

Discharge Guidelines for the Adult with Congenital Heart Disease Status Post Open Heart Surgery

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The following guidelines are intended to assist direct care nurse in discharging the adult patient with CHD who has recently undergone open heart surgery. Individual Cardiologists and Cardiac Surgeons may recommend slight variations of these guidelines so it is important to discuss them at the follow-up visit.

Medications

- Review medications the patient will be taking at home. This includes the name, dose, route, frequency, schedule, purpose, side effects. Include written information for each medication. Clarify length of time patient should take medication at home. Some medications such as aspirin, anti-reflux meds and pain meds are for a limited length of time. Other medications will be stopped by the provider at a later time to be determined by the patient's post-operative course.
- Flu shot can be given before the patient leaves the hospital.
- Patients should check with their providers before taking other prescriptions or over the counter medications.
- At the follow-up visit, the Cardiologist will indicate when to restart oral contraceptives. Barrier methods for contraception should be used before oral medications can be restarted.
- Some patients will be going home on Coumadin or Lovenox. If this is a new medication for the patient, he or she will require specific Coumadin/Lovenox teaching. Follow up plan is clarified and if available, the patient is connected with an outpatient Coumadin clinic. Confirmation of date and place of next lab draw is clarified as well as who will be following the INR levels.

Please also see:

AHA/ACC Scientific Statement
American Heart Association/American College of Cardiology Foundation
Guide to Warfarin Therapy
<http://circ.ahajournals.org/cgi/content/full/107/12/1692>

Refer also to document on this site on [Anticoagulation with Warfarin](#)

Incision Care

- Monitor the incision every day. Watch for any signs of infection: increased redness, swelling, or drainage.
- There may be a glue-like substance along the borders of the incision called Dermabond® which will come off by itself, usually within 2-3 weeks.

- There may be small pieces of tape (Steri-Strips)® on the chest. They will fall off in 1-2 weeks.
- No lotion, ointment, sunscreen, or powder on the incision for 6 weeks after surgery.
- Itching is a normal sign of healing. To reduce the risk of infection, patients should keep a shirt over the chest area, and keep fingernails short.
- Sun exposure darkens the scar. Patients should avoid exposing the incision to sun after surgery, especially in the first year.

Showering

- Showers are usually okay about one week after surgery but avoid scrubbing the area. When showering, the patient should stand with his/her back to the shower head in order to avoid direct pressure and excess water to the incision. Gently pat incision dry after shower.
- Soaking an incision that is not completely healed is a possible source of infection. Therefore, do not soak the incision under water until 6 weeks after surgery.

Activity

After discharge from the hospital, patients are instructed to:

- Take it easy for at least 2 weeks after leaving the hospital. Plenty of time should be allowed to accomplish tasks and the patient should pace him/herself with return to regular activity. At the first follow-up appointment, the Cardiologist will inform the patient when he/she can return to work or school.
- Continue pulmonary toilet after discharge. This includes incentive spirometry, ambulating, coughing and deep breathing (CDB) while hugging a pillow to brace the chest incision.
- Place sensible limits on social events, especially during the first several weeks, as he/she will tire easily.
- Get plenty of rest. Balance rest and activity periods. Avoid long periods of inactivity.
- Avoid strenuous activity and any activities that might cause injury to the chest. After open heart surgery the breastbone (sternum) takes about 6 weeks to heal. During this time, avoid any activities that might cause injury to the chest, such as, bike riding, skating, gymnastics, or contact sports (such as football, basketball, soccer, wrestling). Also avoid heavy lifting, pushing, pulling, or twisting movements.
- Avoid swimming for at least 6 weeks after surgery.
- Like any other activity, sexual activity places a demand on the heart. If the patient is sexually active, they are advised to talk with the cardiologist about safety and resuming sexual activity. Barrier methods of contraception should also be discussed.
- Occasionally patients need outpatient cardiac rehab after their surgery. Case management can help locate appropriate facilities and patients can contact the facilities after discharge.

Other important points related to activity:

- Women can resume wearing a bra after surgery. This will help reduce strain on the sternal incision.
- The Cardiologist will indicate when the patient can resume driving. Reasons to avoid driving immediately after surgery include the possibility of a blow to the sternum due to a collision, slowed reflexes from medication, fatigue.
- Upon return home after surgery, the patient may notice that he/she tires more easily and needs more frequent rest periods. This is normal after surgery but should slowly improve over time.

Pain

- Most patients will have some discomfort after cardiac surgery. The Cardiologist or Nurse Practitioner will prescribe pain medications for home. These may or may not include opiates depending on the patient's hospital course and pain management plan.

Nutrition

- Unless a special diet or fluid restriction is prescribed, a regular diet is resumed. It is best to eat a healthy, well-balanced diet that is low in salt, fat, and sugar.

Dental work

- Routine and elective dental procedures should be avoided for 4 to 6 months.
- New guidelines indicate that antibiotics given before a dental procedure are reserved for those at highest risk for problems resulting from subacute bacterial endocarditis (SBE). Prior to any dental procedures, the patient should contact his/her cardiologist to see if he/she should take antibiotics before the dental appointment.
- Links to American Heart Association Guidelines from on SBE prophylaxis and anticoagulation management.

Please also see:

Prevention of Infective Endocarditis

Guidelines from the American Heart Association

<http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.106.183095>

Other

- Due to fluid shifts and changes in diuretics, some patients are instructed by their cardiologist to weigh themselves daily. If this is the case the patient will be given guidelines for calling the physician or nurse practitioner. Significant weight gain can indicate worsening heart disease.

Transition to Home

Important reminders for the patient:

- They may find they have difficulty sleeping through the night for a variety of reasons. They may be awakened by pain, have difficulty falling asleep, or feel that sleep is interrupted due to the transition from hospital to home. Stick to normal waking and sleeping times. It is okay to sleep on the side when it is comfortable to do so.

- Surgery and hospitalization may have been stressful for the patient and his/her family. Being able to go home is exciting, but can also be overwhelming to suddenly be back in a normal routine. It's normal to be nervous. Try to return to regular routines, as able.
- Many patients say they feel tired and sad some days, then energetic and happy other days. Try not to be discouraged by these ups and downs as they are expected and will gradually resolve. If these feelings persist or are interfering with recovery, the patient should discuss this with the provider.

Follow-Up Appointments

- Typically, the patient sees the cardiologist and/or primary care provider within the first two weeks after going home

When to call the Doctor or Nurse Practitioner

- Temperature greater than 101.5° F (38.5° C)
- Flu-like symptoms
- Color changes (pale, blue, grey)
- Increased work of breathing; excessive shortness of breath or trouble breathing while at rest
- Increased puffiness of ankles, feet, or hands
- Abnormal drainage from incisions
- Increasing redness or tenderness of incisions
- Pain not controlled by pain medication
- Chest pain
- Persistent bowel problems
- Decrease in level of activity
- Extreme fatigue, irritability, anger, frustration, or mood swings
- Decrease in appetite
- Persistent nausea
- Significant weight gain (generally more than 2 lbs.)

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