



Beth Israel Deaconess  
Medical Center



A teaching hospital of  
Harvard Medical School

## Cardiac Surgery Discharge Instructions

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### Post-Operative Instructions

After your heart surgery you will receive extensive education by the doctors, nurse practitioners, physician assistants, nurses, and physical therapists about what you can expect when you go home. You will attend a discharge class, be given written instructions to take home and receive verbal instructions from your nurse. Once you are discharged from the hospital and you are at home all the information given to you may seem overwhelming. Our web section “For Patients” is another tool for you as reinforcement on the education you will receive post operatively. If you have any questions or concerns, please do not hesitate to call your surgeon’s office at 617-632-8383.

### Care of Your Incisions

Following cardiac surgery, care of your surgical incisions should be the same whether the incision is on your chest, leg, groin or side. It is very important to look at your incisions before you leave the hospital with your nurse so you can tell if there are any changes that should be reported to your doctor. If possible have your spouse/caregiver look at your incisions with you in the hospital because the location of the incision may be difficult for you to see. It is also important to take your temperature everyday at the same time preferably in the early evening. Notify your surgeon if your temperature is greater than 100.5 as this could be an early sign of infection. Patients have found it helpful to keep a record of their daily temperatures.

General care of all incisions should include the following:

- 1) **Inspection:** You should check your incisions daily for any redness, warmth, swelling, increased tenderness or drainage. These all could be signs of infection and you should notify your surgeon.

- 2) **Cleansing:** Keeping your skin clean and dry will decrease your risk of infection. You should shower daily with warm water and a mild, gentle white soap or cleanser; good choices are Dove or Ivory. Avoid soaps that have artificial dyes or fragrances. Wash your incisions gently, do not scrub. Pat incisions dry with a clean towel. **DO NOT** take a bath or submerge your incisions in water (i.e. swimming) until instructed by your surgeon. **DO NOT** apply any lotions, creams, ointments, or powders to incision. This includes antibiotic creams.
  
- 3) **Care:** Incisions should be left open to the air. Drainage from your incisions is not normal and should be reported to your surgeon immediately. Some people have an area below their chest incision where drainage tubes were placed after surgery. This area may look like 3-4 little holes or slits. At times, you can have drainage from these areas for a few days after surgery. Again, keep this area clean, but if you do have drainage put a small gauze or a band aid to cover the area after showering to protect your clothes. Those areas should dry up and scab over in a few days. If drainage persists over many days or if the area is reddened and tender you should contact your doctor. This could be a sign of an infection and should be seen by a member of the cardiac surgery team. If you have little paper strips over your incisions, these are called steri strips. They can get wet with washing and will fall off on their own over time. Do not remove them. If they are still on at the time of your follow up appointment they will be removed. Woman, who are large chested, should wear the surgical bra given to them in the hospital at all times. If the bra given to you is uncomfortable you may wear one of your own that does not have an underwire. This will reduce pulling and tension on your incision and promote healing. Please remove your bra 2 times a day for at least an hour for bathing and to allow your skin to breathe. **ALWAYS** wear your bra to bed or when lying flat.

## **Diet and Exercise**

- 1) **Activity:** Keeping active after your cardiac surgery is very important to your recovery and returning to your normal lifestyle. However, this activity is not without limitations and guidelines. Before you are discharged home your physical therapist will give you information about what activities will be good for you when you are home. They will provide you with a walking plan you can follow as an outpatient. Once you are home everyday you should be getting up, dressed, showering, eating meals at the table, and performing all your normal activities of daily life. It is important not to overdue your activity and to rest when you are tired or short of breath. Walking at short intervals and increasing those intervals as you feel able is key to returning to your normal lifestyle. You should **NOT** do any vigorous exercise (including walking faster than 3 mph) until approved by your doctor. In 6-8 weeks, after you have recovered from your surgery, your cardiologist may refer you to an outpatient cardiac rehabilitation program. In cardiac rehab you will work with a trained therapist who will gradually increase your activity and monitor your heart at the same time.

There are other activities that must be avoided for many weeks in order to protect the incision on your chest so it may heal properly. They include the following:

- a) No heavy lifting, pushing or pulling greater than 10 pounds (i.e. a gallon of milk) for 10 weeks with your arms. This will help ensure proper healing of your bone and incision. It is also important to hug a pillow to your chest when coughing. This will reduce pain and prevent any tension on your incision or chest.
- b) Do not drive until cleared by your surgeon. It is ok to ride in a car, but you must wear a seat belt at all times. Initially, your cardiac surgeon prefers you to sit in the back seat of the car. If the shoulder belt is uncomfortable you may place a pillow in between yourself and the seatbelt for comfort. Usually you will be cleared to drive after one month and when you have stopped taking narcotics for pain.
- c) Do not travel by air until you discuss this with your surgeon.
- d) Avoid crowded, public places during cold and flu season and anyone who may be ill.
- e) Sleep anywhere you are comfortable, whether in your bed, on the couch, or in a chair. It is ok to sleep on your side. If you are sleeping in a chair or elevating your head on many pillows due to shortness of breath that is not improving or getting worse, please call your doctor. Sleep is very important to healing and well-being. Sometimes you can get your days and nights mixed up while in the hospital, try to nap as little as possible when you first get home in order to get yourself back into a normal sleep pattern.
- f) You can resume sexual activity when you can climb 2 flights of stairs without difficulty or shortness of breath. Be mindful not to support your weight with your arms.

- 2) **Diet:** It is not unusual to have a poor appetite after undergoing surgery. However, proper nutrition is important in promoting healing and getting your strength back. You may feel food doesn't taste "right" when you get home. This can be due to the anesthesia given to you during surgery or also from some of the medications you are on. This will improve over time. If your appetite is not improving and you are not eating you should call your doctor.

After surgery it is important to eat healthy. This includes a diet low in fat, cholesterol, sugar and salt. This does not mean you can never eat dessert again, but these types of food should be eaten in moderation. It is important to read the labels on your food. Food may say "low fat" or even "fat free" but may be high in sugar and sodium. Just be mindful of what you eat.

Anesthesia, pain medicine, lying in bed, a poor appetite and poor fluid intake may all lead to constipation. You will be sent home with a medicine called Colace (docusate sodium) which is a stool softener. A stool softener will not make you go to the bathroom it will just make it easier. You should not be straining or pushing hard when going to the bathroom. If you are feeling constipated and having difficulty going to the bathroom there are things you can do at home to help. You can increase your fluid intake and mobility, and if possible decrease your use of pain medication. If this is not helping, you may ask your pharmacist or doctor to recommend an appropriate

over the counter laxative. If you go longer than 2 days without a bowel movement you should call your doctor.

## **Pain Control and Other Medications**

When you are discharged from the hospital you will probably be discharged with a prescription for pain medication. Do not be surprised that as you increase your activity at home you may have some increased discomfort in the muscles around your incision. You may worry that this pain may be “chest pain” or that there is something wrong with your heart. Pain in the chest is to be expected after surgery. This pain is usually related to activity such as movement or coughing. The sharpness of your pain should decrease with stopping the activity. You may find sleeping at night difficult due to pain or discomfort. Taking your pain medication as it is prescribed during the day or before bed will help ease your discomfort. You should continue to take your pain medication as needed to ensure comfort with activity and your ability to take deep breaths and cough effectively. If your pain is not controlled, please call your doctor. Please never exceed the recommended dose written on your prescription. However, if your pain is long-lasting, and you feel it is related to your heart please call 911 or your local emergency service.

You will probably be discharged home on different medications than you were on prior to surgery. It is important to **ONLY** take the medications prescribed to you when you are discharged from the hospital. You should call your doctor before restarting any old medications which includes vitamins, herbal supplements and other over the counter medications. There could be interactions or side effects unknown to you. Please make sure you understand the following about all the medications you will be taking:

- Name of the medication
- Purpose
- Dose (please double check if you need to take 1 pill, 2, ½, etc)
- How often it should be taken
- What side effects to watch for

Please do not change your medication schedule, or stop taking any of your medications without contacting your doctor. It is important to make an appointment with your primary care doctor and cardiologist in 1-2 weeks to discuss your new medication list.

Your nurse will provide you a medication list prior to discharge along with prescriptions for these medications. The list given to you will include the name of the medication, the times you should take it, and what the medication is used for. Here is a list of the most common medications prescribed after heart surgery and their side effects:

### **1) Metoprolol Tartrate (Lopressor)**

- a) **Use:** Metoprolol is a “beta blocker”. Metoprolol is a medication used to lower your blood pressure and heart rate.
- b) **Side effects:** Metoprolol may cause you to feel sleepy or dizzy. When you arise from a sitting or lying position please rise slowly over several minutes.

2) **Furosemide (Lasix)**

- a) **Use:** Furosemide is a diuretic or “water pill”. It helps you to loose extra fluid that you are retaining. It is not unusual to gain anywhere up to 20 lbs after heart surgery and this medication will help you to return to your preoperative weight.
- b) **Side effect:** Furosedime will cause you to urinate frequently. You may be on this twice per day so you should take your second dose around 6 p.m. and no later to prevent from waking up in the middle of the night to use the bathroom. Furosemide can also lower your blood pressure which can make you feel dizzy. If this happens notify your doctor. It is important to weigh yourself daily in the morning. If you notice a weight gain of greater than 2 lbs in one day or 5 lbs in one week call your doctor.

3) **Potassium Chloride**

- a) **Use:** Potassium is an electrolyte for your heart. If you are on a “diuretic” medicine (i.e. Furosemide) you will lose excess fluid which can lead to a loss of potassium. This medication will supplement the potassium lost.
- b) **Side effects:** Potassium is a large pill, and can cause nausea. Take potassium with food to avoid nausea.

4) **Docusate Sodium (Colace)**

- a) **Use:** Colace is a stool softener.
- b) **Side effect:** Colace can cause loose stool. If you are experiencing loose stool you may stop taking the medication until your stools are firm again. If your loose stool continues after stopping this medication for greater than 3 days please call your doctor.

5) **Aspirin (ASA)**

- a) **Use:** Aspirin thins the blood by preventing platelets from becoming sticky and clumping together.
- b) **Side effect:** Aspirin can cause nausea. Please take with food to avoid this complication.

6) **Atrovastatin (Lipitor)**

- a) **Use:** Atrovastatin is a “statin”. It is used to lower your cholesterol level.
- b) **Side effect:** Atrovastatin can cause nausea. Please take with food to avoid this side effect. It can also cause muscle cramps and aches. If you are on this medication your doctor may follow your liver function tests (a blood test) periodically to watch for any abnormalities.

7) **Captopril (Capoten)**

- a) **Use:** Captopril is in a classification of medications called “ace inhibitors”. This medication is used to lower your blood pressure. It can also be given to patients after a heart attack or if you suffer from congestive heart failure.
- b) **Side effects:** Captopril may make you feel dizzy or sleepy. When you arise from a sitting or lying position please do so slowly. If your feeling of dizziness persists this may mean your blood pressure is too low and call your doctor. The most

common long term side effect of captopril may be a dry cough. If you are on captopril your doctor may check a blood test periodically to check your kidney function for any abnormalities.

8) **Warfarin (Coumadin)**

- a) **Use:** Coumadin is a medication that causes the blood to clot more slowly or can be called a “blood thinner.” If you had a mechanical valve replacement you will be taking coumadin for the rest of your life. Some people may also need coumadin due to an irregular heart beat. Coumadin dosages are based on a blood test called an INR. You will need to have this blood test done on a regular basis to ensure you are on the proper dose. This blood test is especially important when you first go home. It may take several weeks for your doctor or nurse to determine the right dose for you. The blood test is done many times during the first weeks to help with this decision. After that, your doctor or nurse will tell you how often you must have your INR drawn. Coumadin is a very slow acting medication. The dose you take today will not be reflected in your lab test for almost 48 hours. This is why your blood test will be checked frequently to ensure your blood is not too thin or not thin enough. After your blood test is drawn and the results reviewed, your doctor will contact you to tell you what dose you should take (this will change often in the first few weeks after surgery). Your doctor will also tell you when your next lab draw will need to be done. You should hear from your doctor or nurse within 24 hours of your lab draw. If you do not you need to contact them to find out what dose of coumadin you should be taking. When you are discharged from the hospital you will be given prescriptions of varying strengths of coumadin in order to make it easier for you to adapt to your changing medication dose.
- b) **Side effects:** The most important side effect of coumadin is bleeding, or your blood is slow to clot. While on coumadin you must be careful not to cut or injure yourself. Be careful with shaving (an electric shaver is recommended). If you do cut yourself press on the area hard for a few minutes. If bleeding does not stop, or if you have spontaneous bleeding from your nose or any other area on your body go to the emergency room. If you experience a serious fall or hit your head, even if you don't feel injured, notify your doctor. Coumadin has many food and other medication interactions which can lower or increase its effectiveness. (Please see discharge booklet.) Please notify your dentist or doctors that you are on coumadin before undergoing any procedures due to the risk of bleeding. If you are discharged on coumadin you will be given extensive teaching about the medication, possible interactions and side effects.

9) **Amiodarone**

- a) **Use:** Amiodarone is a medication to prevent or reverse arrhythmias or an irregular heartbeat.
- b) **Side Effects:** Do not stop using this medication suddenly without asking your doctor. You may need to slowly decrease your dose before stopping it completely. This medication can also make you more sensitive to the sunlight. Use sunscreen when outdoors. Your doctor will need to check your progress at regular visits

while you are using this medicine. Be sure to keep all appointments. You may need to have regular blood tests or eye exams while on this medications.

## **Emotions**

Most people experience some emotional strain as they recover from surgery. Mood swings are common, and it is normal to feel sad. However, as you progress in your recovery, you should begin to feel better emotionally as well as physically. If changes in your mood or emotions last longer than 6 weeks, please tell your primary care doctor. Further treatment may be needed. Some patients also experience short periods of forgetfulness or do not feel as “mentally sharp” as usual. This should pass as your recovery progresses. Talk with your doctor if you continue to have trouble thinking or remembering.

## **Follow-Up Appointments**

Before you leave the hospital, your nurse will meet with you and your family to review your discharge instructions, medications, activity guidelines and upcoming appointments. At this time all your questions will be answered.

After you leave the hospital, your contact with the cardiac surgery team and clinical care does not end. Some patients may require a short stay at an inpatient rehabilitation center to get your strength back before going home.

Regardless of whether you go to rehab or straight home, you will be set up with a visiting nurse prior to going home by a nurse case manager. Whichever Visiting Nurse Association (VNA) you are set up with, they should call you within 1-2 days of discharge to arrange the first visit.

Your needs will be assessed at this visit, and they will arrange a schedule to make their subsequent visits. On average you will receive visits 1-2 times a week for a week or two. Again, these visits are based on need so frequency of visits will fluctuate from patient to patient. If you do not hear from your VNA within 1-2 days after you are discharged home, you should call the number given to you on the next available business day.

You will receive a call within a few days after discharge from the cardiac surgery nurse. This will be a follow-up to answer any questions or concerns that may have arisen once you got home. Also, you may receive a call approximately 30 days after your surgery to inquire about your progress if you were not seen in clinic.

Follow-up appointments will be made for you to see your surgeon three weeks after your surgery. During this visit, your overall progress will be checked. If you wish to confirm your appointment, call 617-632-8383.

You should make an appointment to see your primary care physician and/or cardiologist within four weeks after discharge so they may be updated on your progress and review your new medication list.

Patients who receive their care at MetroWest Medical Center do not have to return to Beth Israel Deaconess Medical Center for follow-up care. One of our surgeons sees patients at the Heart Center of MetroWest on Thursday mornings. Your follow-up appointment and subsequent visits can be done there for your convenience. To make an appointment at the Heart Center, please call **508-875-4811**.

## **Danger Signs and When To Call Your Doctor**

Here is a list of symptoms you should note. Please call the number indicated if they occur:

**You should call 911 or your local emergency number to be taken to the nearest emergency room for any emergency situation, such as:**

- Chest pain not related to your incision or angina pain , similar to the pain you had prior to surgery
- Extreme shortness of breath or difficulty breathing
- Severe bleeding, especially if you are on Warfarin (coumadin)
- Fainting, severe lightheadedness or changes in mental status

**Call your surgeon 617-632-8383 if any of the following occur: (Remember, you may call 24 hours a day, 7 days a week.)**

(Please record your temperature daily in the evening and weigh yourself daily at the same time every morning and keep a chart of both. Please bring this chart with you to your wound check and follow up appointments with your doctors/surgeon.)

- Your incision is warm, red or swollen or if there is increased tenderness or pain
- Any of your incisions have **ANY** fluid or drainage coming out
- You have a fever of 100.5 or higher
- Your weight has gone up greater than 2 lbs in one day or 5 lbs in a week
- You have severe pain or increased swelling in either leg
- You have palpitations
- You feel dizzy or weak (if severe call 911)
- You notice any of the following, especially if you are on warfarin (coumadin):
  - A lot of dark, large bruises
  - Black or dark bowel movements
  - Pain, discomfort or swelling in any area, especially after an injury
  - Severe or unusual headache (if symptoms are severe, please call 911)