

# Cardiac Surgery Program

Coronary Artery Bypass (CAB) surgery and  
heart valve surgery



# Table of contents

## Welcome

- 2 Welcome letter
- 3 About Sequoia Hospital's Heart & Vascular Institute
- 4 Our mission and values
- 4 Accreditation
- 5 Visiting hours
- 5 Communication

## Preparing for surgery

- 8 Understanding your heart surgery
- 10 Pre-operative work-up: What to expect
- 11 What to pack for your hospital stay
- 12 Smoking cessation
- 12 Preparing for your return home
- 13 Levels of care needs after discharge
- 14 Skilled nursing facilities
- 15 The day before your surgery
- 16 The morning of your surgery

## Hospital stay

- 17 Surgical preparation
- 17 In the operating room
- 18 Lines, tubes and monitoring devices
- 19 The Intensive Care Unit (ICU) Experience: A Patient's Perspective

- 19 Keeping your family informed
- 20 Managing pain
- 21 Deep breathing and coughing exercises
- 21 The Cardiac Surveillance Unit (CSU) activity guidelines
- 22 Atrial fibrillation
- 23 Getting ready to go home

## Home care

- 24 Recovering at home
- 25 Upper body restrictions (sternal precautions)
- 25 Hygiene
- 26 Caring for your incisions
- 26 Managing pain at home
- 27 Muscle aches and tension
- 27 Constipation, diet
- 28 Sleep
- 28 Sexual activity
- 28 Emotional ups and downs
- 29 When do I call my doctor
- 31 Cardiac rehab

## Contacts

- 31 Contact numbers

# Welcome to Sequoia Hospital



Dear patient,

Included in this binder is information to help you prepare for your procedure and stay at Sequoia Hospital. We encourage you to review the contents, as we want you to be involved in the decisions affecting your care. Please invite loved ones who will assist with your care and recovery to read the material as well.

It will be my pleasure to answer any questions you may have, so please feel free to contact me by telephone or e-mail.

Remember to bring this binder with you to the hospital.

Wishing you a healthy heart,

Julie Biglieri, RN, BSN, CCRN, MPA  
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Heart & Vascular Institute  
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**Please bring this binder with you to all medical and hospital appointments and when you come to the hospital for surgery. Answers to most of your questions can be found in these pages.**

# About Sequoia Hospital's Heart & Vascular Institute

In March 2015, our Heart and Vascular Institute entered into an affiliation with the world-renowned Cleveland Clinic Sydell and Arnold Miller Family Heart & Vascular Institute. This affiliation is the first of its kind in Northern California. Together, Sequoia Hospital and the Cleveland Clinic will build on our respective records of excellence and bring the future of cardiac care to those we serve. Most importantly, it means that patients at Sequoia will benefit from an exceptional and unmatched level of heart and vascular care. The world class cardiovascular physicians at Sequoia Hospital's Heart and Vascular Institute treat some of the most complex cardiac cases in California and produce some of the nation's best outcomes. Sequoia Hospital has ranked among the nation's leading providers of cardiovascular care for over three decades.

## Sequoia Hospital

Dignity Health Sequoia Hospital is an accredited, not-for-profit community hospital providing innovative and exceptional health care for generations of Bay Area residents. Sequoia's Heart and Vascular Institute is a nationally known pioneer in advanced cardiac care, affiliated with the Cleveland Clinic Heart and Vascular Institute. Sequoia has received national recognition from Healthgrades for superior patient safety and was named as one of America's top 100 hospitals for cardiac care. Our Total Joint Replacement program is a designated Blue Distinction Center for Knee and Hip Replacement, and our Birth Center is consistently ranked as a favorite among Peninsula families. We are also known for our comprehensive emergency care and leading-edge tomosynthesis 3-D mammogram technology. Our new state-of-the-art Pavilion combines the most advanced medical and surgical services with a unique healing environment, including private, spacious rooms and inviting garden areas. To learn more, please visit our website: [dignityhealth.org/sequoia](http://dignityhealth.org/sequoia)

### Join our community:

[facebook.com/sequoiahospital](https://facebook.com/sequoiahospital)

[twitter.com/sequoiahospital](https://twitter.com/sequoiahospital)

[youtube.com/sequoiahospital](https://youtube.com/sequoiahospital)

# Our mission, vision & values

Our mission sets a clear focus for our work. Our values define how we carry out the mission. Our vision demands that we consistently and effectively live up to both.

## Our mission

We are committed to furthering the healing ministry of Jesus. We dedicate our resources to:

- Delivering compassionate, high-quality, affordable health services;
- Serving and advocating for our sisters and brothers who are poor and disenfranchised; and
- Partnering with others in the community to improve the quality of life.

## Our vision

A vibrant, national health care system known for service, chosen for clinical excellence, standing in partnership with patients, employees and physicians to improve the health of all communities served.

## Our values

Dignity Health is committed to providing high-quality, affordable health care to the communities we serve. Above all else we value:

**Dignity:** Respecting the inherent value and worth of each person.

**Collaboration:** Working together with people who support common values and vision to achieve shared goals.

**Justice:** Advocating for social change and acting in ways that promote respect for all persons and demonstrate compassion for our sisters and brothers who are powerless.

**Stewardship:** Cultivating the resources entrusted to us to promote healing and wholeness.

**Excellence:** Exceeding expectations through teamwork and innovation.

## Accreditation

We are pleased to inform you that our hospital is accredited by the Joint Commission. The Joint Commission serves to help insure and monitor the quality and safety of patient care in hospitals and clinics. Our hospital is committed to providing safe and quality care to all patients served. If you feel the care provided has in any way compromised patient safety or failed to meet accepted quality of care standards, please do not hesitate to contact our Quality Improvement Department at (650) 367-5224.

We will endeavor to address your concerns as promptly as possible. If after contacting us, you feel we still have not adequately addressed your concerns, please feel free to contact JCAHO by either calling (630) 792-5000 or writing to:

**Joint Commission on Accreditation of  
Healthcare Organizations**  
**One Renaissance Blvd.**  
**Oakbrook Terrace, IL 60181**  
**Website: [jcaho.org](http://jcaho.org)**

## Visiting hours

Our visiting hours are reflective of our care team needing time to transition at shift change. As always, please discuss any concerns that you might have about our visiting hours with your nurse. We will individualize your needs as much as we possibly can.



Visiting times and the number of visitors allowed are based upon our commitment to patient privacy, quality of care and customer service considerations.

## Communication

### Cellular phones

Cell phone use is not permitted inside ICU patient rooms and surgical suites. Courteous use of cell phones is permitted in Sequoia Hospital except in these areas.

### Patient telephones

Patient telephones are provided in the Cardiac Surveillance Unit.

### For the hearing impaired

A telecommunications device is available to help hearing impaired patients or patients who want to communicate with a hearing impaired relative or friend. Arrangements can also be made for a person who uses sign language to assist. Please speak with your nurse.

### For the visually impaired

A special phone is available on request. Please speak with your nurse.

### Language services

Communication between caregivers, patients, and families is essential for quality healthcare services. Please inform your nurse if you need translation services.

# Communication (continued)

## Guest house/Out of town visitors

Sequoia Hospital has a Guest House for out of town visitors. Preference is given to families whose physician has made a prior reservation.

## Patient satisfaction survey

After your stay, you may be randomly selected to receive a patient satisfaction survey. We value the opinions and suggestions you share with us, and we appreciate you taking the time to answer this survey to the best of your ability. This is an opportunity to give us important insight that will help us improve service.

## Sequoia Hospital Foundation

Grateful patients and their family members often ask how they can express their appreciation for a caregiver or department that made a significant impact on their care at Sequoia Hospital. The Sequoia Hospital Foundation is pleased to offer the Guardian Angel program as a way for donors to honor Sequoia's caregivers while making a tax-deductible gift to support the hospital's healing mission and programs.

One hundred percent of your gift will be used for patient care and programs at Sequoia Hospital and you may direct your gift to a specific fund/department at the hospital or to the Foundation's "where the need is greatest" fund. If you, your family or friends would like to support our healing mission, please contact the Foundation at (650) 367-5657. Additional information regarding the Sequoia Hospital Foundation's programs is available online at [sequoiahospitalfoundation.org](http://sequoiahospitalfoundation.org).

Gifts from members of our community make a significant difference at Sequoia Hospital. Thank you.





# Understanding your heart surgery

## The heart's primary function is to supply oxygenated blood to our bodies.

The heart is made of two pumps that sit next to each other. The pump on the right receives blood from the veins of the body and pumps it to the lungs. The lungs oxygenate this blood and return it to the left pump. The left pump takes this oxygenated blood and pumps it out to the body. The body uses the oxygen and returns the blood to the veins and back to the right pump where the process starts again.

The average adult has 4 to 5 quarts of blood. At rest, our heart pumps the body's entire blood volume every minute. When we exercise even moderately, our heart can pump twice its blood volume every minute in order to provide the extra oxygen needed by the working muscles.

## The heart's second function is to supply oxygenated blood to itself.

The left side of the heart pumps the oxygenated blood to our body via a large artery called the aorta. There are two arteries branching out at the base of the aorta called the right coronary artery and left coronary artery. The role of these arteries is to supply the heart muscle with oxygenated blood. The right and left coronary arteries in turn branch out to deliver oxygen to every area of the heart.

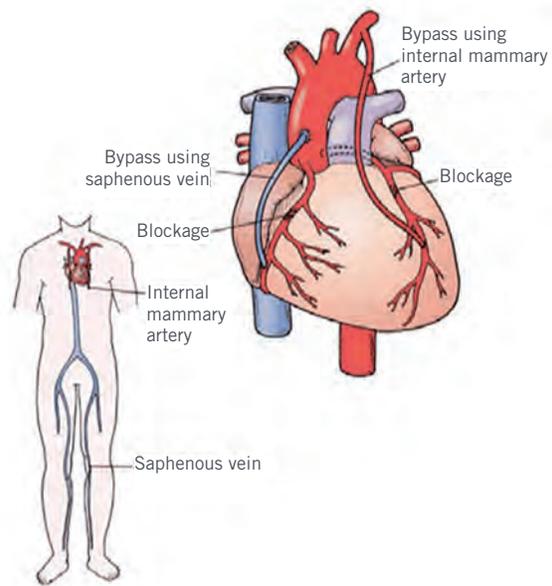
Cholesterol is a normal chemical in our bodies that helps us make new cells. Certain factors such as an abundance of animal fat in our diet, high blood pressure, diabetes or pre-diabetes, excess weight, smoking or genetic inheritance can predispose a person to deposit excess cholesterol in the walls of their arteries. This cholesterol deposit blocks the flow of blood and the narrowed

arteries can no longer supply the oxygen-rich blood required. When this occurs, a person may experience fatigue, shortness of breath, angina or even a heart attack (myocardial infarction).

## Bypass surgery

Techniques such as angioplasty or stenting can re-open arteries. Sometimes neither approach is appropriate and a person requires coronary artery bypass (CAB) surgery in order to restore blood flow to the heart.

During coronary artery bypass, a vein from the leg or an artery from the arm or chest wall is used to bypass the blockage, creating new pathways for blood to flow. Restoring the blood supply to the heart muscle relieves chest pain and returns your heart to better function.



# Understanding your heart surgery (continued)

## Valve surgery

The heart is a pump that squeezes and has a set of one-way flap valves that organize the flow of blood through the heart. These valves open and close to keep blood flowing through your heart and out to your body. When these valves do not open (valve stenosis) or close (valve regurgitation) properly, the heart muscle cannot function normally. This causes your heart muscle to overwork and may lead to fatigue, decreased exercise tolerance and/or shortness of breath. During heart valve surgery, your surgeon repairs or replaces the abnormal valves. This should restore effective blood flow through the heart.

## Mitral valve disease

Common problems with the mitral valve:

- Some people are born with slightly abnormal mitral valve tissue that causes prolapse and leakage. This is the most common condition leading to mitral valve repair.
- Certain diseases such as rheumatic fever and endocarditis can scar and stiffen the mitral valve, preventing it from opening properly.

## Aortic valve disease

Common problems with the aortic valve:

- The most common problem is progressive calcification of the valve associated with the aging process. The valve narrows and cannot open and close properly.
- Some people are born with two leaflets (flaps) instead of the usual three. This condition is tolerable when one is young but as one ages and the valve stiffens, the valve cannot perform its normal function.

# Pre-operative work-up

The surgeon's office will schedule you for a pre-operative work-up and testing.

## Physical exam

Bring the completed Patient History Form with you to your appointment. In the office, a physician assistant will examine you.

## Medications

If you are seen at the surgeon's office, please bring the medications you are **currently** taking to this appointment. Make sure they are in their **original** containers.

IF YOU ARE ADMITTED TO THE HOSPITAL FOR YOUR WORK-UP, **DO NOT BRING YOUR MEDICATIONS WITH YOU.** This is for your safety! Instead, bring a current list that includes the names, dosage and times you take each medicine.

## Pre-operative testing

Testing may include:

- Blood and urine tests
- EKG (electrocardiogram)
- Chest X-ray
- Ultrasound of neck arteries and leg veins

Physical exam and testing generally occurs as an outpatient. However, if you are 80 or over, or need a more extensive work-up, you may be admitted the day prior to your surgery to be evaluated by specialists. These may include: pulmonologist (lung specialist), endocrinologist (diabetic specialist), and/or nephrologist (kidney specialist).

## Consents

You will be signing consents for your surgery, potential blood transfusion, treatment and hospital stay.

## Advance directive

An advance directive tells your doctor what kind of care you would like to have if you become unable to make medical decisions. Similar documents are living wills and power of attorney for health care. **If you have any of these documents, please bring copies with you to the hospital.** If you have not thought about an advance directive, you may want to prepare one so your doctor and family know your healthcare wishes. Doctors recommend that everyone prepare these papers regardless of the type of surgery or condition. A good source of information on advance directives is the American Bar Association (ABA) [abanet.org/publiced](http://abanet.org/publiced).

# What to pack for your hospital stay

Wear comfortable clothing to the hospital. You can wear the same outfit on your return home. Sweats are ideal, especially if you have a long drive home.

Please pack lightly. Storage is minimal in most hospital rooms, particularly in the Intensive Care Unit.

## Toiletries

- Dental care
- Shaving items
- Lip balm
- Hairbrush and/or comb

## Clothing

- Change of underclothing
- Bathrobe, if you wish

You will be issued gowns, pajama bottoms and a pair of non-skid slipper socks.

## Prosthesis

- Dentures
- Glasses
- Hearing aids with extra batteries

## Entertainment

There will be a TV and TV guide in your room. If you bring reading material, choose light reading.

## Valuables

Leave jewelry, money, credit cards and other valuables at home. If you choose to bring electronic devices, label them. Please give items of sentimental value such as wedding rings and religious medals to a family member for safekeeping before going to surgery. Check with your nurse before wearing these items again.

## Smoking cessation



### If you smoke, quit!

Stopping for any period of time can help you. Smoking increases your risk of problems after surgery.

Call 1 (800) NO-BUTTS for more information about smoking cessation.

## Preparing for your return home

Once you return home, the next several weeks will be your convalescent period. You should not need much more help with your personal care than before surgery, but you will need help with cooking and other household chores. **We do not want you to lift more than five pounds for one month after your surgery.**

- **Have a friend or family member drive you home from the hospital, fill your discharge prescriptions, and take you to your appointments.**
- **Arrange for someone to stay with you for the first week or so.**

Most patients go home from the hospital within a week. Do not be alarmed if you stay longer as you may need extra care.

You should not drive for one month after your hospital discharge. Medication, pain and fatigue will significantly slow your reaction times.

## Levels of care needs after discharge

The majority of cardiac surgery patients will go home with minimal care needs after their hospital stay. However, some patients may require a higher level of care or may need assistance transitioning from the hospital to home. Types of care include:

- **Home healthcare** – caregivers, who may include nurses, physical therapists, and occupational therapists, make home visits.
- **Skilled nursing facility (SNF or “sniff”)** – provides assistance with overall daily care, including showering/bathing, walking, dressing, meals and medication administration. Physical therapists and occupational therapists assist with activity and mobility concerns.
- **Acute rehab facility** – delivers a higher level of care than a SNF and typically includes longer length of stays.
- **Long-term care facility** – designed for people who require indefinite full-time care.

Of those cardiac surgery patients who need additional care, most will not need an acute rehab or long-term care facility after surgery. But arrangements are determined on a case-by-case basis, depending on the individual needs of patients.

## Skilled nursing facility (SNF)

### What types of patients may need a SNF?

In some instances, patients may benefit from being transferred to a SNF. These patients tend to:

- have significant care needs or multiple medical issues prior to surgery
- require more care than family or home caregivers can provide

Please note: a SNF is not the same as a rehab facility or long-term care facility. See levels of care needs after discharge in left column for more information.

### What can I expect if I am transferred to a SNF?

If you need to go to a SNF, it’s not because you are considered sick or ill – you are being given extra support and care while you recover. The goals of transferring you to a SNF include:

- ensuring you have a successful post-operative recovery without complications
- discharging you from the hospital safely
- ensuring you have the resources you need while you recover, especially if those resources aren’t available to you at home
- making sure you have extra time and assistance to regain strength and independence prior to going home

## Skilled nursing facility (SNF) (continued)

Doctors, nurses, nursing assistants, therapists, and other staff will be involved with your care. However, their involvement will be less than what you experienced at the hospital. The staff is primarily there to offer support and assistance as you need it. You will also be expected to be more independent in your care and recovery than at the hospital.

### How long will I have to stay?

The typical length of stay is approximately one to two weeks. Your stay would only be longer if your doctors feel it's necessary for your safety and recovery.

### Will insurance pay for a SNF?

Every provider and plan, including Medicare, has different coverage requirements, so it's important to determine what your insurance covers and what criteria you need to meet to qualify for a SNF. **Contact your insurance provider before surgery to determine eligibility for services.**

Your patient navigator will discuss the process with you before surgery. She will review your options, give you information, advise you to contact your insurance company for prior authorization, and help determine the services for which you qualify. This will help speed up the approval process.

If you do not qualify for a SNF, private-pay options are available. Our case management department can discuss private-pay options with you.

### What if I anticipate needing a SNF?

We recommend that you begin your search for a facility prior to being admitted to the hospital. If you need assistance with locating facilities, you can ask your nurse navigator or contact Sequoia Hospital's case management department for a list of local facilities.

Many facilities offer tours for potential clients prior to admission. This can help you determine if a facility is right for you. Identifying an appropriate facility is especially important if you do not live in the Bay Area, as it can sometimes be more difficult to find qualified facilities in other areas.

### Other questions about SNFs?

Remember, if you are otherwise healthy and independent at home prior to surgery, it's unlikely you will require this level of care after discharge. But if you do, we'll help you with the selection, approval, and transfer process. If you have additional questions, please contact:

Sequoia Hospital Case Management  
(650) 367-5683

# The day before your surgery

## Diet

You may eat your regular meal the evening before your operation but you should have **nothing to eat or drink after midnight!** This includes coffee, water, hard candy and chewing gum. This is for your safety during anesthesia.

## General information

“Prepping” (preparing) the skin before surgery can help reduce the risk of infection after surgery. Sequoia Hospital has chosen Chlorhexidine Gluconate (CHG) antiseptic solution for you.

## Before you shower or bathe

- Carefully read all directions on the product label.
- Chlorhexidine should not be used on the face, ear, eyes, mouth or genital area.
- Chlorhexidine should not be used if you have an allergy to it.
- Stop Chlorhexidine use if you develop any rash and call your doctor.

## When you bathe or shower

- Wash your hair and face with regular shampoo/soap. Rinse thoroughly to remove any residue.
- Wash your entire body from the neck down with Chlorhexidine. Apply the minimum amount of Chlorhexidine necessary to cover your entire body (about 1 oz.). Use Chlorhexidine liquid as you would any other liquid soap. You can apply Chlorhexidine directly to the skin or to a wash cloth and wash gently.
- Rinse thoroughly with warm water and towel dry.
- Do not use your regular soap, lotion, powder or perfume after cleaning with Chlorhexidine.

## Before going to bed

- Brush your teeth as usual.
- Use Peridex™ (chlorhexidine gluconate) 0.12% mouthwash, swishing for 30 seconds.
- Dress in clean clothes/sleepwear

# The morning of your surgery

Please arrive at the hospital at the time designated by your surgeon's office. When you arrive, please go to the information desk inside the main entrance, where someone will direct or escort you for check-in.

- Just prior to your operation, a surgical technician of your gender will clip bodily hair from your chest to ankles. Immediately after clipping, you will shower with antibacterial soap.
- The staff will instruct you to do Chlorhexidine shower (described above) at the hospital after any hair is removed with clippers.
- After the clipping and the Chlorhexidine shower, wash with Chlorhexidine disposable wipes (6 in a kit). Open the CHG Prep Cloth package as directed. Ignore blue foam. Select white cloths for prep.
- Use the first cloth to wipe your neck and chest area; use one cloth for each arm, one cloth for each leg/groin, and the last cloth for your back. Discard the cloths in trash can. **DO NOT FLUSH DOWN THE TOILET.**
- Allow area to air dry for one minute. **DO NOT RINSE.** It is normal for the skin to feel “tacky” for several minutes after the solution is applied.
- **Avoid touching the prepped area after using the cloths.**
- Brush your teeth as usual.
- Rinse your mouth with the Peridex™ (Chlorhexidine Gluconate) 0.12%.
- You will be given an identification wristband to wear. Please keep it on at all times while you are in the hospital.
- Your nurse will then start an IV and review your medication list, medical history and other information.
- You will then be transported to the surgery department where you will be interviewed by the operating room nurse and anesthesiologist.
- Please be aware that the repetitive questions by multiple personnel are designed to ensure your safety.

## Surgical preparation

- The anesthesiologist will introduce him/herself and answer your questions.
- You will be in the operating room approximately three to five hours.
- Two family members may stay with you until you go to the operating room. At that point, family and friends can take a break and then go to the ICU waiting room in three hours. The surgeon will meet them there to discuss the operation.



## In the operating room

- When you enter the operating room (OR), a nurse will greet you and check your name band and other vital information.
- The anesthesiologist will start an IV and give you a sedative. Once you are asleep, the staff will apply monitoring devices and insert breathing and drainage tubes.
- The monitoring devices and tubes will accompany you to the Intensive Care Unit (ICU), where you will be taken immediately following surgery. This equipment is not painful, but can be an overwhelming sight for family members.



# Lines, tubes & monitoring devices

## You can expect the following:

- A breathing tube inserted in your mouth, connected to a ventilator that helps with breathing until you are fully awake in the ICU.
- Specialized intravenous (IV) lines in your arms, wrist and neck that allow nurses to give medications, draw blood samples and monitor heart function without having to “stick” you.
- Sterile dressings that cover your incisions for the first 24 hours. After that, they will be removed and the incisions will be exposed to the air to heal.
- One to three chest tubes to drain fluids that accumulate as a result of the operation.
- Pacing wires placed against your heart during the operation, attached to a temporary, external pacemaker.
- A bladder catheter (Foley) that drains urine by gravity. Most people do not feel this tube, but on occasion it may give you the sensation of having to urinate, even as it is draining.

Most lines and tubes can be removed within 24 – 48 hours after surgery. Pacemaker wires and one IV will remain until you are close to the day of discharge.

# The Intensive Care Unit (ICU) experience

## A patient's perspective

Upon entering the ICU, you will still be under anesthesia. Bypass surgery patients usually begin waking up between 2 – 4 hours after entering the ICU. Valve surgery patients will be kept asleep for a minimum of 3 – 4 hours. Once you are allowed to wake up, it may be an additional 2 – 4 hours before you are fully awake.

- When you wake up, you may feel tired, confused, nauseated, thirsty, feverish, or cold. All are very normal after heart surgery. You may experience pain and tenderness around your incision(s). The nursing staff is close by to help alleviate your symptoms with medication and other measures to keep you comfortable.
- You will wake up in the ICU with a breathing tube in your mouth/throat. Your nurse and respiratory therapist will remove the tube as soon as it is safe, usually within a couple of hours after you wake up. **You will not be able to speak while the tube is in place.** Your nurse will ask you yes/no questions that you may answer by nodding your head. These questions will focus on your comfort. Once the tube is removed, you will be able to speak but your voice may be hoarse.

- After the breathing tube is removed, your nurse will administer oxygen and start your breathing exercises. You will be able to take sips of water and ice chips shortly after the breathing tube is removed.
- Typically, on the day following your surgery while still in the ICU, you will get out of bed, sit in a chair and start eating solid foods. The nursing staff will assist and coach you during this activity. Your appetite will most likely be very poor at this time so eat what appeals to you.

The average stay in the ICU lasts 24 – 48 hours. Your general state of health, response to surgery, and age will dictate your length of stay. You will be transferred out of the ICU only when you are medically stable.

## Keeping your family informed

Your family may visit for short periods while you are in the ICU. Your nurse will be happy to discuss your progress with them. The staff requests that your family leave the unit during shift change to ensure patient privacy. Your family may ask about your condition, any time day or night, by calling the ICU at (650) 367-5623. **Please designate one contact person to receive this information and distribute it among family members and friends.** This will keep interruptions in your care to a minimum.

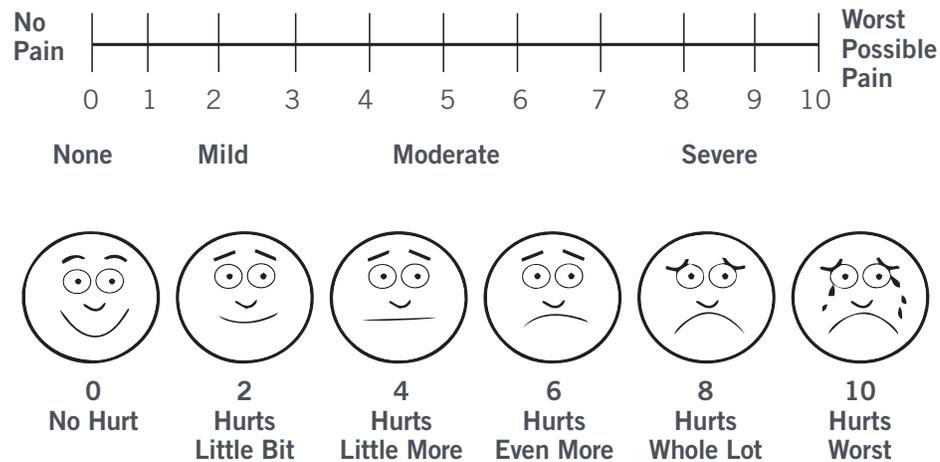
# Managing pain

Pain is an individual experience. Our goal is to keep you as comfortable as possible after surgery. With proper pain management, you will be able to move around and do your deep breathing exercises.

Nurses use a “pain scale” to help determine the effectiveness of your medication regimen. You will be asked something like “What is your pain level?” This is the number that best describes how you rate your pain at that moment in time. **There is no right or wrong answer.**

Adequate pain management is necessary and crucial for your recovery. Be sure to ask your nurse for medication **before** pain prevents you from actively participating in your care.

Pain Rating Scale© Mosby



# Deep breathing & coughing exercises

Pneumonia is a complication that can occur with any surgery. Before your operation, the pulmonary therapist and/or nurse will teach you deep breathing and coughing exercises with an inspirimeter. These exercises are very important and will help keep your lungs clear and prevent pneumonia.



## The Cardiac Surveillance Unit (CSU) activity guide

When you have progressed to the CSU, the nursing staff will continue to care for your individual needs and monitor your labs, heart rhythm and vital signs. They will review your plan of care for the day and note it along with other information on the “White Board” in your room. You and your family may also use this board to note questions for your physicians or other staff. Your nurse will visit you hourly to ensure your comfort and safety.

### Activity guidelines in the CSU:

**Walking is an integral part of your recovery.** It will help prevent post surgical complications such as pneumonia or the development of blood clots in the legs.

### To start your walk:

- Call your nurse for your first walks, especially if you have lines or tubes. When you are steady, your nurse or physical therapist will clear you to walk with family or even by yourself.
- You may feel more secure using a walker in the first few days. There is a walker provided in your room for your use. The staff will show you how to use it properly.
- Pain should not prevent you from walking and doing your deep breathing exercises every hour. If it does, you need better pain control. Inform your nurse if this is the case and he/she will be glad to help.

Increase the number of walks every day. Challenge yourself while you are with us and you will know you are ready to return home. Remember, being tired is normal at this point.

# The Cardiac Surveillance Unit (CSU) activity guide (continued)

## Helpful hints:

- Alternate periods of resting in bed, sitting and walking.
- Walk in the hall. Distance and speed is not any issue.
- Eat your meals sitting up in chair or on edge of bed.
- Sit up for no more than 45 minutes. At this point, you should stand, take a few steps in your room or a walk in the hall. This will prevent blood clots from forming in your legs because of sluggish circulation.
- Try not to stay in bed more than 1 hour unless napping.

- When in bed, do ankle exercises (rotate your ankles, point then flex your feet).

## How many times should I walk?

<b>Day 1</b>	<b>1x = Must!</b> 2x = Great! 3x = Outstanding!!
<b>Day 2</b>	<b>3x = Must!</b> 4x = Great! 5x = Outstanding!!
<b>Day 3</b>	<b>4x = Must!</b> 5x = Great! 6x = Outstanding!!

## Atrial fibrillation

Atrial fibrillation is an irregular heart rhythm (arrhythmia) that occurs in 30 – 35% of people after heart surgery. It is not dangerous, but can make some people feel poorly. Atrial fibrillation is usually treated with medications. You may need to continue these medications once you are discharged and until your cardiologist stops them.

**Note:** If you did not have this arrhythmia before surgery, your heart will most likely return to its regular rhythm (normal sinus rhythm).

# Getting ready to go home

## You are ready to go home when:

- Your pain is controlled by oral pain medication.
- You are walking 5 – 6 times a day with little or no assistance.
- You can get in and out of bed without the use of side rails.
- You have had a bowel movement, are able to pass gas and do not feel bloated.

For more information on levels of care needs after surgery, please see page 13.

## Before going home

- A patient navigator will review discharge instructions with you.
- Make sure your questions are answered.



# Recovering at home

Here are some general guidelines that will assist you during your home recovery.

## Medications

Have someone fill your prescriptions as soon as you are discharged. **Do not stop any medication without speaking to your cardiologist first.** Some medications may need to be gradually discontinued.

All valve surgery patients will need to be given prophylactic antibiotics in accordance with American Heart Association guidelines prior to any dental work including cleanings, extractions, root canals, implants, etc. If you are a valve surgery patient, please notify your dentist of this requirement prior to your scheduled appointment. Please contact your doctor's office if you have any questions.

## Follow-up Care

- Schedule an appointment with your cardiologist for 5 – 7 days after leaving the hospital.
- If instructed, schedule a visit with your surgeon for 30 days after leaving the hospital. You may be seen by a physician assistant or nurse for this visit.

## Activity

Recovery is hard work!

- Get dressed and groomed every morning.
- Stay in the living areas of your home. Return to your bedroom only if you need a nap.
- Continue to alternate between resting, sitting and walking. Lie down for no more than one hour. Sit down for no more than 45 minutes at a time. Avoid crossing your legs. This will prevent sluggish circulation in the legs that can lead to blood clots.
- Take daily walks outside on level ground when the temperature is comfortable. Start with 5 minutes out, 5 minutes back. Walk at your own pace. If you feel up to it, repeat your walk later in the day.
- Increase your walking time by 2 minutes every two days, as tolerated. A good goal is to walk continuously for 30 minutes a day by the end of one month. You may walk more if able.
- Stairs are okay, especially if you were using them prior to surgery. Take them slowly.
- Exercise is part of taking care of yourself, and is just as important as taking your medicines. Over time, exercise will increase your physical stamina and decrease your fatigue.
- Continue using your spirometer (the big one) 5 – 6 times per day. This will help keep your lungs clear until your activity level is back to normal.

# Recovering at home (continued)

## Upper body restrictions (sternal precautions)

Your breastbone (sternum) will take 8 weeks to fully heal. It may take longer if you are a diabetic. Sternal precautions will help reduce pain and promote healing.

- **DO NOT LIFT, PUSH OR PULL MORE THAN 5 POUNDS** (about ½ gallon of milk) **FOR THE FIRST 4 WEEKS.** You may do light household tasks. (No vacuuming or lawn mowing.)
- Computer work is fine. Keep your shoulders relaxed and your elbows low with the keyboard close to you. This will minimize using your chest muscles and prevent pain.
- **DO NOT DRIVE FOR 4 WEEKS.** Your breastbone is not stable enough to handle the demands of driving, even with power steering. Remember, your reaction time will be slower because of anemia, fatigue, pain and/or new medications.
- You may travel in a vehicle's front seat. **Do not disable the airbags.** A breastbone injury is easier to fix than a head injury. Drive safely!

## Hygiene

- You may shower and wash your hair. Warm water rather than hot is best for the first couple of weeks. **DO NOT SOAK IN A TUB OR POOL** for one month.
- Have a small, stable chair or stool in the stall in case you feel tired or dizzy. Make sure you are able to move around safely.
- For the first few days, **have someone nearby in case you need help.**

# Recovering at home (continued)

## Caring for your incisions

- Any gentle soap and water will keep your incisions clean. Carefully clean your incision(s) first, and then wash the rest of your body. You may use your hand or a clean cloth when washing.
  - Gently pat your incisions dry, then towel off the rest of your body.
  - Check your incisions daily. Watch for increased redness, swelling or oozing. Contact your surgeon if this develops. Do not wait until your follow-up visit.
  - A plumpness at the top of your incision is normal and will disappear within a couple of months.
  - An occasional clicking or rubbing feeling in the breast bone is normal, especially in the first week. If you experience this, decrease upper body activity. This sensation will go away in a couple of weeks. If it persists or is frequent, call your surgeon.
  - Wear clothes that will protect your incisions from the sun as they sunburn easily and become darker.
  - DO NOT apply any lotions, creams or ointments to your incisions unless instructed by your physician.
- If you have leg incisions, it is important to keep your legs at heart level or higher when sitting or lying down. You can accomplish this by using pillows or elevating your legs on a stool or coffee table. This minimizes swelling that can cause tension on the incisions and slow healing. Do this several times a day. Note that some swelling in the surgical leg is normal and will go away.
  - Your incisions may feel numb to touch. This numbness will go away in time.

## Managing pain at home

Once home, you may experience increased pain simply because you will be more active. Expect to use pain medication for the next 2 to 4 weeks.

- Start with regular, over-the-counter Tylenol 325 mg, two (2) tablets every 6 hours as needed. If you are prescribed another pain medication, you can add this to the Tylenol regimen. We recommend taking medications at the start of the day when your activity begins and at bedtime to ensure a comfortable night's sleep.
- As your pain diminishes, you can “wean” your pain medications. Try taking half the dose or stretching the amount of time between doses.

# Recovering at home (continued)

## Muscle aches and tension

You may experience muscle aches in your back, between your shoulder blades, ribs and chest. This is normal and will go away in time.

To relieve muscle tension, try the following:

- Correct your posture: Sit up straight bringing your shoulders over your hips, focus on keeping shoulders down and relaxed.
- Stretching exercises: With correct posture, gently lower your chin to your chest. Hold for 10 – 15 seconds. Repeat several times a day.
- Use a heating pad set on low to relieve aches and tension. A cotton sock filled with rice and heated in the microwave for 2 – 3 minutes also works. **DO NOT APPLY HEAT TO YOUR INCISION.**
- Massage or place gentle pressure on the sore spot.

## Constipation

Constipation is common especially while you are taking pain medication and your activity is less than usual.

- Eat more fiber (fruits, vegetables, whole grains).
- Drink sufficient fluids, approximately 6 – 8 cups per day. Warm fluids are helpful.
- Take a laxative of your choice. We recommend warm prune juice in the morning or milk of magnesia at bedtime.

## Diet

It may take up to 4 weeks for your appetite to return to normal. Until your appetite returns, eat what appeals to you.

- If you are a diabetic, **always** follow your diabetic diet.
- Follow a diet low in sodium and fat.
- Eat fresh foods as often as possible. They are best for you. Gradually remove processed food from your diet.
- Eating a heart healthy diet will minimize the development or recurrence of blockages in the coronary arteries.
- For additional information regarding a healthy heart diet, go to **americanheart.org**.

# Recovering at home (continued)

## Sleep

A common complaint after heart surgery is difficulty falling or staying asleep. Your regular sleep pattern will return in a few weeks but may be the last thing to return to normal. The following may prove helpful:

- Take your pain medication 30 minutes before settling into bed.
- Avoid taking naps late in the afternoon.
- Get sufficient exercise and fresh air.
- You may still need to sleep with your head elevated. Use a foam wedge or large pillows.
- Some people sleep in their armchair or sofa for a couple of days after returning home. If you do, make sure you lie as flat as possible to avoid blood clots in your legs.

## Sexual activity

Sexual relations are fine whenever you have recuperated enough to desire it. Avoid putting weight or pressure on your chest. You may need to take a passive role until you have completely recovered.

## Emotional ups and downs

Emotional ups and downs are very common during the home recovery phase. People can experience deep feelings of helplessness, vulnerability, sadness and depression. These emotions affect men and women alike.

- There may be “good” days and “bad” days. Be kind to yourself! You have undergone a major surgery that has physically and emotionally drained you. In time, you will return to your “old self.”
- Spread your activities evenly throughout the week. Do not over-schedule one day while devoting the next day to rest. This will help eliminate “bad” days. Visits from friends and family can be helpful, but should be limited. These visits must fit in your recovery schedule and allow you to exercise and get plenty of rest.
- A support group like Mended Hearts may be helpful. They have volunteers who have undergone heart surgery and are ready to listen as well as share their personal experiences with you. You can get more information by going to **[mendedhearts.org](http://mendedhearts.org)**.

If, after a period of time, these measures do not lift your spirits or prevent you from actively participating in your recovery, please contact your primary care provider.

# When do I call my doctor?

Call your surgeon for any of the following:

- Fever higher than 101°F/38.3°C or shaking chills.
- Changes in incisions (wound separation, increased redness/swelling or drainage that worsens after leaving the hospital).
- Increased, unprovoked, severe incisional pain.
- Frequent grinding, clicking or popping in your breastbone.
- One or both legs become(s) cool, pale, numb or painful, especially if this occurs suddenly.

Call your cardiologist for any of the following:

- Fast or irregular heartbeat.
- Shortness of breath/feeling winded while resting or with very little exertion.
- Dizziness or lightheadedness.
- Weight increase of more than 2 pounds overnight or more than 5 pounds in a week.
- Increased swelling in your legs.

# Cardiac rehab

## Why is cardiac rehab important after surgery?

Participation in a cardiac rehabilitation program after cardiac surgery is key to your long term recovery. The American Heart Association recommends participation in a cardiac rehab program along with other secondary preventative measures such as aggressive management of hypertension, diabetes mellitus, smoking cessation, and weight loss to help maintain patency of grafted vessels long term. You should start participating in a cardiac rehabilitation program approximately 4 – 8 weeks after surgery.

## How can I get enrolled?

A referral from your cardiologist and copies of pertinent medical records are required to enroll in Cardiac Rehab.

## Where can I go for cardiac rehab?

If you live locally, Sequoia Hospital provides a Phase II Cardiac Rehab Program for all post-cardiac surgery patients. It is covered by Medicare and most insurance providers.

If you do not live in the area, there are cardiac rehab programs that you can enroll in where you live. Our physical therapists (PT) can provide you a list of facilities in your area upon request.

## What will I do in cardiac rehab?

Each hospital's cardiac rehab program may be set up differently. Should you choose to enroll in cardiac rehab at Sequoia, you will undergo an initial assessment by our staff. After the initial assessment, an individualized treatment plan will be devised based on your specific needs. Then you will begin attending exercise classes, as well as education and counseling classes. Participation in the program typically lasts 3 months or for a total of 36 classes. Classes meet 3 times a week for an hour at a time and are supervised by our staff with an additional hour each week for an educational lecture. Exercise class size is limited to 4 – 6 phase II patients per class. Phase III Cardiac Rehab is a continuation of supervised exercise and is usually a self-pay program.

If you would like more information on Sequoia Hospital's cardiac rehab program, please call (650) 367-5517.

If you would like more information about the importance of cardiac rehab after cardiac surgery, please go to The American Heart Association's website: **heart.org**

# Contact numbers

## Sequoia Hospital Contacts

Patient Nurse Navigator  
**(650) 367-5672**

Julie Biglieri RN, BSN, MPA, CCRN  
Director of Patient Services Cardiac/Telemetry  
Heart & Vascular Institute  
**(650) 367-5858**

**Intensive Care Unit (ICU)**  
**(650) 367-5623**

**Cardiac Surveillance Unit (CSU)**  
**(650) 367-5617**

**Case Management**  
**(650) 367-5683**

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