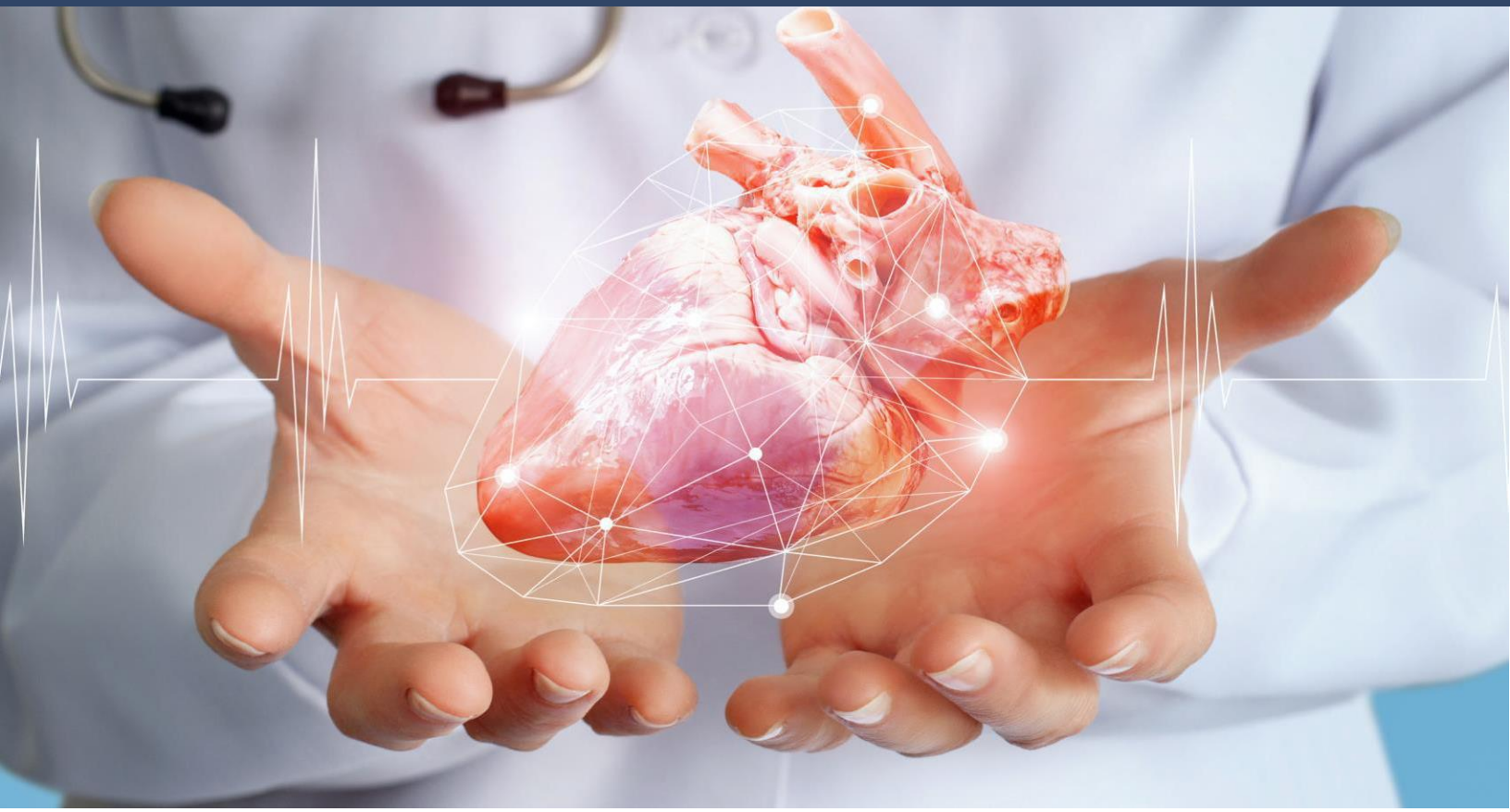
Perfecting the Surgical Journey
ERAS®
CARDIAC



ERAS© Enhanced Recovery After Surgery

CARDIAC PATIENT EDUCATION

Your Journey to a Successful Recovery from Cardiac Surgery

THE University of Vermont MEDICAL CENTER

UVMMC – Cardiothoracic Surgery – P: (802) 847 – 4152 F: (802) 847 - 8158

Questions for the Medical Team Regarding My Surgery:

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Program Welcome Letter

Perfecting the Surgical Journey
ERAS®
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Welcome to *The University of Vermont Medical Center*.

Thank you for trusting us with your care. We want this experience to go as smoothly as possible for you and your loved ones. A positive healthcare journey begins with education.

This book will help you and your caregivers understand what to expect during and after your heart surgery at *The University of Vermont Medical Center*.

We are committed to providing the highest quality of care and keeping you well informed about your health. A member of your heart care team will be happy to answer any questions you have before, during, and after your stay with us. We help our patients make successful recoveries using a special protocol called Enhanced Recovery After Surgery (ERAS® Cardiac). It is now a nationally recommended protocol.

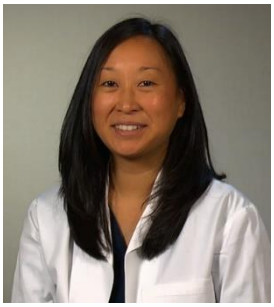
Once again, thank you for choosing *The University of Vermont Medical Center*.

Sincerely,

Your Cardiothoracic Surgery Team

Meet Our Team

Cardiac surgery has been shown to improve a patient's quality of life, alleviate debilitating symptoms and increase longevity. On behalf of The University of Vermont Medical Center Cardiac Surgical Team, we want to share our commitment to patient-centric care and safety. We know how precious life is and pledge to get you through your surgical journey safely and effectively.



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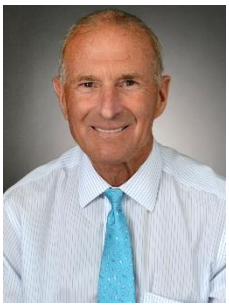
Thoracic and Cardiac Surgeon



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Learn About the University of Vermont Medical Center

At The University of Vermont Medical Center, we never forget that the people we treat are fathers, sisters, children, loved ones. When you turn to us for your health care needs, we provide you with the kind of care you deserve – nationally recognized medical treatment, informed by the latest thinking and delivered with an individualized touch.

Parking: When you arrive at the University of Vermont Medical Center Main Campus, you can park in the underground parking garage. This is a paid garage that accepts cash, checks, and credit cards. You can also pull up to the front entrance, and we will valet park your car. Valet parking is available from 6 a.m. – 5 p.m. and pick up is available until 9 p.m. For pick-up after 9 p.m. please call (802-847-2812). There is no charge for parking or valet if you have a handicap plate or tag.

Pharmacy Locations:

- 1 South Prospect St. Burlington, VT, Level 1
- 111 Colchester Ave, Main Campus, Burlington, VT Main Lobby, Level 3
- 792 College Parkway, Fanny Allen Campus, Medical Office Building, Suite 103 Colchester, VT

Laboratory Locations & Hours:

- 1 South Prospect St. Burlington, VT, Level 1 Lobby
  - **Monday - Friday 8:00am - 4:30pm**
- 111 Colchester Ave, Main Campus, Burlington, VT Main Lobby, Level 2 Blood Draw
  - **Monday - Friday 8:30am - 5:00pm**
  - **Saturday & Sunday 7:00am - 3:30pm**
- 792 College Parkway, Medical Office Building Suite 104, Colchester, VT, Fanny Allen
  - **Monday - Friday 7:00am - 3:30pm**

Other Services:

- Billing/Patients Financial Services – (802) 847 - 8000
- Case Management & Social Work – (802) 847 - 3553
- Patient Information – (802) 847 - 0000
- Patient & Family Advocacy – (802) 847 - 3500

QR Code to UVMMC Visitors Website

Pre-Surgery Preparation

YOUR SURGERY IS SCHEDULED ON _____with _____.

Our Office will call the afternoon prior or the Friday before to confirm the time of arrival and surgery time.

Postponement of surgery is possible but will be communicated.

Your Preop telephone screening (PAT) ON: _____.

A nurse will call you to review your health history, medications, and discharge instructions at the following number (802) 847 - 3000. **See MyChart for appointment details**.

This phone call takes approximately 30 minutes to complete. If you need to change this date or time, please call the Pre-operative Evaluation Office at (802) 847 - 5400

Outpatient (Admitted the same day as your surgery)

Following the decision for surgery you will need to complete the following testing and have the following meetings with healthcare providers. Examples below to consider include:

- Diagnostic testing and labs your surgeon have ordered.
- Receive instructions on what to do the night before and the morning of your surgery.

You will check in at the patient registration desk at the Main Campus, 3rd Floor Registration Desk, 2-hours before your scheduled surgery time.

Inpatient (Admitted prior to your surgery)

Sometimes our patients need to be admitted prior to surgery while others are already in the hospital. Examples below to consider include:

- Orders are placed for diagnostic testing.
- Anesthesiology will discuss the anesthesia for surgery.
- A healthcare provider will meet with you to discuss plan of care, what to expect and answer your questions.

Pre-Surgery Checklists

Checklist: For Preoperative Testing Day

- ☐ Given Chlorohexidine (CHG) soap
- ☐ Given incentive spirometer (IS)
- ☐ Medication instructions (Stops prior to surgery)
- ☐ Contact, medical and medication information up to date
- ☐ Lab testing and diagnostics

Checklist: Getting Ready for Surgery

- ☐ Complete nasal decontamination if **positive** results:
  - Using Chlorohexidine (CHG) soap and Mupirocin ointment x5 days prior to surgery and the morning of surgery
- ☐ Trim beards down to 1" or less three days before surgery
- ☐ Shower the night prior to surgery with (CHG)
  - *see page 9 for instructions*
- ☐ Heart healthy diet and remain active
- ☐ Consider purchasing a thermometer, blood pressure cuff and scale to use after surgery
- ☐ Friday or the afternoon before surgery, given arrival time
  - Addressed any special needs for the day of surgery

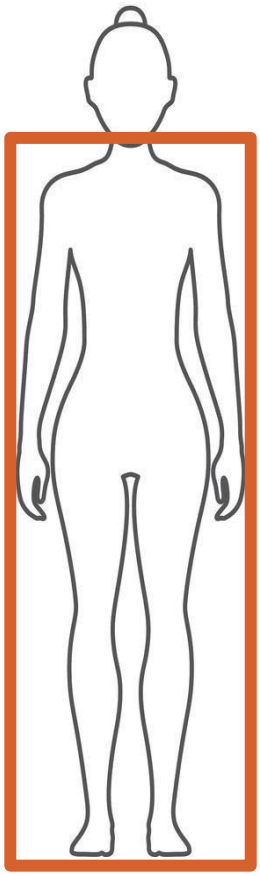
Checklist: Day Of Surgery

- ☐ No solid food after 12 midnight
  - Clear liquids are ok until 3 hours before surgery
- ☐ Take medications as instructed
- ☐ Brush teeth and shower morning of surgery with (CHG) soap
- ☐ Remove any jewelry or piercings
- ☐ Arrive at hospital at instructed time, *2-hours before surgery*
- ☐ Leave valuables at home or with family member
- ☐ If you wear contacts, do not wear them, please wear your glasses
- ☐ Bring insurance card, photo ID, and a list of medications to the hospital
- ☐ Bring CPAP machine if using one at home

Pre-Surgery Shower

You play a key role in the prevention of a surgical site infection by preparing your skin to be as germ free as possible. Your surgeon has asked that you shower with the antibacterial soap Chlorohexidine (Hibiclens) provided. It contains chlorohexidine gluconate (CHG). If you have a known allergy to this agent, you should not use this soap and inform your surgeon or nurse.

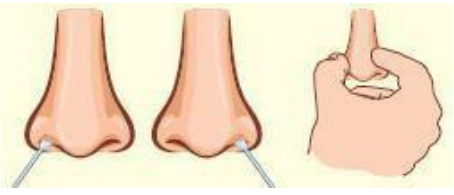
Preoperative Showering Instructions



- Do not shave the surgical area within 7 days of surgery

1. The evening before surgery, shower with regular soap and shampoo
2. Turn off the water
3. With a clean washcloth gently wash with the Chlorohexidine soap for 5 minutes
    - Wash each part of your body listed below: Neck, chest, stomach, hands, arms, legs, feet, back, rear, groins, and in-between folds
    - Chlorohexidine is a strong disinfectant. **Do not** use it on your face, eyes, ears, or genitals
    - Make sure to leave the Chlorohexidine on your skin for 5 minutes before washing off
4. Turn water back on and rinse entire body, then dry with a clean towel
5. Do not use powder, creams, or lotion after the showers
6. Change your bed linen after your evening shower
7. Repeat morning of surgery or as directed

If positive nasal screening test (MRSA or MSSA):



- Apply Bactroban (mupirocin) to each nostril with a cotton swab twice daily for five days prior to your surgery and the morning of surgery
- Shower with the Chlorohexidine (Hibiclens) soap once a day for five days prior to surgery, including the morning of surgery

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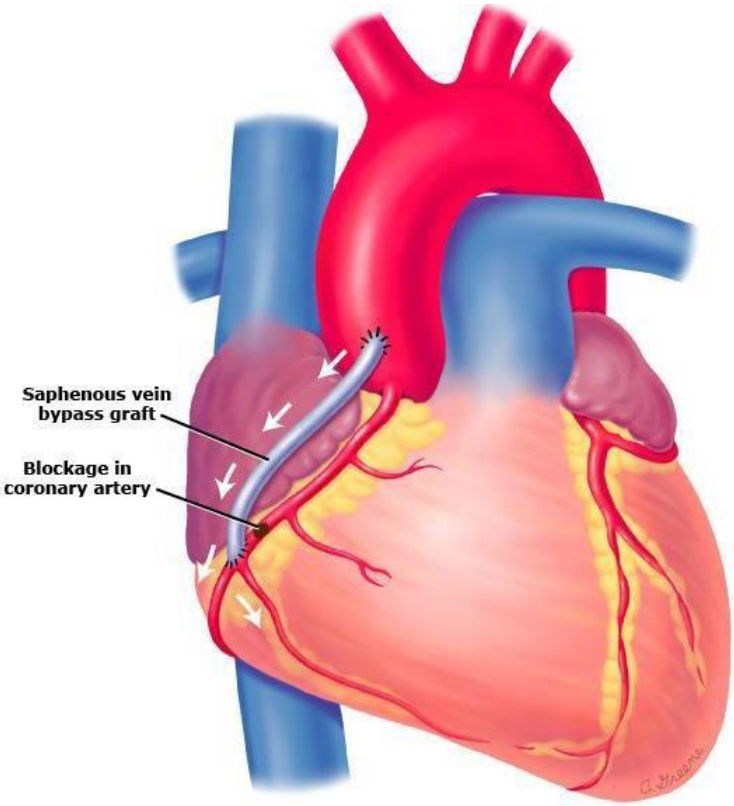
Understanding Heart Disease

The heart is a muscle about the size of a clenched fist. The heart receives oxygen-rich blood from the coronary arteries on the outside of the heart. The heart needs enough blood supply to pump blood to the rest of your body efficiently.

Coronary artery bypass graft surgery (CABG), a surgeon uses healthy pieces of blood vessels from other parts of the body (called "grafts") to re-route blood. They do this by attaching a graft to the aorta, which is the largest blood vessel in the body, and then to a place below a blockage. This creates a way around the blockage. Sometimes, the surgeon redirects an artery that is supposed to supply the chest muscle and attaches it to the heart. These types of grafts allow blood to get past blockages and to the heart muscle that was not getting enough blood.



Understanding
Heart Disease

Treatment of Heart Disease

- You will get an "IV," which is a thin tube that goes into a vein. This can be used to give you fluids and medicines.
- You will get anesthesia medicines. This is to make sure that you do not feel pain during the procedure. Bypass surgery is done with general anesthesia. This type of anesthesia makes you unconscious so you can't feel, see, or hear anything during the procedure. If you have general anesthesia, you might get a breathing tube to help you breathe.
- You might get medicines to help control pain after the procedure.
- The doctors and nurses will monitor your breathing, blood pressure, and heart rate during the procedure.
- The surgeon will make a cut, or "incision," in the skin over your breastbone. Then, they will split the breastbone to get to your heart.
- The surgeon will cut out the piece or pieces of blood vessels that will be used as grafts. This could mean that the surgeon will need to make cuts in your arm, leg, belly, or within the chest itself.
- When the surgeon is ready to attach the grafts, they will need to stop your heart for a brief time. While your heart is stopped, a machine called a "heart-lung machine" will take over the work of your heart. The machine will keep blood flowing throughout your body. After the surgeon sews on the grafts, they can restart your heart and take you off the heart-lung machine.
- The surgeon will put the breastbone and skin back together. They will cover your incisions with clean bandages.

For more detailed information please visit uptodate.com and search CABG (The Basics).
Article Title: *Patient education: Coronary artery bypass graft surgery (The Basics)*

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Understanding
Valvular Heart Disease

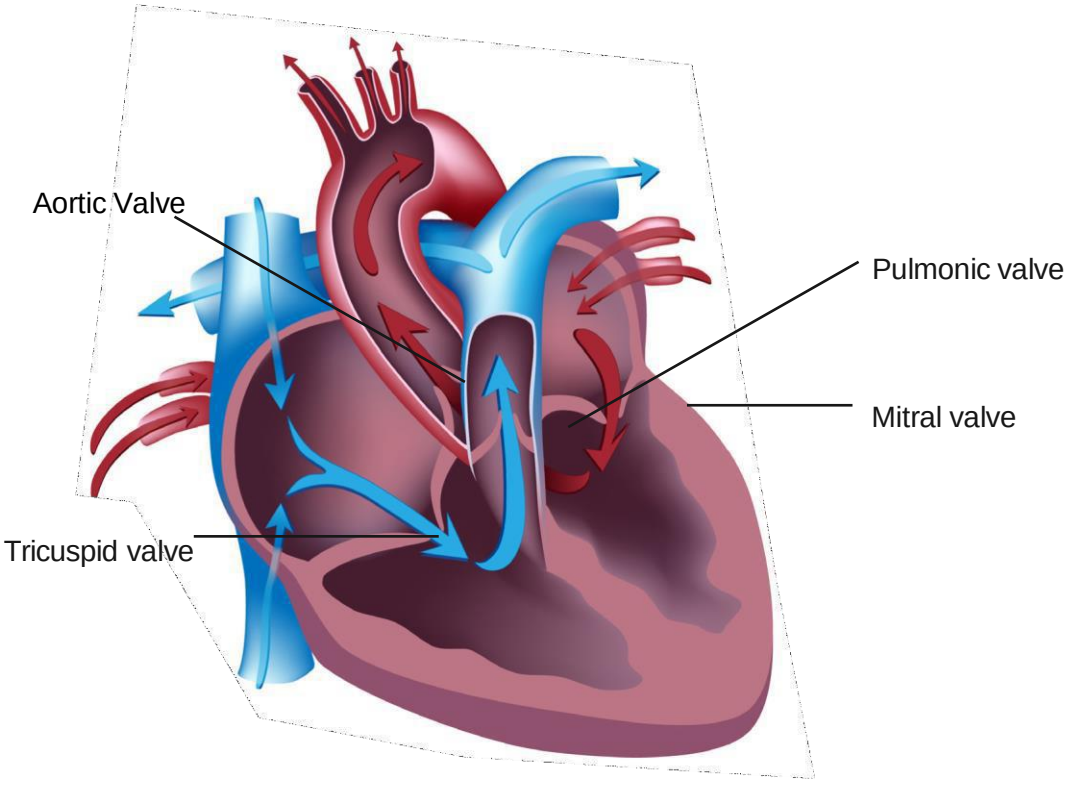
The heart has four chambers separated by tissue called the septum. Four valves in the heart assist in pumping blood through the heart to the lungs and body. The valves work much like one-way doors. They allow blood to move in one direction, from one heart chamber to the next.

Aortic valve:
between the left Ventricle and aorta.

Pulmonic valve:
between the right ventricle and the lungs.

Tricuspid valve:
between the right atrium and the right ventricle.

Mitral valve:
between the left atrium and left ventricle.



Understanding
Valvular Heart Disease

Stenosis- The term used for a blocked valve. This narrowing prevents the valve from opening all the way.

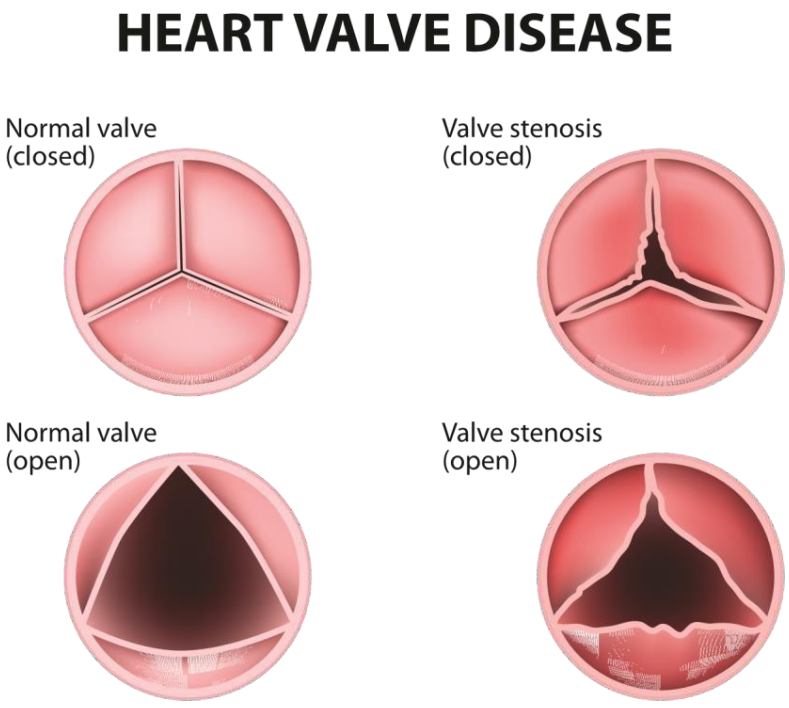
Insufficiency/Regurgitation- The term used for a leaking heart valve. When the valve from one chamber does not close all the way after each heartbeat, blood leaks backward into the chamber it started from (regurgitation).

Treatment of Valvular Heart Disease

Valvular heart disease varies from person to person. Depending upon the type of disease and severity of symptoms, valvular heart disease may be treated with medications, catheter-based procedures, or surgery. Valves can either be repaired or replaced.

The two types of artificial heart valves used to replace a damaged valve are biological (animal tissue) and mechanical (metal and/or plastic) valves. Your surgeon will discuss which valve type is best for you.

Mechanical Valves will require an anticoagulant after surgery called Warfarin (Coumadin).



Understanding Valvular Heart Disease:
Warfarin (Coumadin) for Valve Surgery Patients

Warfarin (brand name: Coumadin) is a prescription medication that interferes with normal blood clotting (coagulation). It is also called an anticoagulant.

The normal clotting mechanism is a complex process that involves multiple substances (cells and clotting factors). Clotting factors are proteins produced by the liver that act in sequence to form a blood clot.

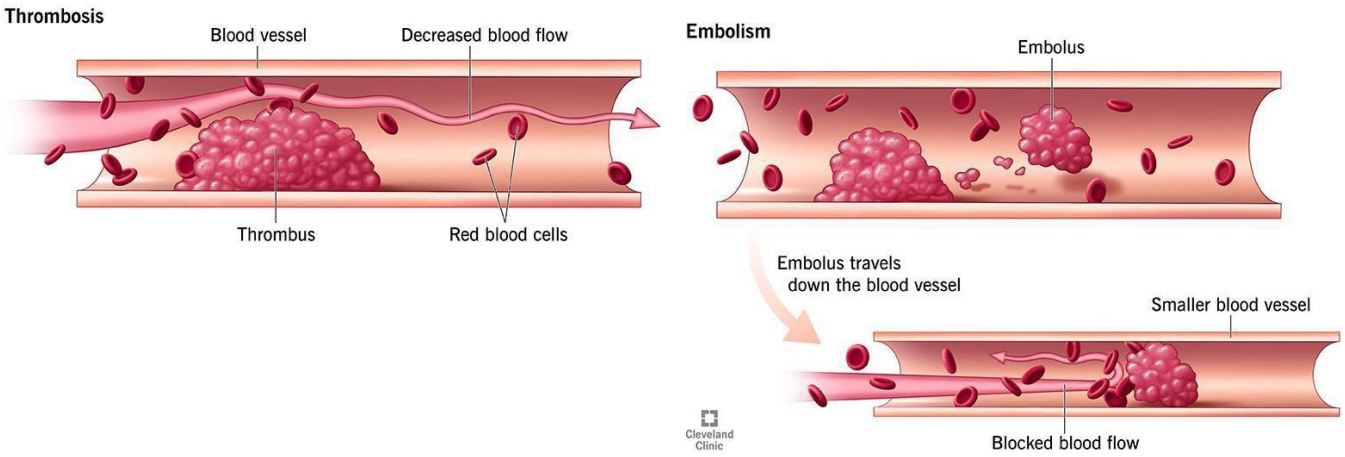
For the liver to produce some of the clotting factors, adequate amounts of vitamin K must be available. Warfarin blocks one of the enzymes that uses vitamin K to make some of the clotting factors, in turn reducing their ability to work correctly in the blood. As a result, the clotting mechanism is disrupted and the ability of blood to clot is reduced.

Why Do I Need Warfarin?

Warfarin is prescribed for people who are at increased risk for developing harmful blood clots. This includes people with a mechanical heart valve, an irregular heart rhythm called atrial fibrillation, certain clotting disorders, or a higher risk of a clot after hip or knee surgery.

Warfarin is also used in people who have already developed a harmful blood clot, including some people who have had a stroke, heart attack, a clot that has traveled to the lung (pulmonary embolism or PE), or a blood clot in the leg (deep vein thrombosis or DVT).

Warfarin does not dissolve clots, but it keeps them from increasing in size and moving to another part of the body. This allows the body's natural systems to break down a clot over time and helps reduce the chance of clots developing in people with a higher risk of forming clots. Warfarin prevents and treats serious medical problems caused by blood clots.



Warfarin Monitoring

The goal of warfarin therapy is to decrease the clotting tendency of blood, but not to prevent clotting completely. Therefore, the blood's ability to clot must be carefully monitored while a person takes warfarin. These labs are call Prothrombin Time (PT) and International normalized ratio (INR)

The dose of warfarin is adjusted to maintain the clotting time within a target range, based on the results of periodic blood tests. These tests can be done in a laboratory or using a portable device at home.

Your Primary Care will be the provider responsible for monitoring your Warfarin dosing long-term. Occasionally the Cardiothoracic Surgery Office will monitor for a few weeks prior to surgery. Upon discharge this should be clarified.

Warfarin Side Effects

Possible side effects — The major complication associated with warfarin is bleeding. This includes serious, life-threatening bleeding such as bleeding into the brain or internal bleeding, which is rare, and minor bleeding such as easy bruising, gum bleeding, or nosebleeds, which are common and can occur with any anticoagulant.

When to seek help — If there are obvious or subtle signs of bleeding, including the following, you should call your health care provider **immediately**.

- Persistent nausea, stomach upset, or vomiting blood or other material that looks like coffee grounds
- Headaches, dizziness, or weakness
- Nosebleeds
- Dark red or brown urine
- Blood in the bowel movement or dark-colored stool
- A serious fall or head injury, even if there are no other symptoms
- A car accident or other serious injury that could cause bleeding

It is also important to notify your health care provider if you have any of the following:

- Bleeding from the gums after brushing the teeth
- Swelling or pain at an injection site
- Black and blue skin (bruising)
- Excessive menstrual bleeding or bleeding between menstrual periods
- Diarrhea, vomiting, or inability to eat for more than 24 hours
- Fever (temperature greater than 100.4°F or 38°C), which could be a sign of infection that might alter the INR
- A new medication prescribed by another clinician, because some medications can alter the INR in people taking warfarin
- A planned surgery or procedure, because it may be necessary to stop the warfarin for a period of time to decrease your risk of bleeding during or after the procedure

For more detailed information please visit uptodate.com and search Warfarin (Beyond the Basics).

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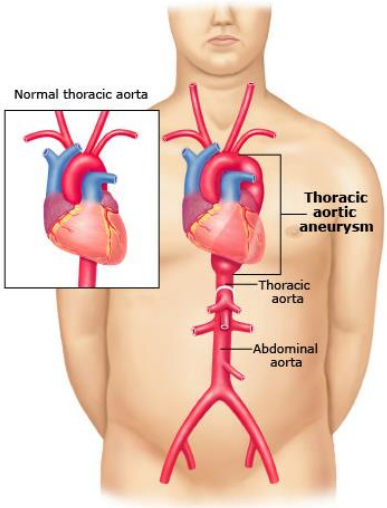
Understanding
Thoracic Aortic Aneurysm

The Aorta
The aorta is the largest artery in the body. Blood flows out of the top of the heart through the aortic valve into the aorta. Blood then flows down through the chest (thoracic aorta), into the abdomen (abdominal aorta) where lastly it splits into two blood vessels that supply each leg.

Aortic Aneurysm
An aneurysm is a bulge that occurs when the wall of the aorta becomes weak or damage.



They can develop anywhere along the aorta. The pressure of the blood flowing through the aneurysm creates a bulge at the weak spot, which causes it to “balloon” or expand in size. The bulge usually starts small. The aneurysm may grow over time as the pressure continues.

Aneurysms are often found incidentally during image evaluation of other problems. They commonly cause no pain or discomfort and can enlarge for prolonged periods of time without being found.

When the aneurysm gets too large, it can cause pressure on neighboring organs. The wall of the blood vessel can split or “tear” (dissection) or even “burst” (rupture). This can cause life-threatening internal bleeding or other serious complications.

Causes of Thoracic Aortic Aneurysms
Many factors can contribute to the development of an aortic aneurysm. Some of the most common conditions associated with aneurysm formation are:

- High blood pressure (hypertension)
- Smoking, leading to injury of the wall of the aorta
- Hardening of the arteries (atherosclerosis) where fat, cholesterol, and other substances (plaque) clog the arteries
- Changes in your aorta due to advanced age
- Inflammation of your aorta
- Injury from falls or motor vehicle accidents
- Untreated infection such as syphilis or salmonella
- Congenital or genetic causes of weakness of the artery wall (present from birth), such as Marfan or Ehlers-Danlos syndrome

Symptoms of Thoracic Aortic Aneurysms

Thoracic aortic aneurysms often do not cause any symptoms, and they usually develop slowly over time. However, if the aneurysm is big enough to put pressure on a surrounding structure, you may experience symptoms such as:

- Hoarseness
- Trouble swallowing
- Swelling in your neck
- Pain in your chest or upper back
- Nausea and vomiting
- Rapid heart rate (tachycardia)

Monitoring of Thoracic Aortic Aneurysm

Because treatment is individualized, it is especially important that you see your doctor for an annual CT scan to follow your aneurysm.

Taking control of your blood pressure and keeping it in a healthy range will help reduce the need for future surgery. You will, however, likely require lifelong monitoring of the diameter of your aorta even after an operation to be sure problems don't develop in other areas. Keeping regular appointments with a heart specialist will help you monitor your aorta and reduce the chances of future problems.

Activity and Exercise Recommendations:

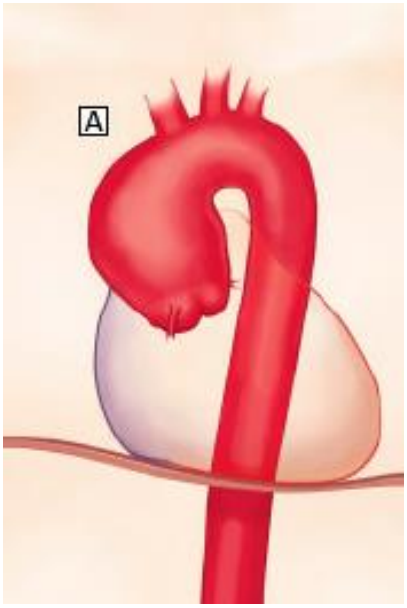
- Exercise is part of a healthy lifestyle because it can lower your blood pressure. It should be included in the treatment plan for all patients with aortic disease
- Moderate aerobic activities (walking, jogging, running, yoga, pilates) are SAFE
- Lifting light weights is OK, as long as you stop well before you can't do another rep. Heavy weightlifting (like bench pressing) should be avoided as this movement can sharply and quickly increase blood pressure.
- Sexual activities are safe
- Avoid contact sports

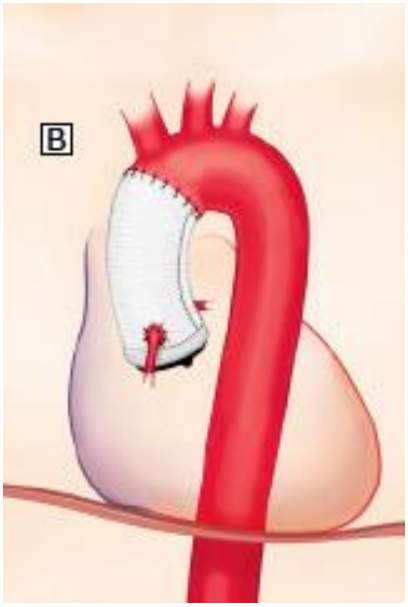
Treatment of Thoracic Aortic Aneurysm

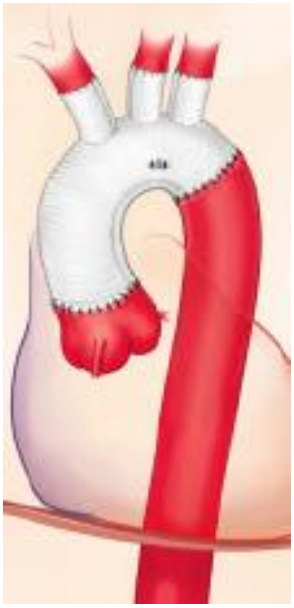
If decided to move forward with surgery, your cardiothoracic surgeon will recommend replacement or stenting of the affected portion of your aorta with an artificial graft. Not all options are appropriate for every patient, but your doctor will talk to you about the recommended operation, including the technique that is chosen and the incision that is made.

If the aneurysm involves the ascending aorta (located in the part of the aorta that exits the heart and travels up toward the neck), the diseased portion can be replaced with a tube graft through an incision on the front of the chest. This incision is called a median sternotomy and extends down the front of your chest, through your breastbone or sternum, which enables your cardiothoracic surgeon to see your heart and aorta.

If the aneurysm is close to the aortic valve, the valve also may have to be repaired or replaced. In some cases, the area between the valve and the ascending aorta, called the root, is involved in the aneurysm and will have to be replaced. An aortic root replacement is a more complex operation, and your surgeon will discuss the details with you.







Information provided by The Society of Thoracic Surgeons.

For more detailed information please use this QR code:

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Enhanced Recovery After Surgery (ERAS©)

ERAS© stands for Enhanced Recovery After Surgery. ERAS© for cardiac surgery patients is a modern approach to caring for patients throughout their surgical journey. The surgical journey begins before surgery and continues until the patient has returned to their activity baseline.

ERAS© helps promote healing by combining the most up-to date protocols to help patients prepare for surgery and for their recovery.

With ERAS© patients are active participants in their recovery journey.

ERAS© to Reduce Complications

Before Surgery ERAS©

- Stop smoking and drinking excessive alcohol
- Control blood sugar levels
- Reduce anxiety
- Improve exercise level
- Eat a Healthy diet
- Minimize fasting

After Surgery ERAS©

- Early removal of the breathing tube, wires, and drains.
- Resume eating & drinking
- Early and frequent out of bed & walking
- Maintain manageable pain
- Return of bowel function
- Minimize use of opioids
- Control blood sugar levels

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After Surgery Hospitalization

Operating Room

During your surgery, you will have a breathing tube, chest tubes, temporary pacing wires, IV lines, and a urinary catheter (tube in your bladder) placed. Your surgery will take anywhere from three to six hours.

The Heart-Lung Machine

Traditionally during open heart surgery, a patient is placed on a heart-lung machine and does the work of the heart and the lungs throughout the procedure. The surgeons may choose not to use a heart-lung machine for your surgery; that would be called “off-pump” or “beating-heart” surgery. Your surgeon, after careful review of your situation, will decide which method is best for you. Each method has benefits and risks.

Critical Care Unit

Following surgery, you will be brought to a special intensive care unit where you will be closely monitored by a nurse and care team who are highly trained. You will have a breathing tube placed while you were in surgery, and you will have it for at least some of the time while you are in the intensive care unit. This is called being intubated. While you are intubated, you will not be able to speak. Our goal is to have the breathing tube out within 6 hours after surgery. When the breathing tube is removed (extubated), you will receive oxygen through your nose. Once extubated, using your incentive spirometer is important to prevent pneumonia. Taking deep breaths is especially important. It will help keep your lungs working well.

Your nurse will monitor your heart rhythm and chest tube drainage, help you safely move, work with you on pain control and talk with you about your plan of care. The surgeons and advanced practice providers (physician assistants and/or nurse practitioners) will see you daily during rounds on the unit. Your loved ones may be asked to briefly return to the family waiting room.

Telemetry Unit

Your next move will be to the Telemetry Unit which means your recovery is progressing. A heart monitor will be applied that will remain on until discharge. You will receive a heart-shaped pillow you can hold to your chest when you cough, sneeze, or move. The pillow will help you stabilize your chest.

Some things you can expect during your stay:

- Your care team will round daily
- Drains and lines will be removed
- Your blood sugar will be checked frequently
- Dressings may be removed and replaced
- You may have additional tests ordered
- Mobility to begin the evening of surgery by dangling on the side of the bed
- Walking with assistance on postoperative day one
- Walk in the hall 3-4 times daily
- Out of bed in a chair for all meals
- Use of incentive spirometer to take deep breaths
- Eating as soon as you can
- Medications will be adjusted for heart rate, blood pressure, and swelling

Discharge Planning

Most patients continue their recovery safely at home after heart surgery. When you go home, a hospital case manager will arrange visiting nurse services. Most patients are discharged to their home. Some patients may continue recovery at a skilled nursing facility; your hospital case manager will make these arrangements, including transportation to the facility when necessary.

Patients are often ready for discharge 3-7 days after surgery. Discharge occurs when the following milestones have been reached:

- Eating and drinking
- Walking safely
- Pain is controlled
- Heart rate and rhythm are regulated
- Blood tests are stable
- Fluid retention is resolving

Recovering At Home

- Put on compression TED stockings in the morning and remove at bedtime for four weeks
- Continue deep breathing exercises with an incentive spirometer for two weeks
- Take your temperature, blood pressure, heart rate and weigh yourself at the same time every morning, and keep a log
- Share your discharge instructions with all your healthcare providers, including the visiting nurse, cardiologist, and primary care doctor
- Resume a normal daily routine of bathing and getting dressed in the morning
- Try to get 6-8 hours of sleep every night; avoid stimulants (caffeine, nicotine)
- Talk to your family or friends about your feelings of depression or frustration. If your depression doesn't improve, talk to your healthcare provider
- Dental cleanings or dental work are not recommended within 3 months of surgery unless necessary. Please contact our office to discuss as planned antibiotics for prevention of infection may be necessary

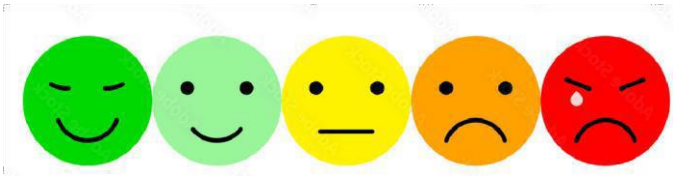
Stop any activity immediately if you feel short of breath, notice irregular heartbeats, feel faint or dizzy or have chest pain, and contact the CT Surgery office (802) 847 - 4152

Keeping Pain Tolerable

Uncontrolled pain is associated with increased blood pressure, heart rate. It can also impact appetite ability move and take deep breaths.

Although you will have some pain after surgery, the goal is to adequately control your pain AND minimize negative side effects from commonly used pain medications called opioids. Opioids can lead to nausea, excessive, drowsiness, constipation, confusion, and delayed return of bowel function. You will be given multiple medications to help keep your pain tolerable. Some medicines (non-opioids) will be scheduled, and others (opioids) will be reserved for when your pain is not tolerable. You will be asked to rate your pain on a 0-10. 0 being no pain, and 10 being the worst you can imagine. A pain score of 4 is considered a tolerable level.

RATE YOUR PAIN:



0 2 4 6 8 10

Distractions techniques to help control pain

- Watch TV
- Read
- Crossword puzzles or games
- Listen to music
- Meditation

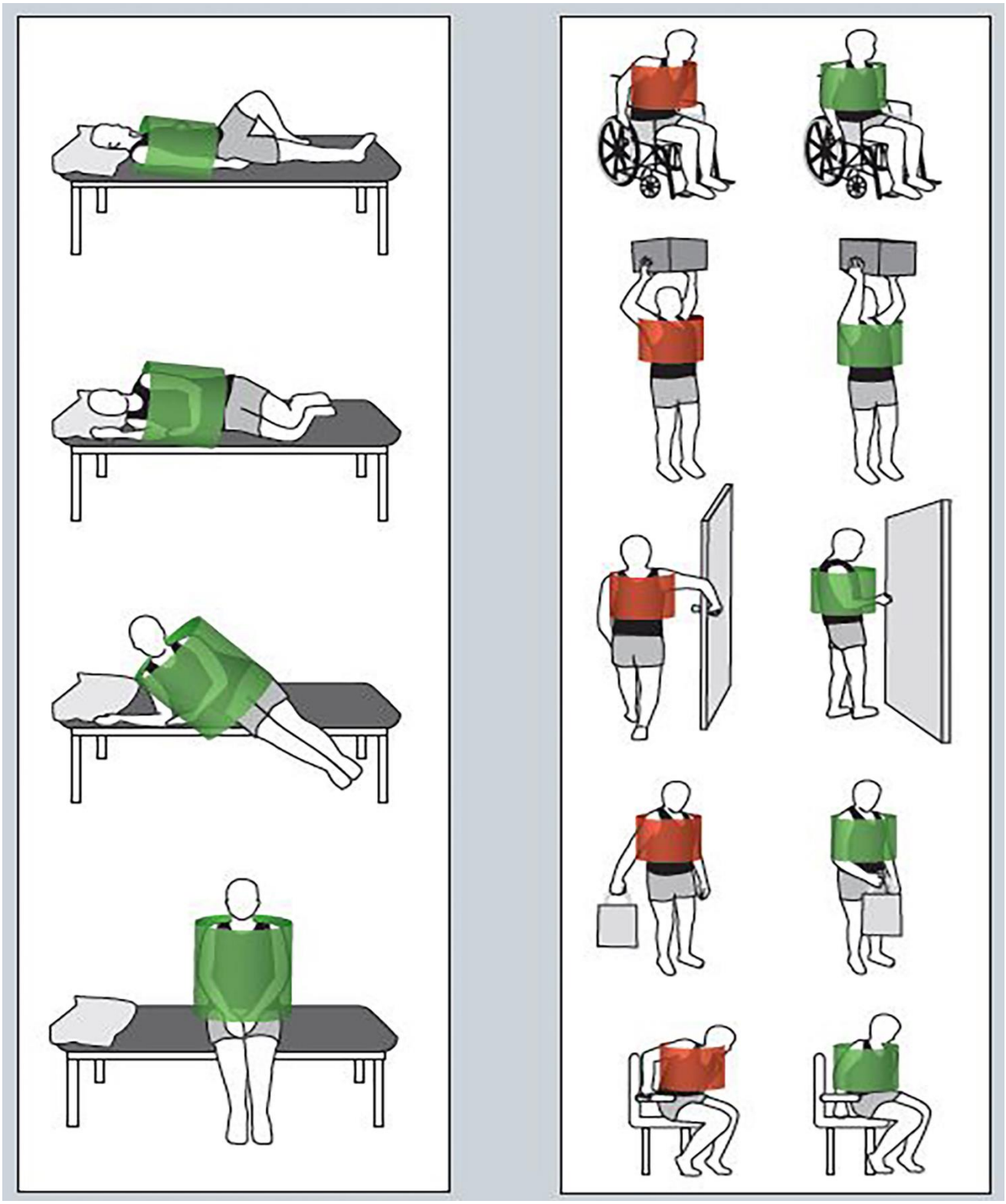
Healing Therapies

Therapies - specially trained staff promote healing, comfort, and relaxation, including:

- Healing Touch
- Aromatherapy
- Integrative Medicine consultation
- Breathing/relaxation techniques

Getting Back to Normal Activity

Keep Your Move in the Tube®



Getting Back to Normal Activity

For the next 6 weeks following your surgery, it is important to adhere to the following guidelines. Let pain be your guide when you are attempting non-load bearing activities "out of the tube." It is important to pursue active living after surgery. Immobility for more than 3 consecutive days can cause loss of muscle mass equaling the size of an orange per day.

Immediately stop any activity if you experience discomfort or hear a clicking/popping sound and call your surgeon (802) – 847 – 4152

✓ Use BOTH arms and keep them close to the body with elbows in, when: ○ Lifting, pushing or pulling any object ○ Standing up from a chair ○ Getting out of bed- Pushing or pulling ✓ You may move your arms freely if you are not holding something ✓ Always support your chest by hugging yourself or a pillow when coughing, sneezing, or laughing	✗ Avoid pushing or pulling with one arm ✗ Avoid lifting objects with one hand ✗ Avoid any activity that puts uneven strain on the breastbone (ex: sweeping, hunting, yardwork) ✗ Avoid reaching behind with both arms together
✓ It is okay to reach "out of the tube" behind with ONE ARM for self- care activities (ex: toileting, grooming). Be sure to: ○ Rotate from the waist ○ Keep elbows close to your body ✓ Take a shower daily with antibacterial soap	✗ No tub baths or soaking (ex: swimming) for 3 months after surgery ✗ Do not apply creams/ointments to incisions until after they are healed ✗ Avoid scrubbing your incision
✓ Examples of exercises that are OK to perform: ○ Bicep/arm curls with elbows at your sides ○ Tricep pushdowns/elbow extensions with elbows at your sides ○ Lower body exercises (walking, stationary bike, treadmill, squatting) ✓ It is important to be mindful of your breathing and avoid holding your breath, especially when lifting.	✗ Avoid exercises, sports or activities that involve uneven pushing/ pulling with arms (golf, tennis, pickleball, bowling, skiing, running, swimming) ✗ Avoid exercises that cause elbows to go behind the body (chest stretch) ✗ Avoid resistance exercises with elbows out to the sides (overhead lifting, lat pulldown, pec fly, chest press) ✗ Avoid exercises in a pushup (plank) or hands and knees position ✗ Avoid arm cycling, elliptical machine, and standing quad stretches
✓ Wear your seatbelt: ○ Rotate from the waist and reach for your seatbelt with both arms.	✗ Do not drive a vehicle (car, truck, tractor, riding mower) for 1 month from your surgery date or until cleared by your surgeon.

Preventing Infections After Surgery

Incisional Care:

- Shower daily with a gentle soap allowing shower water to rinse the soap off. Water from shower may directly hit your incisions
- Gently pat incisions dry with a clean towel
- Keep your incisions clean and dry
- It is normal to see bruising and areas of hardness in your leg incisions (a camera was used to remove the vein there); you can elevate the leg and wear compression stockings or ACE bandages to help reduce swelling
- Itching and numbness around your incision are normal after surgery
- Remove chest tube gauze dressing 48hrs after the tubes were removed
    - If you have sutures in place: 7 days after chest tubes were removed, have Home Health or PCP remove the sutures
- Check your incisions daily for drainage, redness, increased tenderness, or edges pulling apart. If you notice any symptom above from your chest incision, call your surgeon immediately (802) 847 - 4152

Avoid:

- Holding pets and children close to your bare chest
- Using perfumed soaps or body washes
- Soaking in bathtubs, hot tubs, pools, etc. for 12 weeks
- Picking at scabs or incisional glue
- Using creams, lotions, or ointments on your incisions

Each Day:

- **Women**: Wear a clean bra daily that you can put on without reaching your arms behind your back. See page 27
- Good hand washing
- Shower and brush teeth daily
- Wear clean clothing every day
- Check your temperature daily for 2 weeks
- You may need assistance with showering the first few days
    - If you are unsteady on your feet, use a shower chair

Surgical Bra Information

Female patients should wear a surgical bra 24 hours a day following cardiac surgery. The bra should alleviate tension from your breasts on your incision and can assist in the healing process of the chest bone.

- It should not be loose-fitting or cause skin irritation or discomfort
- It should not be tight-fitting or cause redness on your skin
- Change and wash the bra following your daily shower

Incisional Care:

- Place and change a pad or gauze daily/as needed between your incision and the bra to keep the bra from irritating/rubbing your chest incision
- Wash incisions daily with soap and water
- Replace with a fresh/clean bra after showering
- Keep incisions dry and clean
- Monitor for any signs or symptoms of infection: fever, warm to touch, redness, drainage, or skin/incision opening
    - Notify the CT Surgery Clinic if you have any concerns

Timeline:

- If you had a full-sternotomy approach (clavicle to bottom of the sternum) you should wear your bra 24-7 for 12 weeks from your surgery date

- If you had a mini-sternotomy approach (clavicle to middle of sternum) you should wear your bra 24-7 for 6 weeks from your surgery date

If you need a new bra or have any concerns about fit, comfort, or incisional care please contact the **CT Surgery Clinic at (802) 847 - 4152**

UVMMC – Cardiothoracic Surgery – P: (802) 847 – 4152 F: (802) 847 - 8158

Follow-up Care

Follow-up care is especially important. It is strongly encouraged that you make and keep these appointments.

- **Primary Care Physician:** 1 – 2 weeks after discharge
  - Please contact your PCP 1-2 days after discharge to schedule this appointment
  - If you have sutures where the chest tubes were, please have PCP remove
- **Primary Cardiologist:** 2 – 3 weeks after discharge
  - Please contact them 5-7 days after discharge
- **Cardiac Surgeon:** 4 – 6 weeks after discharge
  - Our office will contact you 2 – 4 days after discharge
  - A Chest X-ray is expected 30 minutes prior to your appointment time
    - Located at the main campus 3rd floor Radiology Department
- **Cardiac Rehabilitation:** 4 – 6 weeks after discharge

Cardiac Rehab Services

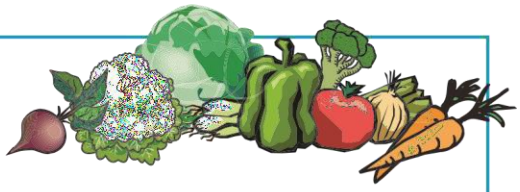
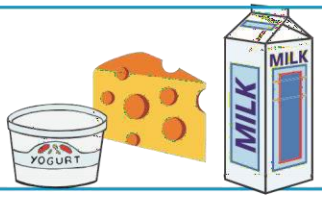
Cardiac rehab is an individualized and personalized treatment plan focused on evaluation and instruction to improve physical activity, nutrition, and stress management. Cardiac rehab is highly recommended for most heart surgery patients.

- Progressive physical activity/exercise
- Control/reduce blood pressure
- Reduction/cessation of smoking/tobacco
- Manage/improve diabetes
- Improve physiological well-being/stress reduction
- Weight loss and control
- Learn your target heart rate
- Healthy eating habits coaching
- Peer support
- Monitored exercise sessions

NY, NH & VT Cardiac Rehab Programs

New York Cardiac Rehab		
Adirondack Health Center	2233 State Rt 86 Saranac Lake, NY 12983	P. 518-897-2483 F. 518-897-2880
Alice Hyde Medical Center	133 Park St. Malone, NY 12953	P. 518-481-2582 F. 518-481-2533
Canton Potsdam Hospital	50 Leroy St. Potsdam, NY 13676	P. 315-261-5922 F. 315-261-6451
Champlain valley Physicians Hospital	75 Beckman St. Plattsburg, NY 12901	P. 518-562-7794 F. 518-562-7198
Claxton-Hepburn Medical Center	214 King St. Ogdensburg, NY 13669	P. 315-713-5650 F. 315-393-0055
Elizabethtown Hospital	66 Park St. Elizabeth, NY 12932	P. 518-873-3170 F. 518-873-9002
Glens Falls Hospital Adirondack Cardiology	100 Park St. Glens Falls, NY 12801	P. 518-926-5944 F. 518-926-5945
New Hampshire Cardiac Rehab		
Dartmouth Hitchcock Medical Center	1 Medical Center Dr. Lebanon, NH 03756	P. 603-650-5861 F. 603-650-6154
Weeks Memorial	173 Middle St. Lancaster, NH 03584	P. 603-788-4911 (ex. 4150) F. 603-788-5069
Vermont Cardiac Rehab		
Brattleboro Memorial Hospital	17 Belmont Ave. Brattleboro, VT 05301	P. 802-257-0341 (ex. 8331) F. 802-257-8280
Central Vermont Medical Center	130 Fisher Rd. Berlin, VT 05602	P. 802-371-4322 F. 802-371-5353
Copley Hospital	528 Washington Hwy Morrisville, VT 05661	P.802-888-8230 F. 802-888-8244
Gifford Medical Center	44 S. Main St. Randolph, VT 05060	P. 802-728-2667 F. 802-728-2242
Mt. Ascutney Hospital & Health Center	289 Country Rd Windsor, VT 05089	P. 802-674-7205 F. 802-674-7437
North Country Hospital	189 Prouty Dr. Newport, VT 05855	P. 802-334-3264 F. 802-334-4188
Northeastern VT Regional Hospital	PO Box 905 St. Johnsbury, VT 05819	P. 802-748-7401 F. 802-748-7302
Northwestern Medical Center	133 Fairfield St. St. Albans, VT 05478	P. 802-524-8428 F. 802-524-8806
Rutland Regional Medical Center	160 Allen St. Rutland, VT 05701	P. 802-747-3852 F. 802-772-1915
Porter Medical Center	115 Porter Dr. Middlebury, VT 05753	P. 802-382-3443 F. 802-388-5614
University of Vermont Medical Center	62 Tilley Dr. South Burlington, VT 05403	P. 802-847-4514 F. 802-847-7925

Eat More of These *Heart Healthy Foods*

VEGETABLES 2-3 CUPS PER DAY Eat a Rainbow!	broccoli, cabbage celery, carrots, cauliflower, green beans, field greens, mushrooms, peppers, spinach, summer squash, tomatoes, zucchini	
FRUITS 1.5 - 2 CUPS PER DAY	apples, berries (blueberries, strawberries, blackberries), bananas, cantaloupe, grapes, honeydew, kiwi, mango, nectaries, oranges, papaya, peaches, pears, pineapple, plums, watermelon	
HIGH FIBER GRAINS 3 - 8 SERVINGS PER DAY	oats, brown rice, barley, quinoa, bulgur, whole grain pasta, (1 serving = 1/2 cup) whole grain bread and whole wheat or corn tortillas (1 serving = 1 piece) sweet potatoes, baked potatoes, winter squash, corn (1 serving = 1/2 cup)	
BEANS, NUTS & SEEDS 2 - 3 SERVINGS PER DAY	beans, lentils, nuts, nut butters, seeds 1 serving = 1/2 cooked beans or lentils 1 serving = 2 tablespoons nut butter 1 serving = 1 ounce nuts or seeds	
LOW-FAT DAIRY 1 - 3 SERVINGS PER DAY	low-fat, low-sugar yogurt low-fat milk and cottage cheese small portions	
FISH, SEAFOOD, POULTRY, LEAN MEATS UP TO 7 OUNCES PER DAY Choose seafood 2 -3 times per week. Limit red meat.	seafood: crab, flounder, herring, oysters, salmon, sardines, scallops, shrimp, trout, tuna eggs and skinless chicken turkey 85% extra lean ground beef, loin or flank cuts of meat	
HEALTHY FAT Use sparingly for cooking/ dressing	plant oils like olive and canola cooking spray avocados, nuts, seeds	
SPICES & SEASONINGS UNLIMITED	garlic, onions, green onions, ginger, fresh or dried herbs, spices, lemon, lime, vinegar, low -sodium bouillon cubes, mustard, hot pepper sauce	

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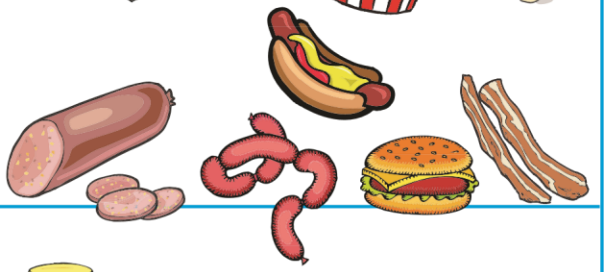
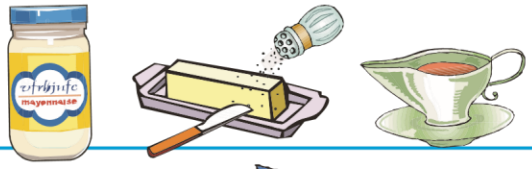
Limit or Avoid These Foods

RESTAURANT & FAST FOODS	burgers, cheese dishes, chicken fingers/wings, cream sauces and soups, pizza	
FRIED FOODS	chips, French fries, fried chicken, fried fish, fried seafood, hush puppies, pork rinds	
FATTY MEATS	bacon, bologna, country ham, fatback, fatty ribeye, hot dogs, porterhouse streaks, regular ground beef, ribs, salami, sausage	
SALTY FOODS Limit the addition of salt and seasoned salt to your food	boxed meals, canned soup, country ham, crackers, cured meats, frozen meals, instant mixes, lunch meats, salted nuts, smoked meats	
FATS AND SEASONINGS	butter, fatback, gravy, lard, margarine, meat drippings, mayonnaise, salad dressing, shortening	
HIGH-FAT BAKERY FOODS & SNACKS	biscuits, cake, cookies, doughnuts, muffins, pastries, pie, sweetened granola	
HIGH-SUGAR FOODS & DRINKS	candy, coffee drinks, energy drinks, fruit juice, ice cream, jam, jelly, sherbet, sports drinks, soda, sweet tea, syrup	

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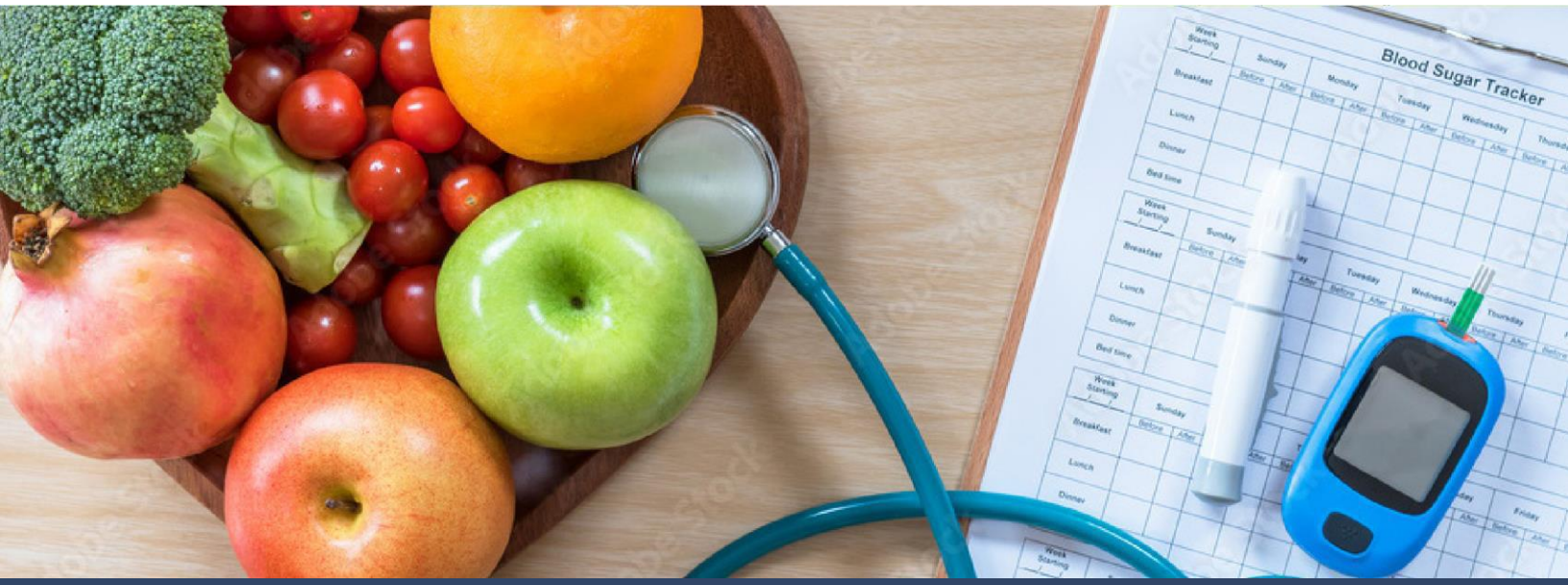
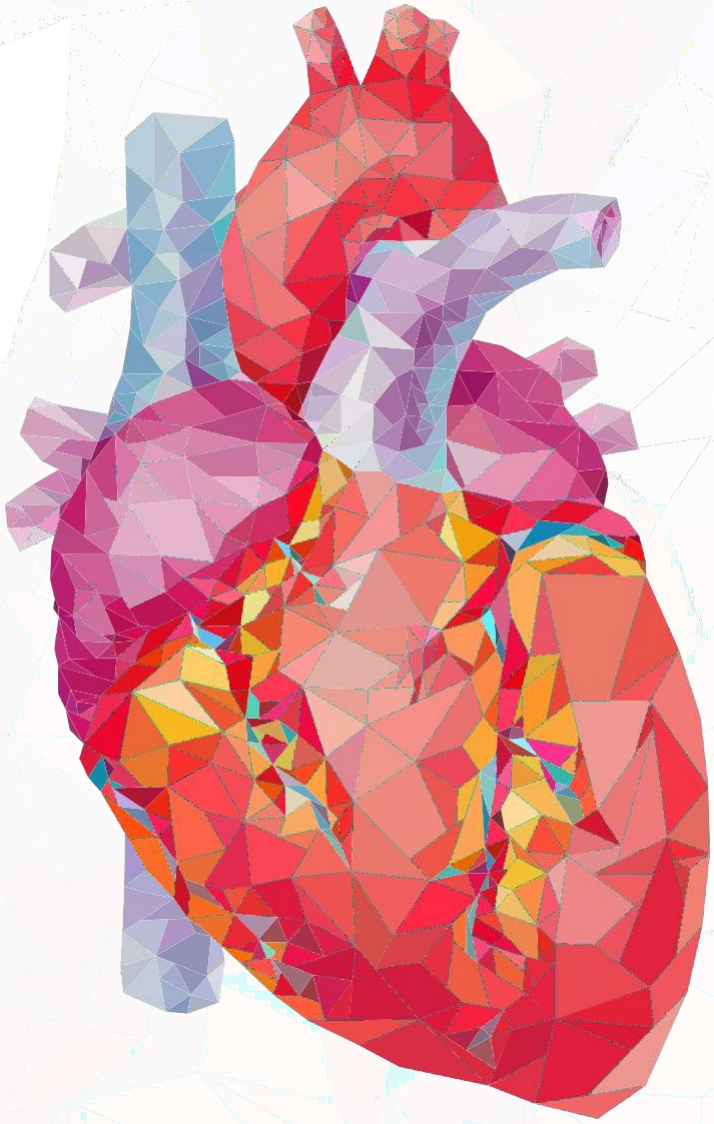
Blood Sugar Goals After Surgery

Controlling your blood sugar levels before and after surgery is important for wound healing and preventing infection.

Being in the hospital can make controlling your blood sugar level difficult for various reasons. Your diet may be different, you are less active, and you may receive medications that can cause your blood sugar levels to rise. To achieve this goal, we would like to partner with you to control your blood sugar levels before, during, and after your hospital stay. During your hospital stay, our goal is to keep your blood sugar levels in the 70-180 range. Please help us work with you to control your blood sugar levels by following the below recommendations:

- Make sure your blood sugar is checked BEFORE eating
- Call your nurse before eating if your meal arrives and your blood sugar still needs to be checked
- Finish drinking nutrition shakes within 2 HOURS of your meal
- Talk with your nurse about healthy food options when you are hungry between meals or bedtime





What to Expect After Heart Surgery

The Society of Thoracic Surgeons

The Society of Thoracic Surgeons

The more you know about what to expect after heart surgery, the smoother your recovery may be. While individual patient responses to surgery and recovery experiences may vary, some generalizations can be made.

This guide, from The Society of Thoracic Surgeons, will help answer questions that patients and their families may have about heart surgery. Always follow your doctor's specific instructions if they differ in any way from those listed here.

Table of Contents

It's **Normal** to...

- **Not have much of an appetite.** It takes several weeks for your normal appetite to return. Many patients notice that their sense of taste initially is diminished or almost absent. Don't worry, it will return. Some patients even are nauseated by the smell of food for a week or two after surgery.
- **Have some swelling, especially if you have a leg incision.** Your leg may continue to swell for some time. Elevate your legs, do your exercises, and wear your compression/support hose, if prescribed. These things will help with the swelling.
- **Have difficulty sleeping at night.** You may find it difficult to fall asleep, or you may wake up at 2:00 a.m. or 3:00 a.m. and not be able to fall back to sleep. This will improve. If difficulty sleeping or staying asleep is due to pain or significant discomfort, taking your prescribed pain medication about an hour before bed may help. Also, exercising during the day will help you fall asleep faster and sleep more soundly.
- **Have problems with constipation.** You may use a stool softener or laxative of your choice. Drinking plenty of water and walking, as approved by your doctor, and adding more fruits, vegetables, fiber, and juice in your diet will help move things along.
- **Have mood swings and feel sad on some days.** Your body went through some major changes during surgery. Don't become discouraged. This will get better as your body continues to heal. Talk to your doctor if you experience feelings of anxiety or depression.
- **Have a lump at the top of your incision.** If it is tender and slightly pink or red, this is normal and should disappear with time. Contact your doctor if you notice increased swelling, redness, or pain.
- **Notice an occasional clicking noise or sensation in your chest in the first days after surgery.** This should occur less often with time and go away completely within the first couple of weeks. If it gets worse, call your surgeon.
- **Experience muscle pain or tightness in your chest, shoulders, and upper back between your shoulder blades.** This will improve with time. Your pain medicine also will help relieve this discomfort. If the pain increases, call your surgeon or 911.

Following **Discharge**

4

It may take 4 to 6 weeks before you start feeling better.

Remember to take all medications as prescribed by your doctor. Taking prescribed pain medications an hour before activity will help you be more active and heal faster.

Follow the exercise program given to you by your physical therapist in the hospital.

6

If an artery in your chest called the mammary artery was used during your surgery, you may experience numbness to the left of your incision. This is normal.

Care of Your **Incisions**

While in the hospital, follow your doctor's instructions. After discharge, most surgeons would agree that it is safe to wash your incisions daily (directly on the incision or over the steri-strips) with mild soap and warm water. Avoid vigorous scrubbing. The steri-strips may even fall off on their own.

You may go home with staples in your leg. The visiting nurse will remove the staples as ordered by your doctor, or they will be removed after your initial visit to the surgeon's office.

Because incisions sunburn easily, be sure to protect them from overexposure to sunlight during the first year after surgery. The scar will become darker if exposed to the sun. Do not apply lotions, creams, oils, or powders to your incisions unless prescribed by your surgeon.

Check your incisions daily. Contact your doctor if you notice any of the following:

- Increased tenderness of the incision
- Increased redness or swelling around the edges of the incision
- Any drainage from the incision line
- A persistent fever

Care of Your **Surgical Leg**

If your surgery involved taking a bypass graft from your leg, follow these guidelines:

- Care for your leg incisions as described in the Care of Your Incisions (left).
- Avoid crossing your legs because this impairs circulation.
- Avoid sitting in one position or standing for prolonged periods of time.
- Elevate your leg on a stool or coffee table with a pillow under your foot when sitting. You also can lie on a couch and elevate your leg on the arm of the couch or on pillows. Try to elevate your leg above the level of your heart. This makes it easier for the swelling to go down.
- Check your leg daily for swelling. The swelling should decrease when you elevate your leg, but it might recur when you stand. If you continue to have leg swelling or it becomes worse, notify your doctor.
- If compression/support hose was prescribed for you, wear them while you are awake for at least 2 weeks after discharge. The stockings help decrease swelling, especially if you have a leg incision.
- Remove your stockings at bedtime. Wash the stockings with mild soap and water and dry them on a line.

Medications

Your doctor will prescribe medications when you are discharged from the hospital. Sometimes these medications will be sent electronically to your pharmacy, or you will receive a paper prescription. It is important to have your insurance cards with you when you pick up your prescriptions at the pharmacy.

Take the medicine exactly as your doctor prescribes. Keep a current list of your medicines, dosages, and times to be taken in your wallet or purse. Do not take other medication, supplements, or herbal preparations without telling your doctor. Additional information about your medications will be provided by your nurse or pharmacist before discharge.

SIDE EFFECTS

It is important to understand that medications can cause side effects. Take them with a small meal, if appropriate. If you have any of the following side effects from medication, you should call your doctor's office:

- Diarrhea, constipation, or stomach pain
- Nausea, vomiting, and upset stomach
- Dizziness or lightheadedness when standing
- Confusion
- Tingling in hands and feet
- Extremely slow or fast pulse
- Skin rash
- Unusual bruising or bleeding

Heart Surgery **Discharge**

Symptoms

NEEDS IMMEDIATE ATTENTION

Go to the local emergency room or call 911

- Bright red stool
- Chest pain similar to pre-op
- Chills or fever
- Coughing up bright red blood
- Fainting spells
- Heart rate faster than 150 beats/minute with shortness of breath or new irregular heart rate
- New onset of nausea, vomiting, or diarrhea
- Severe abdominal pain
- Shortness of breath not relieved by rest
- Sudden numbness or weakness in arms or leg
- Sudden, severe headache
- Uncontrollable bleeding

URGENT PROBLEMS

Call your doctor

- Acute gout flare-up
- Elevated temperature more than 100.0°F/38.0°C two times within 24 hours
- Extreme fatigue
- Pain or tightness in calf that becomes worse when pointing toe up to head
- Persistent but controllable bleeding or oozing from incisions
- Sharp pain when taking in deep breath
- Skin rash
- Urinary tract infection: frequent urination, burning with urination, urgency with urination, bloody urine
- Weight gain of more than 1-2 pounds within 24 hours
- Worsening ankle swelling or leg pain
- Worsening shortness of breath

Call the clinical nurse specialist/case manager with questions related to:

- Helpful community services or agencies
- Incisional care
- Postoperative recovery
- Discharge instructions
- Home health care
- Surgery
- Draining or reddened wounds
- Management of symptoms

What your doctor/nurse might ask if you call:

- How long have you had these symptoms?
- What medications are you currently taking and when did you last take them?
- When did you have surgery?
- Who was your surgeon?
- Where was your surgery done?
- What was the date of your hospital discharge?
- Does the visiting nurse come to see you?
- What about incisional drainage? What is the drainage color; does it have an odor; how long has it been draining; is the drainage getting better or worse; is the area red and/or swollen?

Activity After Surgery

Stop any activity immediately if you feel short of breath, notice irregular heartbeats, feel faint or dizzy, or have chest pain. Rest until the symptoms subside. If they do not lessen within 20 minutes, notify your doctor.

EXERCISE GUIDELINES

If you experience shortness of breath, dizziness, leg cramping, unusual fatigue, and/or chest pain (angina), stop any exercise immediately. Notify your doctor if these symptoms persist.

If your post-exercise pulse rate is more than 30 beats faster than your resting pulse rate, then you have exercised too hard.

In order to correct these conditions, you will need to modify your next exercise session.

Showers: You can take showers after your pacing wires and staples are out. Avoid soaking in baths until your incisions are healed. Avoid extremely hot water.

Dress: Wear comfortable, loose-fitting clothes that do not put undue pressure on your incisions. If you wear a bra, choose one without underwires and with a front closure.

Rest: You need a balance of rest and exercise during your recovery. Plan to rest between activities and take short naps as necessary. Resting also includes sitting quietly for 20-30 minutes. After meals, rest for 30 minutes before exercising.

Walking: This is one of the best forms of exercise because it increases circulation throughout the body and to the heart muscle. It is important to increase your activity gradually. Walk at your own pace. If you get tired, stop and rest.

Each person progresses at a different rate after heart surgery. Before your discharge, physical therapists will provide you with an individual plan for exercise. It is important to pace your activities throughout the day. Do not try to do too many things at one time. When the outside temperatures are lower than 40°F or above 80°F, walk at indoor shopping malls. In colder weather, wear a scarf or mask around your mouth and nose.

Stairs: Unless your doctor tells you differently, you can climb stairs. Take them at a slow pace. Stop and rest if you tire. When using the handrail, do not pull yourself up with your arms. Use your legs.

Activity After Surgery

continued from page 6

Sex: You can resume sexual relations when you feel comfortable. For many people, this is about 2-4 weeks after discharge, unless instructed differently by your doctor. Ask your nurse for more detailed information, if needed.

Driving: You can ride as a passenger in a car at any time. Always wear a seat belt. Avoid driving or outdoor bicycling for 4 weeks after surgery. This period is recommended to allow your breastbone (sternum) to heal. When traveling, be sure to get out of the car every 2 hours and walk around for a few minutes.

Lifting: You should not put too much strain on your sternum while it is healing. or the next 6 weeks following your surgery, it is important to adhere to the activity guidelines on page 26. Let pain be your guide when you are attempting load-bearing activities “out of the tube.” It is important to pursue active living after surgery. Immobility for more than 3 consecutive days can cause loss of muscle mass equaling the size of an orange per day. Do not hold your breath during any activity, especially when lifting anything or when using the restroom.

Work: Most patients will begin to feel like returning to light work 6-12 weeks after surgery. Check with your surgeon and get cleared before returning to work.

Visitors: Limit your visitors for the first couple of weeks.
If you get tired, excuse yourself and lie down. Your visitors will understand.

Keep Your Move in the Tube Educational Videos

PULSE ASSESSMENT

Monitoring your pulse rate helps to keep your activities within a safe heart rate range. To take your pulse, place your index and middle fingers on the lower part of your thumb, then slide your fingers down to your wrist. If you do not feel the pulse, try moving your fingers over a little bit in the same area. Once you can feel the pulse, count it for 15 seconds and multiply by four. This will tell you how many times your heart is beating in 1 minute. Your doctor or nurse can help you find your pulse if you have difficulty.

When to **Resume Usual Activities**

FIRST 6 WEEKS

- Light housekeeping (dusting, setting the table, washing dishes, folding clothes)
- Light gardening (potting plants, trimming flowers)
- Needlework
- Reading
- Cooking meals
- Climbing stairs
- Shopping
- Attending sports events, church, movies, and restaurants
- Riding in car as a passenger
- Walking, treadmill, stationary bike
- Shampooing hair
- Playing cards/games

AFTER 6 WEEKS

Continue activities of first 6 weeks, and if you can tolerate more, add:

- Part-time work if your job does not require lifting and returning is approved by your surgeon
- Heavy housework (vacuuming, sweeping, laundry)
- Heavy gardening (mowing lawn, raking leaves)
- Driving a car or truck
- Business or recreational travel
- Fishing, boating
- Light aerobics (no weights)
- Walking dog on leash

AFTER 3 MONTHS

Continue previous activities, and if you can tolerate more, add:

- Heavy housework (scrubbing floors)
- Heavy gardening (shoveling snow, digging)
- Sports (football, soccer, softball, baseball, tennis, bowling, golfing, swimming, water skiing, skydiving, hunting)
- Jogging, bicycling, weightlifting, push-ups
- Motorcycle riding

Diet

After discharge, your doctor will recommend that you follow a low-fat diet and that you avoid adding salt when cooking or at the table. This may reduce your risk of a future heart attack and your need for another angioplasty or surgery. You should try to have less than 30% of your calories from fat. It also is recommended that you eat less saturated fat and cholesterol.

The American Heart Association suggests:

- Saturated fat intake should be 5%-6% of calories
- Polyunsaturated fat intake should be up to 10% of calories
- Monounsaturated fat should be approximately 15%-20% of total calories
- Cholesterol intake should be less than 300 milligrams per day
- Sodium intake should be no more than 2,300 milligrams (2.3 grams) per day

Review your medication instructions for any possible dietary interactions. You should begin making changes to your diet when your appetite returns to normal.

DAILY WEIGHT

- Weigh yourself at the same time each morning after you urinate but before you eat breakfast. Use the same scale every day.
- Keep a record of your daily weight.
- Notify your doctor if you gain 2 pounds or more overnight.

Cardiac **Rehabilitation**

Cardiac rehabilitation is a way for people who have had bypass surgery, valve replacement, transplant, or other heart surgery procedures to get going again. A team of doctors, nurses, exercise physiologists, and nutritionists will help you feel well again by leading you through a rehabilitation program designed to fit your needs. Cardiac rehabilitation includes four phases.

PHASE I begins early after a heart event, while you are still in the hospital. This phase usually includes light supervised exercise such as walking the halls and stair climbing. Additional education is provided by hospital nurses and physical therapists. You should ask the hospital staff about risk factors, diet, medication instruction, sexual activity, exercise, and normal life at home.

PHASE II is the early outpatient phase of cardiac rehabilitation. This phase usually requires a doctor's referral and involves telemetry monitoring. You will start this phase of the program approximately 2-6 weeks after discharge from the hospital. Most programs meet for 1 hour, three or more times per week for 12 weeks. Phase II aims to return you to normal active life.

The goals of Phase II are to:

- Improve functional capacity and endurance
- Provide education of lifestyle changes
- Reduce fear and anxiety about increased activity or exercise
- Assist in making optimal social and psychological adjustments

Education is a major emphasis in the Phase II program and is accomplished through individual or group instruction. *Educational topics include:*

- Medication review
- Lifestyle changes and goal setting
- Nutrition counseling with a registered dietitian
- Stress management
- Safe performance of activities, including sexual activity, vocational, and recreational pursuits

Your spouse or other family members are encouraged to attend the educational sessions with you.

Cardiac **Rehabilitation**

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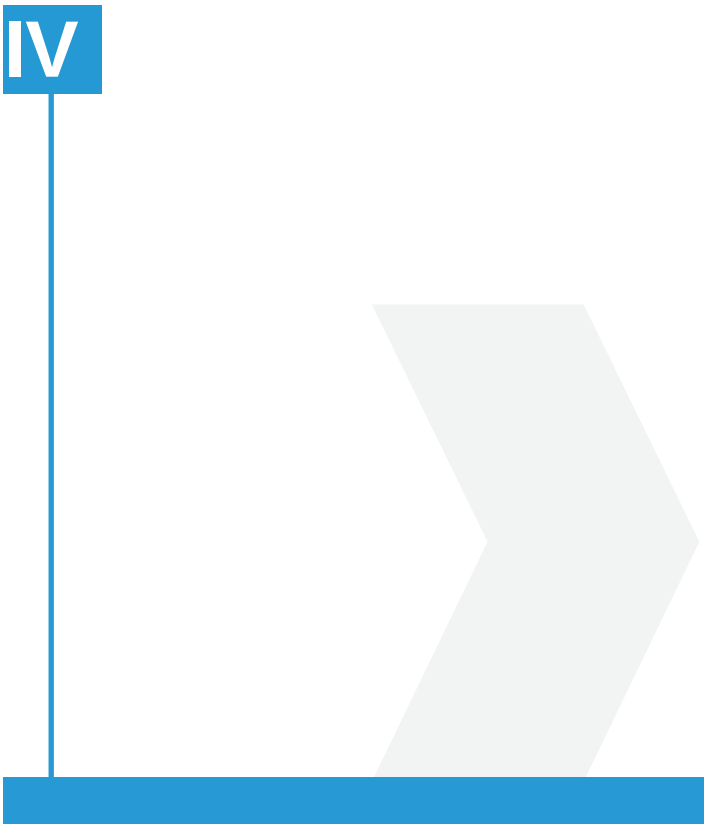
PHASE III is a continuation of the Phase II program. Generally, the Phase III program is for participants who were discharged from the hospital 6-14 weeks earlier. A doctor may refer you directly into this program without Phase II participation.

The goals of Phase III are to:

- Provide an ongoing exercise program
- Offer support necessary to make lifestyle changes
- Achieve desired goals such as independent lifestyle or return to work
- Prevent progression of heart disease

The program offers monitoring of heart rhythm and rate, as well as blood pressure before, during, and after exercise. Records of your exercise routines are required. These routines generally occur three or more times per week.

PHASE IV is a wellness program for those who have completed any of the other phases. This program is a means for you to continue making lifestyle changes. You can expect to exercise three or more times per week with minimal staff supervision.



FOR MORE HOSPITAL INFORMATION

To find health information, or for convenient and secure access to your medical record through MyChart Online, please visit UVMhealth.org or call **(802) 847 - 0000**

CARDIOTHORACIC SURGERY

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