- Barbecue sauce
- Chili sauce
- Steak sauce
- Relish
- Papa Dash® mixes

Eating Out

Today, many restaurants provide nutrition information about their menu items. Since most fast foods and ethnic foods (Chinese, Mexican, Italian) are high in sodium, ask to see this information before making a selection. Upon request, some fast food restaurants will accommodate your needs off salt or ketchup. Another choice is to order a salad and add a squeeze of lemon instead of dressing, which is generally high in sodium. At restaurants that prepare foods “made to order,” ask that your meal be prepared without salt or MSG.

Your recommended amount of sodium per day:

Dietitian: _____

Phone # _____

Low-fat cooking can be achieved by:

- Using smaller portions of lean meats, skinless poultry and fish.
- Trimming off any visible fat.
- Using cooking methods that remove fat from red meats and poultry.
- Adding a minimal amount of healthy fat in preparing all foods.

Low-fat cooking methods:

Broil or roast: For chicken, steaks, chops and roasts, place meat on a rack so the fat can drip off. Remove the skin from the chicken or turkey before serving.

Braise or stew: For chicken, chops and steak, trim meat well and remove chicken skin before serving. “Braising” means cooking in liquid. Braising can be done on the top of the stove in a covered pan, on low flame, or in a covered dish in a slow oven (350° F). To enhance flavor, add vegetables (onions, celery, tomatoes, carrots, mushrooms) and herbs or other seasonings (garlic, sage, basil, caraway, tomato paste, ketchup, wine, and Worcestershire sauce).

Low-fat frying: Wipe frying pan with an oiled paper towel. Treating your pan in this way, turns it into a “non-stick” pan. This method is just as effective as using a pan-coating spray. Cook on low flame. If meat is broiled and/or cooked in a pan, cook thoroughly and drain off any fat. Use cookware that conducts heat slowly and steadily to prevent scorching and sticking, such as cast iron or non-stick skillets.

Vegetable seasoning suggestions: Use fat-free meat stock for seasoning vegetables. Freeze stock in ice cube trays and defrost as needed. Add a teaspoon of smoke or hickory flavoring to the broth instead of salt, pork or other meat fat. Toss vegetables with a dash of heart healthy oil, garlic powder, lemon juice, vinegar, pepper sauce or minced onion.

Combination meals: To decrease your meat intake, combine smaller amounts of lean meats with vegetables and whole grains. Examples: stir-fried meat and vegetables, chicken and rice, turkey and white-bean soup.

Cooking for a Happy Heart

LOW-FAT RECIPE MODIFICATIONS

| Ingredients | Possible Substitutes |
|---|---|
| 1 whole egg | ¼ cup egg substitute One egg white and 1 tsp. oil Two egg whites |
| 1 tbsp. butter | 1 tbsps. trans fat-free margarine 2 tsp. preferred oil (nut oils, olive oil, canola oil, non-hydrogenated soybean oil) |
| 1 cup hydrogenated cup shortening (or lard) | 2/3 cup preferred oil (nut oils, olive oil, canola oil, non-hydrogenated soybean oil) 1 cup + 3 tbsp. margarine |
| ½ cup butter or margarine | ¼ cup applesauce + ¼ cup margarine |
| 1 cup whole milk | 1 cup skim milk |
| 1 cup light cream | 3 tbsp. oil and skim milk equal to 1 cup evaporated skim milk |
| 1 cup heavy cream | 2/3 cup milk + 1/3 cup oil |
| 1 cup sour cream | ¾ cup buttermilk and ¼ cup oil 1 cup plain low-fat yogurt 1 cup blended low-fat cottage cheese |
| 1 oz. hardened cheese | 1 oz. skim milk mozzarella cheese (cheddar, colby, muenster) 2 tbsp. ricotta cheese 2 tbsp. 1% cottage cheese |
| 1 oz. (one square) chocolate | 3 tbsps. powdered cocoa + 1 tbsp. oil (for chocolate frosting or sauces) ¼ cup cocoa (for cakes or cookies) |
| 1 cup ice cream | 1 cup ice milk 1 cup low-fat ice cream with no added sugar |
| 1 oz. bacon (2 slices) | Canadian bacon, turkey or soy bacon |
| 1 cup mayonnaise | 1 cup nonfat mayonnaise 1 cup nonfat salad dressing (mayonnaise type) |

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Diabetes and Blood Sugar Control After Surgery

Diabetes is a serious condition that causes your body to have a problem controlling the amount of sugar in your bloodstream. When you eat, food is broken down into glucose (sugar). Glucose is your body's main source of energy, but cannot get into your cells without insulin. Your body makes insulin, which is actually a hormone. Insulin works to keep your blood glucose (blood sugar) in the normal range by helping it move from your blood into your cells. Over time, high blood glucose levels can lead to serious health problems with your eyes, heart, feet, kidneys and nerves. The types of diabetes include:

Type 1

Type 1 diabetes means that your body no longer produces insulin and you will need to have insulin shots every day in order to control your blood sugar. This type of diabetes occurs more often in children and young adults.

Type 2

Most people (about nine out of 10) with diabetes have Type 2 diabetes. Type 2 diabetes means that your body still produces insulin, however, your cells are less sensitive to your own insulin. You may take pills or just use diet and exercise to control your blood sugar.

Pre-Diabetes

Pre-diabetes is a condition that occurs when blood sugar levels are higher than normal but not high enough for a diagnosis of Type 2 diabetes. Most people with pre-diabetes don't even know that they have it.

Blood Sugar Control with Heart Surgery

Almost every patient who has heart surgery - whether the person has diabetes or not - gets blood sugars checked routinely. This does not mean that you are now diabetic if you have not been previously diagnosed.

After your heart surgery, it can be common for blood sugars to increase. It is very important to keep your blood sugars under tight control. If blood sugar is high, it builds up in your blood. This makes the blood vessels become thick and narrow, leading to atherosclerosis (hardening of the arteries). High blood sugar speeds the development of heart and artery disease.

People with diabetes also have an increased risk of infection and impaired wound healing. Elevated blood sugars could possibly lead to wound infections. During your recovery it is especially important to keep blood sugar well controlled in order to decrease the risk of wound-healing complications.

Your doctor may prescribe medications to control your blood sugar. There are several types of pills, insulin and other injectable medications used to treat diabetes. Each group of medications works in a different way. Many people benefit from taking a combination of medications to address different problems. Some medications have the potential to cause low blood sugar, so it is important to understand the side effects of the medications you are taking.

If you have diabetes, your surgery may cause you to have to change your blood sugar medication and/or insulin injection dosages. You might not be going home on the same medication regimen you were on before. It is very important to check and keep track of your blood sugars at home. Start a journal and write down your daily blood sugar levels, and bring this log back to the doctors' office on your follow-up visit.

Call your primary care doctor if your blood sugar reading is greater than 170 mg/dl for more than a week, or you have two consecutive blood sugar readings over 300 mg/dl.

Medications

When you are discharged, your nurse will give you prescriptions written by your doctor and a list of medications that you will be taking at home. In some cases you will not be taking the same medications you took before your surgery. Most of the time new medications will be added to your regimen as a result of having heart surgery.

Medication Guidelines

Take your medications as ordered by the physician on the discharge medication sheet. Do not discontinue any medications without talking to your doctor.

If you have pain, take your prescribed pain medications as needed, especially at bedtime and before activities. You should see a decreased need to take pain medication as you begin to heal. If you do not feel you need something as strong as your prescription pain reliever, consider taking Extra-Strength Tylenol in place of the narcotics. If you still have some pain after your prescription is completed, you may take Tylenol as directed.

Your physician's office cannot call in refills for narcotic medications.

Pain medication can cause constipation. Your surgeon has ordered a stool softener, called Colace, to take at home until you are back to your pre-surgery bowel patterns. Eating high-fiber foods, such as fruits and vegetables, and walking will help prevent constipation.

Please be aware that your pain medications might have acetaminophen (Tylenol) in them. Be careful not to take too much acetaminophen/Tylenol in one day, as this can be harmful to your liver.

If you have questions or concerns about what medications you are taking, talk with your physician, nurse or pharmacist.

Common Medications

The following is a list of common medications you may be prescribed following your heart surgery. If you have questions about any medications, please call your physician.

Aspirin

You have been started on therapy with aspirin since your heart surgery to prevent future heart attacks and/or strokes. Aspirin works by stopping production of natural substances that cause blood clots. You should take this medication at the same time every day. If aspirin upsets your stomach, try taking it with food. The main side effects of aspirin therapy are bruising and bleeding. You may notice that it takes you longer to stop bleeding after minor cuts. Remember to tell all medical personnel that you are taking this medication, and do not stop taking it without talking to your doctor.

Anti-platelets (e.g., Plavix, Effient, Brilinta)

You may be started on anti-platelet therapy after heart surgery to prevent future heart attacks and/or strokes. These drugs work by stopping natural substances in your body that produce blood clots. The main side effects of anti-platelet therapy are bruising, bleeding and headaches. Report any major bleeding to your doctor immediately. It is important to let all healthcare professionals (doctors, dentists, pharmacists, etc.) know you are on this medication. Do not stop taking this medication without talking to your doctor.

Anticoagulants (e.g., Coumadin)

You may be started on anticoagulation therapy after heart surgery to prevent future heart attacks and/or strokes. Anticoagulants work by blocking natural substances in your body that form blood clots. The main side effects of Coumadin therapy are bruising and bleeding. You may notice that it takes you longer to stop bleeding after minor cuts. It is very important to let your doctor and dentist know you are taking this medication.

Various drugs interact with Coumadin; therefore, talk to your pharmacist before starting a new medicine or herbal supplement. You will need to have your blood monitored while you are taking Coumadin to make sure your blood isn't too thick or too thin. The dose of Coumadin has been specially chosen for you by your doctor and may change during treatment. Do not stop taking this medication without talking to your doctor.

The vitamin content in food is important to look at when you are planning meals. It is OK to eat foods that contain vitamin K, but it is important to eat the same amount from week to week to avoid problems with Coumadin therapy.

Foods that contain Vitamin K include:

- Blueberries
- Broccoli
- Cabbage
- Brussels sprouts
- Green onions
- Spinach
- Turnip, collard, and mustard greens
- Lettuce
- Peas
- Beef liver
- Pork liver
- Mayonnaise
- Margarine
- Canola oil
- Soybeans
- Cashews

Beta-blockers (e.g., Metoprolol, Atenolol, Carvedilol)

You may be started on therapy with a beta-blocker, as this medication class has been proven to improve survival after your heart surgery. It works by relaxing your blood vessels and slowing your heart rate to improve blood flow and decrease blood pressure. Take this medicine exactly as your doctor tells you. You may take this medication with food or immediately after meals. The most common side effects from this medicine are dizziness, tiredness and changes in heart rate. Tell your doctor if you experience any of these that you cannot tolerate. Do not stop taking this medication without talking to your doctor.

Statins (e.g., Lipitor, Crestor, Pravachol)

This type of medicine is prescribed to decrease cholesterol levels in the blood. Your doctor may adjust this medicine based on your lab work. Blood tests are needed to measure your cholesterol levels and also check liver function. Most patients experience no or minimal side effects with these medications. Tell your doctor if you have any unexpected muscle pain, tenderness, cramps or weakness. These are rare, but serious side effects of statins. Do not take statins if you have active liver disease, are pregnant or breastfeeding. Various drugs may interact with statins, therefore talk to your pharmacist before starting a new medicine or herbal supplement.

Angiotensin-Converting Enzyme Inhibitors (“ACE Inhibitors,” e.g., Benzapril, Lisinopril)

ACE inhibitors widen the blood vessels to improve the amount of blood the heart has to pump. This will lower blood pressure and decrease the amount of stress on the heart. ACE inhibitors have been proven to help protect and increase survival. Common side effects are dizziness, lightheadedness, cough, and salty taste. If a cough is present, use sugarless candy or cough drops to lessen cough episodes. If bothersome, talk with your physician. Monitor blood pressure before taking medication. Follow the prescribed range for when to take or hold medication. Salty taste will usually go away after four to six weeks. Keep all lab appointments. Angioedema (swelling of the face, eyes, and lips) is a rare side effect, but be aware if occurs.

If you develop swelling of the face, eyes, and lips, call 911. This can be an allergic reaction and can lead to a medical emergency.

Angiotensin II Receptor Blockers (“ARB’s,” e.g., Valsartan, Losartan)

Angiotensin Receptor Blockers block a natural substance called angiotensin that narrows blood vessels. ARB’s relax and widen blood vessels to help blood flow more easily, which lowers blood pressure. Common side effects are dizziness, lightheadedness, increased potassium, and metallic taste. Monitor and record blood pressure every day before taking medication. Follow prescribed parameters for when to hold or continue the medication. Keep all lab appointments to check potassium and kidney levels.

Antiarrhythmics (e.g., Amiodarone, Diltiazem, Digoxin)

These drugs affect the heart's electrical activity by slowing the conduction of impulses through the heart or blocking electrical impulses. By taking this medication you're helping your heart keep its normal rhythm. Tell your doctor about all the medicines you take, including prescription and nonprescription medicines, vitamins and herbal supplements.

Antiarrhythmics and certain other medicines can interact with each other, causing serious side effects. Sometimes the dose of the antiarrhythmic or other medicine must be changed when they are used together. The dose of the antiarrhythmic has been specially chosen for you by your doctor. Keep taking your medicine until your doctor tells you to stop. Your doctor will decide how long you need to stay on this medication.

Your Surgeon and Office

The physicians of East Tennessee Cardiovascular and Thoracic Surgery Group are the region's most experienced cardiothoracic surgeons and have performed more than 11,000 open-heart surgeries.

The physicians have three convenient locations:

East Tennessee Cardiovascular and Thoracic Surgery Group

9125 Cross Park Drive, Suite 200
Knoxville, TN 37923
865-632-5900

1819 West Clinch Avenue, Suite 110
Knoxville, TN 37916
865-331-9075

988 Oak Ridge Turnpike Suite 380
Oak Ridge, TN 37830
865-481-0183

www.etcvsg.com

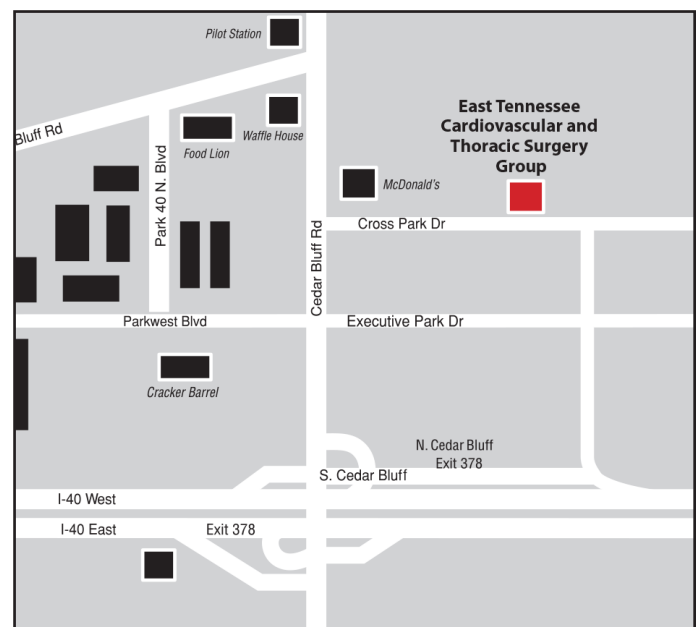
Directions to West Knoxville Office:

From East 40/North 75 (Knoxville/Asheville):

Exit at 378B Cedar Bluff Road and stay to the far right off the exit (as if going to North Cedar Bluff Road). Continue straight through the light off the exit (Executive Park Drive). At the next four-way stop, turn left onto Cross Park Drive and continue for roughly 1,000 feet. Turn right at the second access road. (Our brick office building complex is on the right to your right.) Take another right into Cross Park Center and our office is straight ahead on the second floor of the 9125 building.

From West 40/South 75 (Atlanta/Chattanooga/Nashville):

Exit at 378 Cedar Bluff Road and turn left onto North Cedar Bluff. Immediately after passing Cross Park Drive, take a right between the McDonald's and First Horizon. Continue on the access road (pass Country Inn & Suites) until it dead-ends at our 9125 building. We are located on the second floor.



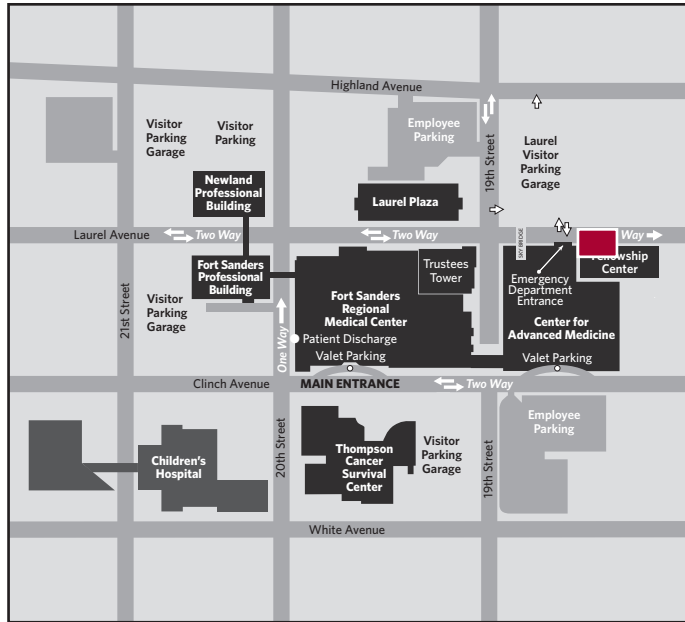
Directions to Downtown Office:

From East 40/North 75 (Knoxville/Asheville):

Follow I-40 West toward downtown Knoxville. Use the right lane to take exit 387 toward 17th Street/Western Avenue. Continue onto Ailor Avenue. Turn right onto North 17th Street. Turn right onto Clinch Avenue. Our office is located on the right in the first floor of the Center for Advanced Medicine, which is adjacent to Fort Sanders Regional Medical Center.

From West 40/South 75 (Atlanta/Chattanooga/Nashville):

Follow I-40 East toward downtown Knoxville. Take exit 387 towards TN-62/17th Street/Western Avenue. Merge onto Dale Ave NW. Use the right two lanes to turn right onto North 17th Street. Turn right onto Clinch Avenue. Our office is located on the right in the first floor of the Center for Advanced Medicine, which is adjacent to Fort Sanders Regional Medical Center.



Directions to Oak Ridge Office:

From West Knoxville:

Take I-40 exit 376A to Oak Ridge (Hwy 162N). Follow signs to Oak Ridge and merge right onto Lafayette Avenue. Merge right onto Oak Ridge Turnpike and travel approximately 1.5 miles to Physicians Plaza building on Methodist Medical Center's campus. Our office is on the third floor.

From Harriman, Rockwood, Kingston and Crossville:

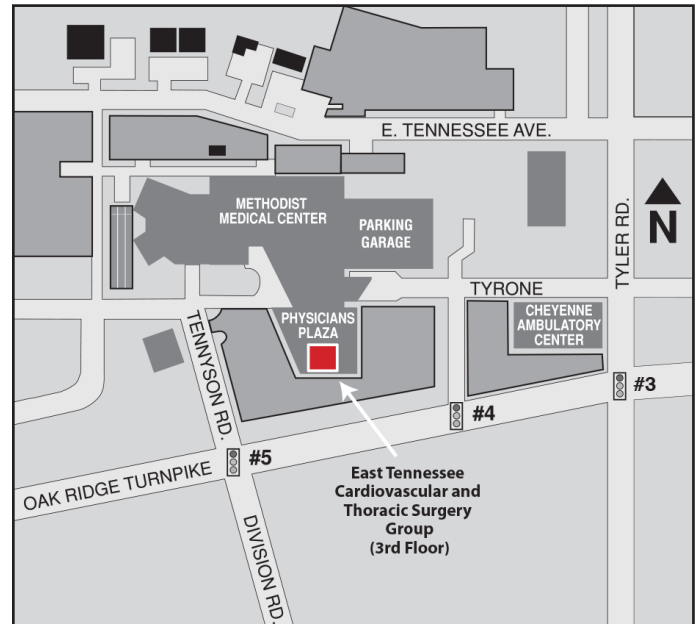
Take I-40E to Gallaher Road, exit 356. Follow Hwy 58 signs to Hwy 95 (Oak Ridge Turnpike). Travel approximately 6 miles to Physicians Plaza. Our office is on the third floor.

From Sunbright, Wartburg, and Coalfield:

Travel east on Hwy 62 toward Oak Ridge. Turn left from Illinois Avenue onto Oak Ridge Turnpike (Hwy 95). Travel approximately 1.5 miles to Physicians Plaza building on Methodist Medical Center's campus. Our office is on the third floor.

From Lake City, Clinton and Norris:

From Clinton, take Hwy 61 to Hwy 95 (Oak Ridge Turnpike). Travel approximately 2.5 miles to Physicians Plaza building on Methodist Medical Center's campus. Our office is on the third floor.



Coumadin Log

Anticoagulation Flowsheet

Patient Name: _____ MD: _____

DOB: _____ Diagnosis: _____ INR Range: _____

| DATE | PT | INR | WEIGHT | DOSE & COMMENTS |
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