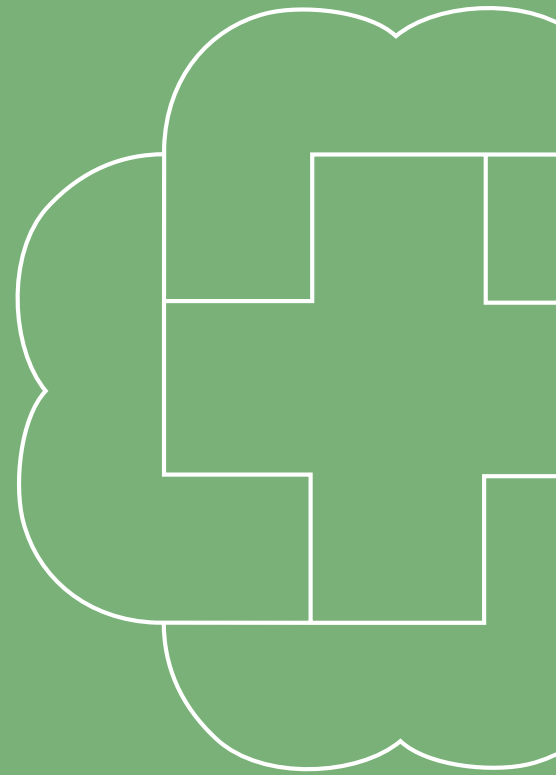


As You Recover from Cardiac Surgery

Information and Guidelines



As You Recover from Cardiac Surgery

Information and Guidelines

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Introduction

This notebook tells you what to expect after your heart surgery. We hope this information will help you have a successful recovery.

Keep in mind that you are unique. Every health situation and surgery recovery is different. If you have questions, you should feel free to call your heart surgeon or heart doctor.

Words to Know

Here are some important terms related to heart surgery. Some are used in this notebook. Others may be used by your doctor.

Aorta: The main blood vessel that carries blood from the heart to the body.

Artery: Blood vessel that delivers oxygen-containing blood to the heart and other organs.

Atherosclerosis: Fatty deposits called plaque lodge in the walls of the arteries. This can block the artery and lead to a heart attack or need for bypass surgery.

Atrial fibrillation: An irregular rhythm in the heart. This may be a fast rhythm that starts in the atrium. This is a common complication after heart surgery, and it usually goes away. You may need medication to control this rhythm.

Atrium: Top two chambers of the heart.

Coronary artery: The blood vessels that carry blood to the heart muscle.

Coronary artery bypass surgery (CABG or “cabbage”): Heart surgery to create a new path for blood to flow to heart muscle that is affected by blocked arteries.

Coronary artery disease (CAD): When the coronary arteries narrow or are blocked by a buildup of a fatty deposit called plaque.

Cox-Maze procedure: Surgical procedure done with CABG or valve surgery. It corrects or prevents atrial fibrillation — an irregular heart rhythm.

Ejection fraction (EF): A measurement of the pumping ability of the heart muscle. An EF of 50% or more is considered normal.

Heart valves: Aortic, mitral, tricuspid and pulmonic valves. These can be either too tight (stenotic) or not tight enough (insufficiency or regurgitation). Mitral valves can sometimes be repaired, but other valves are replaced with a mechanical valve or a valve made from animal tissue.

Hyperlipidemia: Abnormal blood profile of the components cholesterol, triglycerides, HDL (good cholesterol) and LDL (bad cholesterol).

HDL: High-density lipoprotein, one form in which cholesterol travels in the blood. HDL is the “good cholesterol,” which contains a lot of protein. It actually works to clear cholesterol from the blood.

LDL: Low-density lipoprotein, one form in which cholesterol travels in the blood. LDL is the “bad cholesterol” — the main source of artery-clogging plaque.

INR: International Normalized Ratio. Lab test used to measure effect of the blood thinner Coumadin®.

LIMA: The left internal mammary artery. This artery is located under the left side of the breastbone and is often used for a bypass graft.

Myalgia: Muscle achiness sometimes caused by medications.

Myocardial infarction or heart attack: Occurs when plaque ruptures and causes a clot to form and block the artery. The heart muscle is damaged when it does not get enough blood and oxygen.

Vein: Blood vessel that returns blood and oxygen to the heart and lungs. Veins are used for heart bypass grafts.

Ventricles: Bottom two chambers of the heart. The pumping chambers.

Ventricular remodeling: Surgical procedure that changes the shape of the heart and allows the ventricles to pump better.

General Guidelines for Heart-Healthy Living

- Take your medications as directed.
- **Stop smoking.** A stop-smoking program may be helpful. One resource is Bronson's Smoking Cessation Specialist, (269) 341-6729.
- Maintain a healthy body weight.
- Get moving! Join a cardiac rehab program and walk daily with a family member or a friend.
- Control your blood lipids (cholesterol, triglycerides, LDL) by following a low-fat food plan.
- Control your diabetes with a sensible food plan.
- Limit visitors if they interrupt your planned activity or rest times. Don't be afraid to say your doctor told you to rest after lunch, etc.
- Go to the nearest Emergency Department (ER) or call 911
 - If you feel chest discomfort
 - If you feel symptoms like those you had before your heart surgery

Follow-up Appointments/Care

Your Bronson discharge instructions will tell you when to see your doctors for follow-up care.

- Your cardiothoracic (heart) surgeon will usually see you:
 - 1-3 weeks after discharge if you have staples or sutures to be removed, or as directed,
and
 - 4-6 weeks after surgery. After this appointment, you may be allowed to:
 - Drive
 - Start lifting more weight
 - Discuss returning to work
- Your cardiologist (heart doctor) will usually see you 1-4 weeks after discharge.
- The home health care registered nurse will see you the day after discharge and then as needed.
- Choose a cardiac rehab program and call to set up your first appointment.
- Other appointments may be needed.

Note: Call your heart surgeon's office promptly if:

- You feel like your breastbone is “loose,” especially after a cough or sneeze.
- You have any signs of infection (fever higher than 101 degrees, chills, or your incision is red, swollen or draining).

Frequently Asked Questions

Q: Which doctor will take care of me after I leave the hospital?

A: Your heart surgeon and heart doctor will want to see you 1 to 4 weeks after discharge. Please call those offices for an appointment. You should also call your primary care doctor for an appointment.

Q: Whom do I call for my prescriptions?

A: You will get prescriptions before you leave the hospital. Be sure to take only the medicines listed on your discharge papers. If you have questions about your pain medicine, ask your heart surgeon. Other medication questions can be handled by your heart doctor or heart surgeon.

Q: Why do I have tingling, creepy-crawly sensations across my chest — often on my left side?

A: An artery under the left side of your breastbone was used during surgery. The sensations will go away with time.

Q: Why do I feel winded during activity?

A: Your lungs were inflated and deflated during surgery. You will feel less winded as time goes on. Remember to keep using your incentive spirometer after discharge.

Q: Why am I having trouble sleeping?

A: Your usual sleeping pattern was upset while you were in the hospital. If you had trouble sleeping before surgery, it may be worse now. Try to nap less during the day, or not at all. Some people need medication to get back to normal. Your primary care doctor is the best person to handle this problem.

Q: Is it normal to have swelling at the top of my incision?

A: Yes. Swelling will shrink with time.

Q: Is it normal to have less appetite?

A: Yes. Appetite often decreases after surgery, but it will return to normal.

Q: Why am I constipated?

A: Pain medications can sometimes cause constipation. Try an over-the-counter stool softener. If the problem continues, consult your primary care doctor.

Q: Is it normal to have mood swings and feel irritable?

A: Yes. Many people feel depressed after heart surgery. This feeling usually goes away with time. If you don't begin to feel better, talk with your primary care provider.

Q: My leg with the incision is still swollen. Is this normal?

A: Yes. It takes months for the remaining veins to take over completely. It will help to elevate your legs above the level of your heart. Do this for at least 10 minutes 3 times a day. If your legs are swollen in the morning *before* getting out of bed, elevate your legs on a pillow overnight.

Q: I have less endurance. Is this normal?

A: Yes. You had major surgery and were not active for awhile. You will regain your endurance over time. Participating in a cardiac rehab program will help. Your heart surgeon and heart doctor will discuss options with you.

Q: Why do I hear or feel my heart beating? (This happens most often to thin patients.)

A: An “insulating” tissue that surrounds the heart was removed during surgery. This sensation will decrease with time.

Problems to report to the heart surgeon:

- Incisions that are red, warm to the touch, or have any drainage
- Fever higher than 101 degrees or chills
- The feeling of movement in your breastbone
- Pain in your incision that is not helped with your pain medicine
- If you need a refill for pain medicine. Please try to call the office during regular business hours. Have your pharmacy phone number ready.

Problems to report to the cardiologist (heart doctor):

- Shortness of breath (especially when you are at rest). This can be a sign of heart failure.
- Weight gain of 2 pounds in 2 days or 5 pounds in 5 days
- Problems with heart rate or rhythm, including feelings of palpitations or heart racing, or with blood pressure
- Increased leg swelling
- Any other medical problems
- If you have questions about medicines (besides your pain medicines), or if you need refills

Taking Care of Your Incisions

- Keep incision clean and dry. Clean incision with soap and water in the shower every day.
- Shower only! Do not take a tub bath because you should not soak your incisions. Also, a bath will make you push or pull too much to get out of the tub. Stay out of a **hot tub** until the surgeon gives the okay.
- Keep any open area clean and dry.
- Do not pick at scabs.
- Wash your hands often during the day. Keep your fingers away from your incisions.
- Do not use oils, lotions or ointments on the incisions until they are well healed.
- Staples or sutures may be cleaned daily with soap and water when showering. Be careful that the washcloth does not snag the staples.
- Remove the steristrips (paper strips) from ALL incisions by 2 weeks after your surgery. It is okay if they came off with showering. Their purpose is to make your incisions small — not hold your incision together.

Protecting Your Breastbone

- Hold a small, flat pillow against your breastbone incision to support it when you cough or sneeze. Also do this when you get up out of a chair or bed.
- Do not push or pull with your arms.
- Do not lift more than 5 pounds.
- Do not do any activity that strains or moves your mending breastbone. Examples: swinging a golf club, changing sheets on the bed, mowing a lawn, raking, etc.
- Driving:
 - Do not drive until your surgeon says it's okay. This is usually 4-6 weeks after surgery.
 - State law requires you to wear a lap belt and shoulder strap when you ride in the car. For comfort, you can put a pillow between your chest and the shoulder strap.
 - If the shoulder belt is uncomfortable when you return to driving, you are **not** ready to be driving.

Medications

The following medicines are often prescribed for patients who have heart conditions. The information is divided by drug classes. Each section contains general information and possible side effects.

It is important to learn your medicines and know what they are used for.

General Guidelines

- Always keep a complete list of your medicines with you. Include herbal supplements and both prescription and over-the-counter medicines. List drug name, dose (how much you take), and how often you take it. Update this list every time you go to the doctor, hospital or emergency room.
- Use just one pharmacy to prevent harmful drug interactions.
- Tell **ALL** your doctors about any changes in your medicines. This includes starting or stopping any medicines.
- Take your medicines as ordered by your doctor. Do not double up on doses if you miss a dose.
- Call your doctor if you have serious side effects from your medicines.

Aspirin

- Most patients receive instructions to take an aspirin after CABG surgery. Aspirin keeps platelets in the blood from sticking together and forming clots in the coronary arteries and new bypass grafts. Aspirin is also used to prevent strokes.
- The dose of aspirin is determined by the surgeon.
- Side effects can be abdominal or stomach cramps, pain or discomfort (mild or moderate); heartburn; indigestion; nausea or vomiting. These should be reported to your doctor.

Blood Thinners such as Warfarin (Coumadin®)

- Warfarin (Coumadin®) prevents blood clots from forming or growing larger. It is often used for patients with atrial fibrillation and patients who have had valve surgery. Patients with these conditions are at risk for developing a clot.
- Your doctor or pharmacist will decide how much Warfarin (Coumadin®) you need (your dose) by a blood test. Your results are reported as an International Normalized Ratio (INR). Your dose may change based on your INR or other risk factors. At first, you will need frequent blood tests. Once you are on a stable dose, you will need the tests less often, such as monthly. Your doctor or pharmacist will determine how often.
- Several factors may affect your INR. These include sickness, changes in diet or activity, and taking other medicines. **Both prescription and over-the-counter medicines such as ibuprofen (Motrin®, Advil®) or acetaminophen (Tylenol®) can affect your INR. Try to keep a consistent diet. Tell your doctor or pharmacist about taking any NEW medicines, such as an antibiotic for infection.**
- Warfarin (Coumadin®) has side effects and reactions that can be related to bleeding. Warfarin (Coumadin®) may turn your urine red-orange. This is usually harmless. Other side effects include headache, upset stomach, diarrhea, fever and skin rash. **If you have blood in your urine, or other unusual bleeding or bruising, black or bloody stools, tiredness, dizziness, or unexplained fever, chills, sore throat or stomach pain, call your doctor immediately.**

Antiplatelet Medications such as Clopidogrel (Plavix®)

- Clopidogrel (Plavix®) also helps to keep platelets in the blood from sticking together and forming clots. When taken daily, it can reduce your risk of having a heart attack or stroke. This medicine is also used for patients who have a stent or have atherosclerosis (blockages in the arteries).
- Side effects may include mild abdominal or stomach pain, aching muscles, back pain, dizziness, a general feeling of discomfort or illness, headache and heartburn. These may go away as your body adjusts to the medicine.
- **Call your doctor immediately if you notice bruising or bleeding, especially bleeding that is hard to stop. Bleeding inside the body sometimes makes you feel faint or you may have bloody, black or tarry stools. If this happens, call your doctor immediately.**

Pain Medications such as Acetaminophen/Hydrocodone (Vicodin®, Lortab®), Acetaminophen/Codeine (Tylenol #3®, Tylenol with Codeine®), Tramadol (Ultram®), Acetaminophen/Propoxyphene (Darvocet®), Acetaminophen (Tylenol®)

- Take your pain medicine as prescribed by your doctor.
- Pain medicines by mouth are used to relieve moderate to severe pain after surgery.
- You can usually feel their effect 15-30 minutes after taking them.
- Talk to your doctor about the safe use of alcohol when taking any medicines, especially those that may contain a narcotic.
- Do not take more than 4000 mg. acetaminophen (Tylenol®) per day.
- Be aware of how much acetaminophen (Tylenol®) is in your pain medication.
- Side effects are lightheadedness, dizziness, nausea, upset stomach, vomiting, constipation and rash.

Antiarrhythmics such as Amiodarone (Cordarone®)

- Amiodarone (Cordarone®) is a medication used to prevent arrhythmias. Arrhythmias are abnormal heart rhythms caused by a disturbance in the heart's electrical system. This medicine can prevent the return of arrhythmia or lower the risk of arrhythmia in high-risk patients.
- **Call your doctor immediately if you have any of the following symptoms: lightheadedness, fainting, blurred vision, seeing halos, eyes are sensitive to light, yellowing of the whites of the eyes, shortness of breath, or bluish skin color.**
- Many medicines interact with Amiodarone (Cordarone®). Tell your doctor about all other medicines you are using, especially those for heart conditions and antibiotics.
- **Do not eat** grapefruit or drink grapefruit juice at all while you take this medicine.
- While you are on this medicine, your doctor may recommend a yearly eye exam. Your doctor may also order tests to evaluate your liver function, thyroid and pulmonary function.

Beta Blockers such as Metoprolol (Lopressor®, Toprol®), Carvedilol (Coreg®), and Atenolol (Tenormin®)

- Beta blockers work by slowing your heart rate, which results in stronger contractions. They are used to prevent heart attacks — especially in patients who have had open-heart surgery.
- Beta blockers are also used to treat high blood pressure, congestive heart failure, abnormal heartbeats and chest pain.
- Common side effects of beta blockers include drowsiness, shortness of breath, diarrhea, swelling of hands or feet, and dizziness or lightheadedness.
- Do not suddenly stop taking this medicine.

ACE Inhibitors such as Lisinopril (Zestril[®]), Ramipril (Altace[®]), Benazepril (Lotensin[®]), Enalapril (Vasotec[®]), Quinapril (Accupril[®]) / ARBs such as Valsartan (diovan[®]), Olmesartan (Benicar[®]), Losartan (Cozaar[®]), Irbesartan (Avapro[®])

- ACE Inhibitors and ARBs are used to treat high blood pressure, heart failure, and improve survival rates after a heart attack. They are also used in patients who have a low ejection fraction.
- ACE Inhibitors also increase the blood flow in the kidneys. This helps protect the kidneys for patients who have diabetes.
- One common side effect is dizziness and lightheadedness, especially at the beginning of therapy. Other side effects include headache, diarrhea, more risk of infection and more sun sensitivity. **Call your doctor or go to the emergency room immediately if you have any swelling of the tongue, lips or nose with sudden trouble breathing or swallowing.**
- Contact your doctor or pharmacist if you suffer from a chronic dry cough while you are taking this medicine.

Calcium Channel Blockers such as Amlodipine (Norvasc[®]), Verapamil (Calan[®]), Diltiazem (Cardizem[®]), Nifedipine (Procardia[®])

- Calcium channel blockers work by slowing the heart rate and opening blood vessels. They are used to treat chest pain and high blood pressure and to prevent atrial fibrillation and rapid heartbeat.
- Common side effects include headache, dizziness, flushing, shortness of breath, muscle cramps, constipation and swelling of hands or feet.
- Call your doctor or pharmacist if you have shortness of breath, low blood pressure, dizziness or an irregular heartbeat.

Lipid-Lowering Medications such as Atorvastatin (Lipitor®), Lovastatin (Mevacor®), Simvastatin (Zocor®), Rosuvastatin (Crestor®), Pravastatin (Pravachol®), Ezetimibe (Zetia®)

- These medications are used to lower cholesterol and triglycerides in your body and prevent the buildup of plaque in your arteries. Along with a better diet and exercise, these medicines can prevent future heart attacks and strokes.
- Common side effects include dizziness, headache and rash. **Muscle pain (known as myalgia) is a serious side effect that should be reported to your doctor immediately.**
- **Do not drink** grapefruit juice or eat grapefruit at all while taking lipid-lowering medicines.
- Tell your pharmacist about any other medicines you are taking. Antibiotics, verapamil, amiodarone and some other medicines can have harmful interactions with lipid-lowering medications.
- Your doctor may order liver function tests on a regular basis.

Hyperglycemic Medications

- Elevated blood sugars due to the stress of the surgery do not allow for good healing.
- Diabetics may need an increase in medications after heart surgery.
- People without diabetes may need to be on medication for awhile to control their blood sugar.
- For a good recovery, it is very important to closely monitor blood sugar levels after cardiac surgery.
- Monitor your blood sugar per your doctor's instructions.
- If you use insulin, you should always have a nighttime snack before bedtime.



Medication Record

Date: _____

| Medication | Dose | Breakfast | Lunch | Dinner | Bedtime |
|------------|------|-----------|-------|--------|---------|
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MEDICATIONS

Feel free to make additional copies of this chart. For more tips about medication storage, visit the Heart Hospital at Bronson section of Bronson’s website at **bronsonhealth.com**. For questions about your medications, please call your doctor or pharmacist.



Medication Record

Date: _____

| Medication | Dose | Breakfast | Lunch | Dinner | Bedtime |
|------------|------|-----------|-------|--------|---------|
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MEDICATIONS

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Rehabilitation / Activity

Inpatient Cardiac Rehabilitation

Your doctor has asked that you take part in the Inpatient Cardiac Rehab Program while you are in the hospital. An occupational therapist trained in cardiac rehab will meet with you. You will learn about activities that will improve your recovery.

Follow these guidelines **until your appointment with your surgeon 4-6 weeks after your surgery**. At that time, you will get instructions for increasing your activity.

DON'T

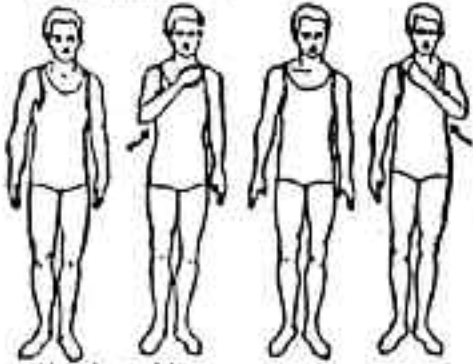
- No lifting more than 5 pounds
- No pushing / pulling with your arms
 - No using your arms to get out of a chair or bed
 - No household duties, such as vacuuming, mopping, hammering, sawing or sanding
 - No tub baths
 - No holding your arms overhead for a long period of time
- No driving until your surgeon says it is okay

DO

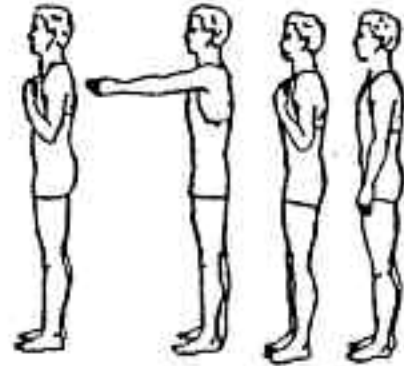
- Take at least 3 walks every day
 - Check pulse before and after
- Do your cardiac rehab exercises 2 times every day
 - Check pulse before and after
- Switch between rest and activity
 - This includes resting after meals

Post Cardiac Surgery Exercises

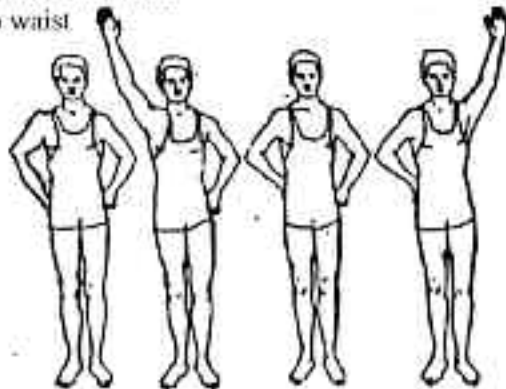
1. Arms at side
Left hand to right shoulder
Left hand down
Right hand to left shoulder
Right hand down



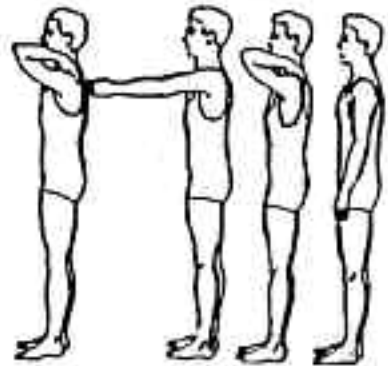
2. Bring both hands to chest
Straighten arms in front
Both hands back to chest
Arms down at side



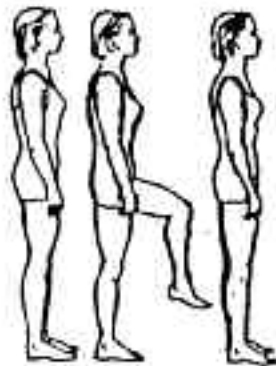
3. Hands on hips
Raise right arm over head
Return to waist
Raise left arm over head
Return to waist



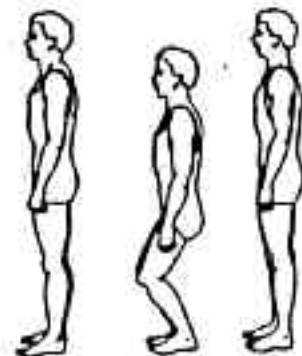
4. Bring both arms to shoulders
Straighten arms in front
Both arms back to shoulders
Arms swing down to sides



5. Raise right knee level with hip
Lower right leg
Repeat with left leg
(Use chair for support if necessary)



6. Half knee bends
Keep heels on floor
(Use chair for support if necessary)



Your Exercise Program

- Start your walks and exercises the first full day you are home.
- Walk 3 times and do your standing exercises 2 times every day.
- Record your pulse: (See how to take your pulse on page 21. Then use chart on page 22.)
 - Take pulse before starting activity. Write it down. This is your resting pulse rate.
 - Take pulse immediately after you exercise. Write it down.
 - Rest two minutes. Take pulse again and write it down.
- After you exercise, your pulse should not be more than 20 beats above your resting pulse rate. After 2 minutes of rest, your pulse should be within 5 beats of your resting pulse. If it is not, rest longer. Then take your pulse again.
- If you feel short of breath, very tired, or have chest pain during or after your exercises, walking or any activity, stop. Rest until you feel better. Then begin your activities again at a slower pace. **If your symptoms do not go away with rest or prescribed medicines, call your cardiologist (heart doctor) or 911.**
- Plan your walk so that you have a place to stop and sit down if you need to.

EXERCISE DON'TS

- Avoid hot showers after exercise. “Cool off” at least 20 minutes before you shower.
- Do not exercise when you are sick. Resume gradually. Take as much time as you missed to work up to the level you were before you got sick.
- Avoid “all out” efforts during exercise.
- Avoid stair-climbing as part of your exercise.
- Avoid walking outdoors if it is really windy.
- Avoid walking outdoors when it is very warm and humid, or when it is cold.
- Avoid walking in areas with lots of hills.
- Do not walk alone outside for the first 2 weeks after returning home.

- Do not begin exercise or walking if your resting pulse is at 110 or more. Call your cardiologist (heart doctor) if your resting pulse rate is 110 or more.
- Continue to increase your walking time or repetitions of exercises until you see your surgeon at the first office visit. (Remember to keep your pulse within 20 beats of your resting pulse rate!)

How to Take Your Pulse

1. Place palm up.
2. Use first two fingers (never thumb) of opposite hand to feel beat.
3. Place fingers on wrist just below base of thumb.
4. Now find your pulse while looking at a watch with a second hand. Count the beats for 15 seconds and multiply by 4. This number is how many times your heart beats per minute.

Tips

- Look away from the clock as you count your heartbeat. That way, you won't count the ticks of the clock instead of your heartbeat.
- Learn to take your pulse accurately. Take your pulse before and after each exercise/walking session.
- You can buy a blood pressure/pulse monitor at most drug stores and medical supply stores.

Exercise Log

| Date | Walk or Other Exercise? | Pulse Resting | Pulse After Exercise | Pulse 2 Min. After Exercise | How Do You Feel? |
|------|-------------------------|---------------|----------------------|-----------------------------|------------------|
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For additional copies of this form, please visit the Heart Hospital at Bronson section of our website, bronsonhealth.com.

Signs that Your Heart is Working Too Hard

Pay attention to how your body responds to activity. Any activity is too much for you if:

- You become **short of breath** for more than 10 minutes or when you are not walking or exercising.
- Your pulse rate **does not return** to resting rate in 2 to 5 minutes.
- Your **heart pounds** or beats with an irregular rhythm.
- You become **unusually tired**.
- You become **sick to your stomach or vomit**.
- You develop **severe leg cramps**.
- You become **lightheaded, dizzy or faint**.

If you have any of these symptoms, stop activity right away. If they don't go away, call your heart doctor.

If you have chest discomfort (heaviness or pressure) or any symptom like you had before surgery, call your heart doctor or 911.

Name _____

Address _____

City/State/Zip _____

Phone _____

Medical Conditions _____

fold here

Family Doctor _____

Phone _____

Heart Doctor _____

Phone _____

Identification Card

You should always carry an ID card, especially when walking. You can use the card here, or make your own.

- **Archery:** You can begin archery after 3 months.
- **Swimming:** Avoid lake or pool swimming for at least 3 months, and incision is healed.
- **Tub baths:** Avoid tub baths for at least 2 months. Shower instead. Before returning to tub baths, your incision must be completely healed. You should also be able to get out of the tub without help.

Outpatient Cardiac Rehab Programs

Your doctors would like you to participate in outpatient cardiac rehab. You may be able to begin outpatient rehab in as few as 2 weeks.

You may choose any of the outpatient cardiac rehab programs listed below. Call to schedule your first (assessment) appointment the first week you are home.

The program you choose will check to see if your insurance plan will cover your appointments. They will also contact your heart doctor if needed.

Outpatient cardiac rehab includes monitored exercise, education and support.

**Bronson Cardiac Rehabilitation at the
Bronson Lifestyle Improvement & Research
Center (LIRC), Oshtemo (269) 544-3220**

OTHER PROGRAMS

- Allegan General Hospital (269) 686-4377
- Battle Creek Health System (269) 966-8199 option 2
(Cardiac Rehab with Physical Therapy Department)
- Borgess Outpatient Cardiac Rehab (269) 552-2200
- Community Health Center of Branch County, Coldwater . . . (517) 278-8596
- Foote Hospital, Jackson (517) 788-4908
- Lakeland Medical Center, Niles (269) 687-1405
- Lakeland Medical Center, St. Joseph (269) 983-8893
- Sturgis Hospital (269) 651-7824
- Three Rivers Health (269) 273-9758

Dietary Guidelines

As You Recover from Open Heart Surgery

- Remember, you need good nutrition in order to heal. Keep this in mind even if you don't feel hungry.
- Try to eat balanced meals that are high in protein. Fish, chicken, turkey, low-fat milk, yogurt and low-sodium cheese are high-protein foods.
- You may prefer small, soft, frequent meals rather than a large meal.

- To avoid fluid weight gain, limit your daily intake of sodium to around 2000-2400 milligrams.

Foods Not Recommended:

1. The salt shaker — including lite salt, kosher salt and sea salt. Ask your doctor if you can use a salt substitute.
 2. Cottage cheese and processed cheeses: Velveeta®, Cheez Whiz® or anything labeled “processed cheese food”
 3. Regular canned vegetables or vegetables frozen with a sauce
 4. Vegetable juice
 5. Salted crackers, pretzels, potato chips, corn chips, nuts or popcorn
 6. Regular canned or smoked meats, poultry or fish; salt pork; and processed luncheon meats, bacon, sausage, deli meats, hot dogs or ham of any type
 7. Regular canned soups, bouillon cubes or broth
 8. Frozen dinners
 9. Packaged meals like macaroni and cheese, beef stew, etc.
 10. Condiments: relish, pickles, regular catsup, soy sauce — regular or lite, barbeque or Worcestershire sauce, meat tenderizers, herbs with salt added, and garlic or onion salt
- Weigh yourself every morning and write down your weight. If it increases by 2 pounds in 2 days or 5 pounds in 5 days, call your cardiologist (heart doctor).

Keeping Your Heart Healthy with the Therapeutic Lifestyle Change (TLC) Meal Plan

The TLC meal plan is a way of eating that is

- Low-saturated fat/low-cholesterol
- Low-sodium (see basic guidelines on p. 26)
- Increased fiber

It will help lower your blood fat/lipid levels, which will help slow down heart disease and other health problems.

To adjust this plan so it's right for you, ask your cardiologist or primary care doctor for a referral to a registered dietitian. You can also call Bronson Outpatient Nutrition Services at (269) 341-6860.

Therapeutic Lifestyle Change (TLC) Meal Plan Guidelines:

- Less than 7 percent of the day's total calories from **saturated fat**.
- 25-35 percent of the day's total calories from **fat**.
- Less than 200 milligrams of dietary **cholesterol** a day.
- Limit **sodium** intake to 2000-2400 milligrams a day.
- Maintain a healthy weight. This will help reduce your blood cholesterol level.
- Try to get 20-35 grams of fiber a day. Good sources are oat bran, beans, fresh fruits and vegetables.

Understanding the Terms in Your Therapeutic Lifestyle Change (TLC) Meal Plan

Cholesterol:

- Cholesterol is a fat-like substance found in your blood. Your body makes all the cholesterol it needs. You do not need to get cholesterol from your diet.
- Cholesterol is found in all animal foods.

Saturated Fat:

- Saturated fats can increase your blood cholesterol and LDL (“bad cholesterol”) levels. This can lead to cholesterol build-up in the arteries.
- Saturated fats are found in animal fats, like lard, butter, meat fat, chicken and turkey skin, and dairy products made from whole milk.
- Palm, palm kernel and coconut oils also contain a high level of saturated fat.

Trans-fatty Acid or Trans Fat (Try to avoid):

- Trans fats raise LDL cholesterol levels in the blood. They can increase the risk of heart disease.
- The amount of trans fat per serving in a specific food is listed on the food label.
- In the listed ingredients, trans fat is found in “hydrogenated” and “partially hydrogenated” fats.

Monounsaturated Fat:

- Monounsaturated fats are the “good fats.” They lower LDL levels without lowering HDL (“good cholesterol”) levels. Substitute monounsaturated fats for saturated fats in your diet.
- Good sources are olive, canola and peanut oils; avocado; and nuts (walnuts, hazelnuts, almonds, peanuts, pecans and pistachio nuts).

Polyunsaturated Fat:

- Polyunsaturated fats lower LDL levels and can slightly lower HDL (“good cholesterol”) levels when substituted for saturated fats in your diet.
- Good sources are liquid safflower, sunflower, soybean, corn, cottonseed and sesame oils.

Reading Food Labels

Look for the amount of **saturated fat, total fat, cholesterol and sodium**.

- ? **Serving size**
- ? **Servings in package**
- ? **Calories**
- ? **Total fat in grams**
- ? **Saturated fat in grams**
- ? **Trans fat in grams**
- ? **Cholesterol in milligrams**
- ? **Sodium in milligrams**
- ? **Dietary fiber**

Here, the label gives the amounts for the different nutrients in one serving. Use it to help you keep track of how much fat, saturated fat, cholesterol and calories you are getting from different foods. **Pay attention to the actual amounts (in grams or milligrams).** *Don't use the percents shown* (percent daily value) because they are not based on the TLC diet.

Nutrition Facts

Serving Size 1 cup (228g)
 Servings Per Container 2

Amount Per Serving

Calories 250 **Calories from Fat 110**

% Daily Value*

| | | |
|------------------------|-----|--|
| Total Fat 2g | 18% | |
| Saturated Fat 3g | 15% | |
| Trans Fat 4g | | |
| Cholesterol 30mg | 10% | |
| Sodium 470mg | 20% | |
| Total Carbohydrate 84g | 10% | |
| Dietary Fiber 0g | 0% | |
| Sugars 5g | | |
| Protein 5g | | |

Vitamin A 4% • Vitamin C 2%
 Calcium 20% • Iron 4%

* Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs:

| | Calories | 2,000 | 2,500 |
|--------------------|-----------|---------|---------|
| Total Fat | Less than | 65g | 80g |
| Sat Fat | Less than | 20g | 25g |
| Cholesterol | Less than | 300mg | 300mg |
| Sodium | Less than | 2,400mg | 2,400mg |
| Total Carbohydrate | | 300g | 375g |
| Dietary Fiber | | 25g | 30g |

Calories per gram:

Suggested Foods for the Therapeutic Lifestyle Change (TLC) Meal Plan

Meat/Poultry/Fish/Dry Beans/Eggs/and Nuts (Eat 5 to 6 ounces per day):

- Select only the leanest meats, poultry, fish and shellfish.
- Choose skinless, white-meat chicken and turkey.
- Use fresh ground turkey or chicken that is made from white meat.
- Fish is low in saturated fat and provides healthy Omega-3 oils.
- Try meat substitutes like dry peas and beans and tofu.
- Limit egg yolks to no more than 2 per week.
- Egg whites and egg substitute contain only protein. You can have as many as you like on the TLC meal plan. (Note: 2 egg whites = 1 whole egg in a recipe.)
- Unsalted walnuts, hazelnuts, almonds, peanuts, pecans and pistachio nuts are good for your heart. ($\frac{1}{3}$ Cup = 1 ounce meat equivalent.)

Milk, Yogurt and Cheese Group (Eat 2 to 3 servings per day):

- Drink skim, $\frac{1}{2}$ % or 1% milk rather than whole or 2% milk.
- Look for hard cheeses that are “fat-free,” “reduced-fat,” “low-fat” or “part-skim.” Remember to be mindful of sodium content.
- Choose low-fat or non-fat yogurt.
- Use low-fat or non-fat sour cream or fat-free cream cheese in recipes and dips.

Fruits and Vegetables (Eat 3 to 5 servings of each per day):

- Fresh, plain, frozen or low-sodium canned fruits and vegetables are best.
- Low-sodium vegetable juices are best.

Breads/Cereals/Rice/ Pasta/Grains (Eat 6 to 11 servings per day):

- Choose whole-grain breads, rolls, cereals, pasta and brown rice. Limit products that come with seasoning packets.
- Limit sweet baked goods such as croissants, pastries, muffins, biscuits, butter rolls and doughnuts.
- Choose unsalted and low-fat crackers, like graham crackers and unsalted saltines.

Fats and Oils:

- Choose liquid vegetable oils that are high in monounsaturated fats, like canola, olive and peanut oils.
- Use liquid margarines or vegetable sprays in place of stick or tub margarine.
- Choose margarine that lists water and unsaturated liquid vegetable oils as the first ingredients. The more liquid the margarine, the better it is for your heart.
- Avoid butter, lard, fat-back and solid shortenings.
- Use low-fat or non-fat mayonnaise.
- Use vinegar or olive oil/vinegar in place of salad dressings.
- Read the label of low-fat or non-fat salad dressings to control sodium intake.

Sweets and Snacks (Limit to avoid excess calories):

- Try angel food cake topped with fruit puree or fresh fruit slices.
- Choose fat-free or low-fat brownies, cakes, cupcakes and pastries.
- Choose fat-free or low-fat cookies like animal crackers, fig and other fruit bars, ginger snaps, and vanilla or lemon wafers.
- Choose frozen low-fat or non-fat yogurt, fruit ice, ice milk, sherbet, sorbet and Popsicles®.
- Try gelatin desserts with lite whipped topping.
- Choose baked and unsalted potato chips or tortilla chips.
- Choose unsalted pretzels and popcorn (air popped or “light”) without salt.

How to Socialize while on the Therapeutic Lifestyle Change (TLC) Meal Plan

- At a buffet, look ahead in line to see what foods are available.
- Limit the number of high-fat foods you eat. Be aware of portion size.
- At a potluck, bring a dish that is low in saturated fat, total fat and cholesterol.
- At parties, focus on activities rather than on eating.
- Sit away from the area where the food is being served. You will be less tempted to overeat.
- Have answers ready to politely say no to high-fat foods. For example, “Thank you, but I couldn’t eat another bite. Everything was superb.”
- If you eat too many high-fat foods at a social event, don’t feel guilty. Just get back on track the next day.

How to Dine Out on the Therapeutic Lifestyle Change (TLC) Meal Plan

- Go to one of the many restaurants that offer low-saturated fat/low-cholesterol menu choices.
- Do not be afraid to make special requests when you order food.
- Control serving sizes by:
 - Asking for a side dish-sized or appetizer-sized serving
 - Sharing a dish with a friend
 - Asking for a half portion
 - Putting half of the serving in a take-home container
- Ask to have gravy, butter/margarine, rich sauces and salad dressing served on the side. Then you can control the amount of saturated fat and cholesterol you eat.
- Ask to substitute a salad or baked potato for chips, fries, coleslaw or other high-fat foods, or ask to leave the extras off your plate.

- When ordering pizza, choose vegetable toppings like green pepper, onions and mushrooms.
- To make your pizza even lower in saturated fat/cholesterol, order it with half the cheese or no cheese.
- At fast food restaurants, go for:
 - ? Salads
 - ? Grilled skinless chicken sandwiches
 - ? Single-sized hamburgers
 - ? Chicken, turkey or roast beef sandwiches
 - ? Sauces on the side
 - ? No cheese
- Choose low-saturated fat/low-cholesterol cooking methods. Look for terms like:
 - ? Steamed
 - ? In its own juice (au jus)
 - ? Garden fresh
 - ? Broiled
 - ? Baked
 - ? Roasted
 - ? Poached
 - ? Dry boiled (in wine or lemon juice)
 - ? Lightly sautéed or lightly stir-fried
- Limit foods prepared with methods that are high in saturated fat and cholesterol. Watch out for terms like:
 - ? Butter sauce
 - ? Fried
 - ? Crispy
 - ? Creamed
 - ? Cream or cheese sauce
 - ? Stewed
 - ? Basted
 - ? Sautéed

Heart-Healthy Menu Choices on the Therapeutic Lifestyle Change (TLC) Meal Plan

Breakfast:

- Fresh fruit or small (4-ounce) glass of citrus juice
- Whole grain bread, bagel or English muffin with jelly or honey
- Whole grain cereal with low-fat (1/2% or 1%) or fat-free milk
- Hot cereal (oatmeal, Cream of Wheat®, grits or hominy) with fat-free milk topped with fruit
- Omelet made with egg whites or egg substitute
- Multigrain pancakes with margarine on the side
- Low-fat or non-fat yogurt (try adding cereal or fresh fruit)

Beverages:

- Water with lemon or flavored sparkling water (no-calorie)
- Fat-free or low-fat (1/2% or 1%) milk
- 100% fruit juice, regular or low-calorie; or juice spritzer (half fruit juice and half sparkling water)
- Tomato juice (reduced-sodium)
- Lemonade
- Decaf iced tea or hot tea
- Iced coffee or hot coffee with skim, 1/2% or 1% milk

Breads:

- Be careful when adding butter, margarine or olive oil to your bread
- Try to avoid sweet rolls, pastries and high-fat breakfast goodies

Appetizers:

- Shrimp cocktail (limit cocktail sauce — it is high in sodium)
- Fresh fruit, fruit cup or fruit juice
- Salad with reduced-fat dressing (or add lemon juice or vinegar)
- Grilled vegetables
- Raw vegetables with low-fat yogurt dip or salsa
- Pita bread with low-fat hummus

Entrees:

- Baked, broiled, steamed, poached or lightly sautéed poultry, fish and shellfish
- Vegetarian dishes with pasta, rice and other grains, beans and non-cream sauces
- Limit the amount of added fat

Salads/Salad Bars:

- Fresh greens, lettuce and spinach
- Fresh vegetables — tomatoes, mushrooms, carrots, cucumbers, peppers, onions, radishes and broccoli
- Beans, chick peas and kidney beans
- Skip the non-vegetable choices such as deli meats, bacon, egg, cheese and croutons
- Choose vinegar or oil/vinegar for salad dressing

Side Dishes:

- Vegetables and starches (rice, potato, noodles) make good additions to meals (if served without added fat)
- Ask for side dishes without butter/margarine
- Ask for mustard, salsa or non-fat yogurt instead of sour cream or butter/margarine

Desserts:

- Fresh fruit
- Low-fat or non-fat frozen yogurt
- Sherbet or fruit sorbet (these are usually fat free and cholesterol free)
- Angel food cake, Jell-O,[®] or low-fat/non-fat pudding

Condiments:

- Jams and jellies
- Horseradish, hot sauce or salsa
- Mustard
- Ketchup (limit or try low-sodium)
- Vinegar, lemon, herbs and spices

Source: www.nhlbi.nih.gov

Resources

Cookbooks:

American Dietetic Association Cooking Healthy Across America
by Kristine Napier

American Medical Association Cookbooks for Healthy Living: Healthy Heart Cookbook

Guide to Healthy Restaurant Eating
by Hope S. Warshaw

The New American Heart Association Cookbook

Websites:

americanheart.org

bronsonhealth.com

heartcenteronline.com

megaheart.com

mrsdash.com
(recipes)

www.nhlbi.nih.gov
(National Heart, Lung and Blood Institute of the National Institutes of Health)

Bronson Outpatient Nutrition Services:

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