



A Preoperative Guide to
Cardiac Surgery for Patients & Families
Your Heart is in the Right Place



Saint Francis Hospital
Trinity Health

The Hoffman Heart and Vascular Institute of Connecticut

This booklet will help prepare you for cardiac surgery at Saint Francis Hospital. We want to ensure you have the best possible experience.

This book will provide you with important information on your surgical stay here at Saint Francis.

Keep a pen or pencil handy to take notes while you read the information. It is okay to be nervous. Do not be afraid to share your feelings and concerns with your doctor, family and friends. Doing so can help you get ready emotionally for surgery.

If you have any questions, please contact your Heart Team or visit www.trinityhealthofne.org

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Meet Your Heart Team

At Saint Francis, your Heart Team is committed to giving you the *best care of a lifetime*. Below is a list of the members of your Heart Team, but remember, **you are the most important member of the team!**

- Cardiac Surgeon
- Cardiologist
- Anesthesiologist
- Intensivist (Physician in Coronary Intensive Care)
- Cardiovascular Perfusionist
- Physician Assistants (PA)
- Advanced Practice Registered Nurses
- Registered Nurses
- Case Manager - Registered Nurse
- Nursing Assistants
- Nurse Manager
- Director of Nursing
- Clinical Coordinator or Assistant Nurse Manager
- Physical Therapist
- Occupational Therapist
- Respiratory Therapists
- Cardiac Rehabilitation Team
- Clinical Dietitian
- Pharmacist
- Pastoral Care
- Administrative Assistants
- Social Worker

Important Phone Numbers

Hospital Units

Cardiac Intensive Care Unit (CICU)	860-714-7058
Nurse Manager	860-714-6790
Unit 8-9 Surgical Telemetry	860-714-7089
Nurse Manager	860-714-1248
Unit 9-9 Surgical Telemetry	860-714-7099
Nurse Manager	860-714-5880
Unit 3-5 Interventional Cardiology	860-714-6035
Nurse Manager	860-714-5175
Cardiac Rehabilitation	860-714-4538
Manager	860-714-4776

General Information

Saint Francis Hospital Main Line	860-714-4000
Financial Assistance	860-714-5681
Admitting	860-714-7030
Pastoral Care	860-714-4308
Security	860-714-4492

Our Cardiac Surgeons' Offices

Joseph E. Flack, III, M.D.

Robert Gallagher, M.D.

Sandeep Gupta, M.D.

1000 Asylum Avenue

Suite 3201A

Hartford, CT 06105

860-714-1094

Entering From Floor 2 of the Collins Garage

If you can walk a good distance:

Go through the 1st set of double glass doors and take an immediate left. This is the connector to the Gengras Medical Office Building (1000 Asylum Avenue). Follow the hallway to the lobby and take the Gray elevator to the 3rd floor.

Take a left off the elevator, then another left. We are past the Dental Center on the right; Suite 3201A.

If you have difficulty walking:

Proceed directly to the security guard desk and request a mini cab (golf cart). The driver will escort you to the Gengras Medical Office Building lobby. Take the Gray elevator to the 3rd floor.

Take a left off the elevator, then another left. We are past the Dental Center on the right; Suite 3201A.

Entering From the Saint Francis Lobby

Take the Blue elevator to the 2nd floor and proceed directly to the information desk for assistance. There, you can request specific walking directions or a mini cab.

Be Informed

Speak Up!

Speak Up is an effort by The Joint Commission to help enhance patient safety by encouraging patients to take part in their care.

- **S**peak up if you have questions or concerns.
- **P**ay attention to the care you get.
- **E**ducate yourself about your illness.
- **A**sk a trusted family member or friend to be your advocate (advisor or supporter).
- **K**now what medicines you take and why you take them.
- **U**se a health care organization that has been carefully checked out.
- **P**articipate in all decisions about your treatment.

MyCare

Saint Francis patients are encouraged to register for MyCare, a service providing free, personalized, and secure online access to portions of their medical records.

- This service allows patients to safely receive and manage information about their health.
- Whether you are looking to manage a medical condition, review test results or pay your bill, MyCare is the tool for you.
- We know how busy life can be and so we are pleased to offer a mobile version of MyCare available in the Apple Store and Google Marketplace.
- You will be issued a MyCare activation code on your After Visit Summary printout at the end of your hospital stay. This code will enable you to log in and create your own username and password on the MyCare website.

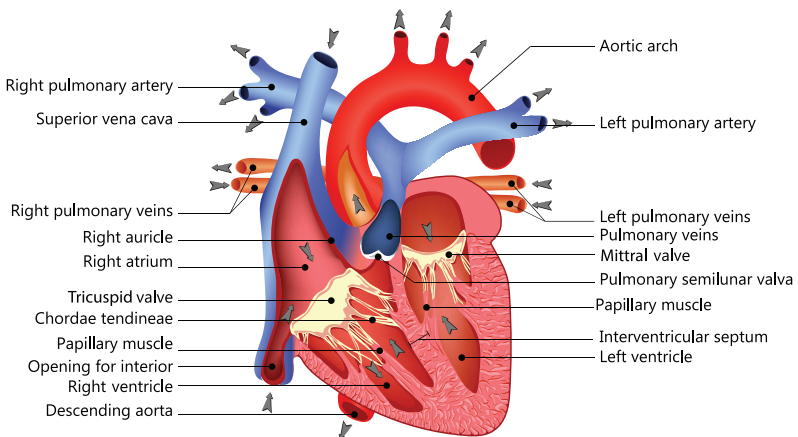
INSTRUCTIONS:

- In your Internet browser, visit www.trinityhealthofne.org.
- Click on the Patient Portal link that appears at the top of the window.
- Click on the link to your respective hospital.
- Follow the instructions on screen to Register for MyCare.
- You will be taken to the sign-up page. On this page, enter your MyCare Activation Code exactly as it appears in your After Visit Summary discharge instructions.

The Human Heart

The human heart is a muscle the size of a clenched fist. It sits behind the sternum or breastbone and between your two lungs.

- The heart is responsible for pumping and circulating blood, rich in oxygen and nutrients, to your body.
 - Oxygen rich blood leaves your heart through your arteries.
 - Blood low in oxygen returns to your heart through your veins.
- The heart is separated into 4 chambers or “rooms”:
 - 2 atria
 - 2 ventricles
- The septum is a wall that separates the chambers into a “right” and “left” side of the heart.
- There are four valves between the chambers of the heart.
 - They act like doors that open and close allowing blood to flow in the proper direction.
 - The valves are tricuspid, pulmonary, mitral and aortic.
- Like all other muscles, the heart needs oxygenated blood. The coronary arteries supply this important muscle with oxygen.

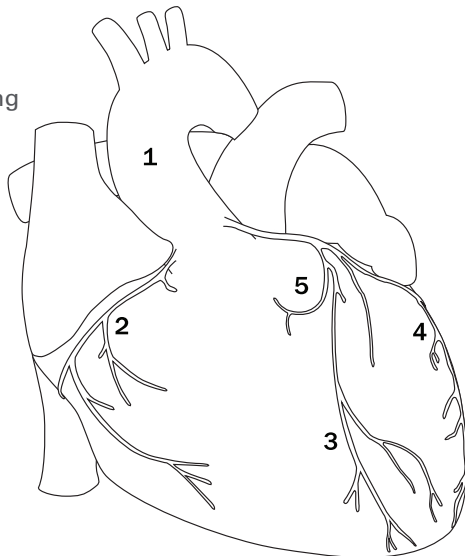


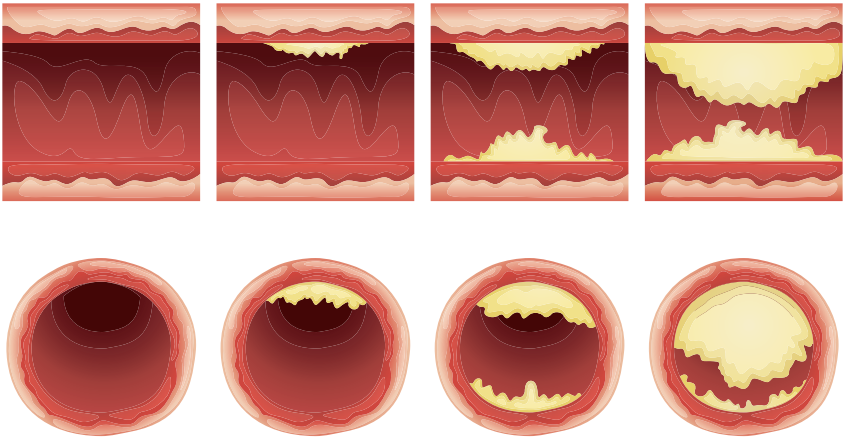
Coronary Arteries

The coronary arteries wrap around the heart to supply the oxygen rich blood to the heart muscle. There are three main coronary arteries: The right coronary artery supplies blood to the right side of the heart. The left anterior descending and circumflex arteries supply the left side of the heart. Each of these coronary arteries has many branches.

The Coronary Arteries

1. Aorta
2. Right Coronary Artery
3. Left Anterior Descending Coronary Artery
4. Circumflex Coronary Artery
5. Left Main Coronary Artery





Coronary Artery Disease

Coronary artery disease occurs when the smooth lining of the artery is damaged and then plaque builds up within the artery walls.

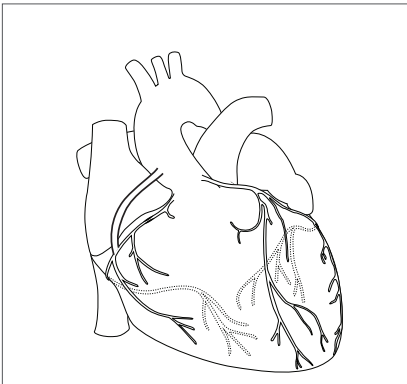
- Smoking, high blood pressure, high cholesterol levels, inflammation and high blood glucose levels all can damage the lining of the heart and increase the risk for plaque build-up.
- As we age, our arteries harden. Fatty deposits called plaque can collect on the inside of the artery wall. As the plaque builds up, the arteries narrow and it becomes more difficult for the blood to pass through.

Coronary Artery Bypass Surgery

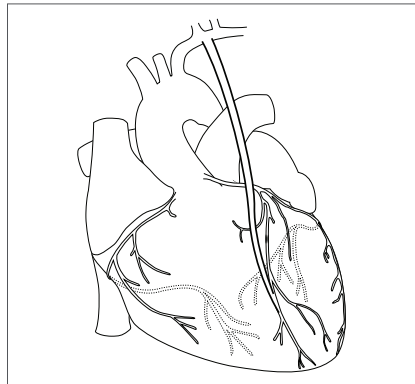
Coronary Artery Bypass Surgery (CABG) is an operation to treat coronary artery disease. The goal is to improve blood flow to your heart muscle.

- The surgeon creates new pathways for the blood called bypasses. This is a detour for the blood around the portion of your coronary arteries that have blockages.
- The bypasses are created from arteries or veins from:
 - Chest (mammary artery)
 - Leg (saphenous veins): vessels can be taken from your arm or leg can usually be taken out minimally invasive
 - Arm (radial arteries)
- CABG can be performed two different ways; your surgeon will determine the appropriate method for you:
 - Traditional:
 - › Use of a heart-lung machine
 - › The heart is stopped while the surgeon completes the operation
 - Off-Pump:
 - › No heart-lung machine is used

Coronary bypass using the saphenous vein or radial artery



Coronary bypass using the internal mammary artery



Heart Valve Disease and Surgery

The valves of the heart open and close like doors, allowing blood to flow through to the heart, lungs, and body. When a heart valve is diseased or damaged, it does not allow blood to flow properly.

- Two common valve conditions:
 - **Stenosis:** The narrowing of the valve opening. This narrowing prevents the valve from opening all the way.
 - **Regurgitation:** Refers to the valve not closing completely, therefore the blood leaks backwards.
- Diseased valves can put strain on the heart.
- Some common causes of valve disease: you can be born with valve disease, have rheumatic heart disease, or infection that causes damage to the valve.
- Aging can also cause the valves to become thick and hard.
- Common symptoms of valve disease are:
 - Chest pain
 - Fainting
 - Shortness of breath
 - Fatigue
 - Dizziness
 - Swelling of legs
- Valve disease can often be detected by a heart murmur when your physician listens to your heart.
- Open-heart surgery or a surgical procedure may be required to fix the diseased or damaged valve.
 - **Repair:** Valve will be repaired, if possible. You will need to take anticoagulant medication for a short time.
 - **Replacement:** Valve will be removed and replaced. If you have a mechanical valve replacement you will need to anticoagulant medication for the rest of your life.

- Saint Francis Hospital offers two new less invasive techniques for valvular surgery.
 - Minimally Invasive Surgery: Uses a smaller incision in the front or side of your chest.
 - Transcatheter Aortic Valve Replacement (TAVR): A hybrid procedure performed by a cardiac surgeon and an interventional cardiologist to replace the Aortic valve.

Your surgeon will determine the appropriate method for you.

BACTERIAL ENDOCARDITIS PRECAUTIONS:

- You are at risk for infective (bacterial) endocarditis because of your heart valve surgery.
- It may be recommended to take antibiotics prior to some types of procedures including dental work. Please discuss with your cardiologist before doing so.
- It is your responsibility to tell all your physicians and your dentist about your valve surgery.
- Your physician and dentist may consult your cardiologist for detailed information.
- Always carry your valve identification card and show it to your physician and dentist.
- Good oral hygiene is very important to help prevent an infection that can grow on your new heart valve.
- See your dentist regularly and follow their recommendations closely.



Before Your Surgery: Pre-admission Testing

Saint Francis Hospital has a specialized cardiovascular pre-admission testing center. This center is dedicated to meeting all of your preoperative medical testing and educational needs.

- Your appointment will be scheduled prior to your surgery and will take about two hours.
- The information obtained at this appointment will help create and coordinate a plan of care for you through discharge. If there are any special needs let us know.
- Please bring a family member or support person with you to your appointment. The education provided will help prepare everyone for surgery and through the recovery process.

At your Pre-admission Testing appointment, some of the following may happen:

- Preoperative evaluation/screening including a physical examination
- Education will be provided to you and your support person
- Blood work
- Electrocardiogram (EKG)
- Radiology testing
- Tour of clinical areas
- Surgical instructions
- Questions/answers
- Create patient specific plan of care
- Opportunity to watch an open heart educational video
- Medication review

Please bring the following items with you to your appointment:

- Photo ID
- Insurance card
- Current medications in the bottles (including over the counter, vitamins and herbal supplements)
- List of current physicians and contact information
- List of allergies
- List of medical/surgical history with dates if available
- Copy of health care proxy and advanced directives
- Registration information for MyCare on the trinityhealthofne.org website

Other Important Information Prior to Your Surgery:

- If you have started any new medications, please inform your surgeon's office at 860-714-1094. In the event that your surgery is rescheduled, please contact your surgeon's office to discuss a new medication plan.

- If you have any worsening or changes in your symptoms please go to the Emergency Department, call your cardiologist or your surgeon's office
- If you have any new infective symptoms such as colds, coughs, rashes or fever prior to surgery, please call your surgeon's office
- Do not take any Ibuprofen, Advil, Motrin, Aleve, or Naproxen within 1 week prior to your surgery. You may take Tylenol or acetaminophen as directed on the bottle prior to surgery

Important Information to Know Before Your Surgery

Items to BRING to the Hospital:

- Photo ID
- Insurance and pharmacy card
- Updated medication list (including herbal, over-the-counter medications)
- Glasses
- Hearing aids
- Dentures
- CPAP machine
- Name of Spokesperson

Items NOT TO BRING to the Hospital:

- Valuables
- Jewelry
- Contact Lenses
- Credit cards
- Wallet
- Medication bottles

DO NOT:

- Eat or drink anything after midnight including candy or gum.
- Smoke after midnight.
- Shave any parts of your body from the neck down, including legs and underarms for one week prior to surgery.
- Use powder, deodorant, perfume, lotion or other products on your skin after your pre-operative skin preparation.
- Wear contact lenses to the hospital.
- Wear body piercing to the hospital.
- Wear makeup, nail polish or artificial nails to the hospital.
- Use hairspray or gel after your pre-operative skin preparation.

Preparing Your Home for Discharge

- Scale
- Mild Soap
- Supportive Bra (without underwire, front closure)
- Groceries (low sodium)
- Meal Preparation
- Pet Care
- Remove Clutter

Smoking and the Effects on Your Heart and Vascular System

The chemicals in tobacco harm nearly every organ in the body including the heart, lungs, and blood vessels. Smoking is a major risk factor for heart and vascular disease.

Any amount of smoking, even light smoking or occasional smoking, damages the heart and blood vessels. If you smoke and already have heart disease, quitting smoking will reduce your risk of heart attack and death. Quitting smoking and avoiding secondhand smoke can help reverse heart and blood vessel damage and reduce heart disease risk.

Quitting smoking is possible, but it can be hard. Millions of people have quit smoking successfully and remained nonsmokers. A variety of strategies, programs, and medicines are available to help you quit smoking. These programs can help you recognize events, feelings or activities that increase your desire to smoke and help identify and build your coping skills to effectively stop smoking.

The Connecticut Quitline is a support hotline and website. To learn more call 1-800-QUIT-NOW or visit www.quitnow.net/connecticut. For more information on programs available to help you quit smoking, please call 1-877-STFRANCIS (1-877-783-7262).

THE BENEFITS OF QUITTING TOBACCO USE:

- After one month you improve your circulation, cough less, are less likely to be short of breath and fatigued.
- After one year your risk of heart disease is half that of someone who does smoke.
- After five to fifteen years, your risk of stroke decreases to that of a non-smoker, and your risk of lung disease and cancer decreases significantly.

Preparing for Open Heart Surgery at Home

The Night Before Your Cardiac Surgery:

You will receive a phone call from a Registered Nurse on the Preoperative Unit 3-5 to:

- Review medical and surgical instructions
- Provide the time you should arrive at Saint Francis admitting department located on the second floor
- Answer any questions you may have
- Review medication instructions

Your surgeon has requested you shower with a special soap containing the ingredient chlorhexidine gluconate or CHG. **Complete the preoperative skin preparation the night before AND the morning of your cardiac surgery.** You should have received supplies from your surgeon's office, pre-admission testing or an in-patient unit (if not, please call your surgeon's office). The skin preparation will reduce the risk of infection by reducing bacteria on the skin. Please follow the home care instructions on the following page carefully.

AFTER YOUR CHG SHOWER - DO'S AND DO NOT'S

- To protect your skin, please **DO**:
 - Put on clean pajamas after your evening shower.
 - Place clean sheets and pillow case on your bed.
 - Wear clean clothes to the hospital the morning of your surgery.
- Please **DO NOT**:
 - Shave any body parts from the neck down, including legs and underarms for one week prior to surgery.
 - Use any products on your skin, including powder, deodorant, perfumes or lotions.
- **ONLY** use the sponge, **DO NOT** use the brush side.



Follow Directions for CHG Shower Carefully (Preoperative Skin Preparation)

Your doctor has recommended the CHG Shower. This is a special soap that helps reduce bacteria on your skin which reduces the risk of infection.

Please follow the instructions below the night before AND the morning of cardiac surgery:

- The night before surgery, wash and rinse your body using a clean wash cloth and soap. Also wash and rinse your hair. Then follow instructions for your first CHG-Preoperative Skin Preparation shower found below.
- The morning of surgery, please do not use regular soap on body. Please follow instructions for your second CHG-Preoperative Skin Preparation shower found below.
- Do not use the CHG sponge to wash your face. Avoid contact with eyes, mouth, and ears. If soap gets in your eyes, mouth, or ears rinse thoroughly with water.
- Open the CHG Shower packets.
- Discard the small plastic piece and briefly wet the sponge under the running water.
 - **DO NOT** use brush side, only use the sponge.
- Turn the water off in the shower.
- Use the 1st sponge to wash from your neck down to belly button for **3 full minutes** in a striped pattern, from side to side and as far over as you can reach (women pay attention to under the breast area). After the chest area is complete, use the same sponge to wash the arms and arm pits.
- Use the 2nd sponge to wash your back, lower abdomen, legs and groin area (in that order) for **3 full minutes**. After washing the groin area, throw the sponge away and do not reuse.
- Turn the shower back on and rinse the soap off – rinse well in the skin folds, groin and armpits to avoid skin irritation.
- Use a clean towel to dry your skin.
- Review Do's and Do Not's after your CHG Shower (Page 20).

The Morning of Surgery (Home)

Your surgeon has requested you complete the preoperative skin preparation the morning of surgery. (Pages 20-21)

- You may brush your teeth but do not swallow water or toothpaste.
- Take medications only as instructed by surgeon with small sips of water.
- Do not eat (including candy or gum), drink, or smoke after midnight.
- Do not use any product on skin including powder, deodorant, perfume or lotion.
- Please arrive at designated time. Park in the Collins Parking Garage, enter the hospital and proceed to the Admitting Office located on floor 2.
 - For directions to Saint Francis Hospital, please visit www.trinityhealthofne.org
 - Bring your parking ticket inside the hospital with you. Pay inside at the machine.
- The Admitting Department will register you, verify your identity, complete any necessary paperwork and obtain any signatures needed.
- An ID bracelet with your personal information on it will be applied to your wrist.
 - This ID bracelet will be used throughout your stay to confirm your identity.
 - During your hospital stay people will ask you to confirm your name and date of birth and then compare it to your ID bracelet. This is done to ensure patient safety.
- A member of our transportation team will take you and your family to the preoperative area on Unit 3-5.



Preparing for Open Heart Surgery in the Hospital

The Night Before Surgery (Inpatient Unit)

You may be in the hospital already. In this case, you may expect the following:

- As you prepare for surgery, you will be given an opportunity to watch a Cardiac Surgical Video on the hospital TV.
- Your surgeon has requested a preoperative skin preparation. This skin preparation can help reduce the chance of infection.
 - A nursing assistant will help you to clean your skin with Chlorhexidine Gluconate (CHG) sponges.
 - You will be provided with a clean gown and linen.
- Your surgeon's physician assistant will visit.
- You may be requested to complete a 5 meter walk in the hallway with a nurse.
- Staff will request information for a family spokesperson who will be contacted by the surgeon after the surgery is complete.

The Morning of Surgery (Inpatient Unit)

- At the request of your surgeon a second preoperative skin preparation will be done to help decrease the risk of infection.
- The team will remove the hair on your body from chest, arms and legs.
- A nursing assistant will help you to clean your skin with Chlorhexidine Gluconate (CHG) sponges.
- A physical assessment will be completed.
- Your vital signs will be obtained including blood pressure, pulse, and temperature.
- A nurse will apply mupirocin ointment to your nostrils to help prevent infection.
- Your blood sugar will be checked.
- Personal belongings shall be given to family members.
- Family members should take any belongings you have brought to the hospital and proceed to the waiting area for the Cardiac Intensive Care Unit (CICU) on the 5th floor of the Patient Care Tower which is building 9.
- Hearing aid, or eyeglasses may be worn to operating room.
- When ready, you will be sent to the PACU holding area prior to surgery. There you will:
 - Be greeted by an Anesthesiologist.
 - Be greeted by the nursing staff who will continue to prepare you for surgery.
- Your family will not be allowed to go to the operating room.

Preoperative Education

Incentive Spirometer (IS)

After surgery you will begin to use your incentive spirometer to help keep your lungs clear, strengthen your breathing muscles and help prevent post-op complications.

Directions for Incentive Spirometer or IS:

- Relax and find a comfortable position.
- Hold the IS upright, insert mouthpiece and seal your lips tightly around it.
- Breathe in slowly and deeply; in doing so, the blue piston inside the spirometer should rise towards the top of the column.
- Hold the piston for a few seconds. Exhale.
- Rest for a few seconds and repeat the above steps at least 10 times in a row every hour while awake.
- As you improve, the nursing staff may adjust the setting to ensure deeper, more effective breathing.
- After you have completed 10 breaths, you should hold the red pillow firmly across your chest and cough to clear any secretions.
- Holding the pillow to your chest helps to splint the pain and support your incision.

Incentive Spirometer (IS)



The Importance of Deep Breathing and Coughing

- Sometimes after cardiac surgery, patients do not take deep breaths.
- Deep breathing expands the lungs and helps prevent pneumonia.
- Breathe in through your nose and out through your mouth.
- To cough, hold your pillow against your sternum. This will help make coughing easier.
- The staff will be happy to assist you.

Pain Assessment and Management

- Pain assessment and management is a primary goal! Throughout your stay a registered nurse will assess your pain.
- Every person perceives pain in a different manner.
- We use a numeric scale (0-10) to assess pain. The rating of "0" indicates no pain and "10" indicates the worst pain possible.
- Each surgeon will order pain medication to meet your individual need. Our goal is to make you as comfortable as possible to actively participate in your recovery.
- Intravenous pain medications will be administered and changed to oral medications as you progress.
- The nursing staff will check frequently to assess your response to the medication given.
- There are additional interventions that may be of comfort:
 - You will receive a soft pillow to help splint your incision when you cough, deep breathe and move.
 - Music and guided meditation channels are available on your hospital television.

0-10 Pain Rating Scale

0



1



2



3



4



5



6



7



8



9



10

0 = No Pain

10 = Worst Pain

The Importance of Early Ambulation

- After cardiac surgery, you will be sitting in a chair and walking as soon as possible, as permitted by your surgeon. This decreases the risk of pneumonia, clots, skin breakdown and more!
- As you recover, you can expect to ambulate more frequently.

The Importance of Handwashing

- Handwashing is one of the most important strategies for avoiding infection.
- Visitors, as well as the staff, should sanitize or wash their hands each time they enter and exit a patient's room. There are sanitizing agents outside all patient rooms.
- The good health of our patients is in all of our hands!

The Importance of Preoperative and Postoperative Nutrition

- Your pre-surgery diet should include as many healthy nutrients as possible.
- Eat good healthy proteins with each meal. Proteins provide building blocks for our muscles, bones, and our immune systems.
- Include whole grains, fruits and vegetables for the vitamins your body needs for healing.
- Reduce your intake of sugary items, caffeine and alcohol from your diet.
- Post surgery your diet will slowly be advanced.
- Food may not taste the same right after surgery.
- Even if you are not hungry, it is important to take in calories to help you heal. Again, these calories should come from proteins, fruits and vegetables.
- As you heal, your appetite should return. At this time it is important to eat balanced, nutritious meals with adequate calories and proteins to enable your body to heal.

The Importance of Medications After Cardiac Surgery

- Before you leave the hospital, your doctor will prescribe medications for you to take at home. The nurse will give you a list of these medications, information about how they work, and their side effects.
- Take your medications as directed. This is one of the most important things you can do to improve and maintain your health.
- There may be new medications. Please feel free to ask as many questions as needed.
- For your convenience, the hospital offers a program called “Meds 2 Go” this program allows for your prescriptions to be filled within a pharmacy in the hospital prior to discharge
- After cardiac surgery, you will be given a going home after cardiac surgery handbook with general information and guidelines about medications.

ANTICOAGULANTS OR BLOOD THINNERS

You may be prescribed a blood thinner for different reasons after cardiac surgery. It is extremely important that you understand the reasons why you are on them, how you take them and the follow-up instructions that will be provided to you by your healthcare team before your discharge.

If you have any questions please do not hesitate to ask.



Call...Don't Fall!

- Your comfort and safety are very important to us!
- The most important thing you can do to prevent falls is to call for help before getting out of bed or to use the bathroom.
- By following certain guidelines, you and your family can reduce your risk of falling:
 - Use the call bell when you need to get out of bed.
 - Avoid quick, sudden movements. Sit on the edge of bed before standing.
 - Stand up slowly and get your balance before walking.
- Remember, we want you to remain safe while in the hospital and ask that you CALL...DON'T FALL



Preoperative Area (Unit 3-5)

If Admitted the Morning of Surgery

A team of registered nurses and cardiac technicians will admit you to the hospital and prepare you for your surgery.

- Review of information:
 - Personal ID (name & date of birth)
 - Medical history
 - Medication profile and allergies
- An intravenous (IV) line will be started and any blood work your surgeon ordered will be collected.
- Your vital signs will be obtained including blood pressure, pulse, and temperature.
 - An exact weight will be obtained.
- Your blood glucose will be checked.
- Surgical prep will be completed:
 - The team will remove the hair on your body from chest, arms and legs.
 - Your skin will be washed again with a special antiseptic soap.
 - You will be provided with a clean gown and linen.
- Family members should take any belongings you have brought to the hospital. Proceed to the family surgical waiting room on 3-9 (building 9, floor 3) to wait during surgery. Once you have heard from the surgical team, please proceed to 5-9 (building 9, floor 5), CICU waiting area.
 - Glasses and hearing aids may be worn to operating room.
- Staff will request contact information for a family spokesperson. The spokesperson will be contacted by the surgeon after the surgery is complete.
- The patient is taken in the bed to the PACU holding area prior to surgery.
 - In the PACU you will meet with an Anesthesiologist.
 - The Nursing staff will finish preparing you for surgery.
 - Ask your pre-op nurse to sign your family up for text messages, which will periodically update your family during surgery.

Operating Room

- The team in the operating room consists of the following people:
 - Cardiovascular Surgeon
 - Physician's Assistants
 - Advanced Practice Registered Nurses
 - Cardiovascular Anesthesiologist
 - Perfusionist
 - Operating Room Nurses
 - Interventional Cardiologist (TAVR)
- The anesthesiologist will administer sedation through the IV line and you will fall asleep before many of the lines and catheters are placed.
- An Operating Room Registered Nurse will provide pre-op interview in pre-op area and provide additional education.
- Once surgery is complete, the OR staff will transport you to the CICU.
- Family wait time may seem long during the operation.
 - The operation generally takes four to six hours and every surgery is different.
 - Time is needed to prepare the patient, complete the operation and transport the patient to CICU.
- The surgeon will update your loved ones once the surgery is complete.
- The OR nurse can update the family during surgery via text.

There will special monitoring and equipment in the Operating Room and the Cardiac Intensive Care Unit (CICU). They include:

Endotracheal (ET) Tube: A tube that helps you breathe during and immediately after surgery. Once you can breathe on your own, the tube will be removed. Commonly known as the Breathing Tube.

Central Intravenous Line: Also called a central line, this larger IV tube is placed in a large blood vessel in the neck and is used for giving medications, IV fluids, or blood.

Intravenous Lines: Small tubes inserted into your blood vessels to give fluids and medications.

Arterial Catheters: A catheter in the wrist will be used to monitor blood pressure and draw blood samples.

Foley Catheter: Thin tube inserted into your bladder to drain and monitor urine amounts during and after your surgery. This tube will be removed as soon as possible to prevent infection.

Chest Tubes: Drain excess fluid from around your heart and lungs.

External Pacing Wires: Small, fine, temporary pacemaker wires, placed in surgery, in case your heartbeat needs to be regulated in the days after surgery. They are removed before you go home.

Nasogastric Tube: Thin tube inserted into your nose down into your stomach to prevent your stomach from becoming too distended.

Chest Electrodes: Similar to the “sticky” buttons of an EKG, these attach to the skin on the chest and are connected by wire to the heart monitor.

The Cardiac Intensive Care Unit (CICU Unit 5-9)

The typical stay in the CICU is approximately 24-48 hours. This is dependent on your needs and progress after surgery. The CICU is located on the 5th floor of the Patient Care Tower (Building 9). During Surgery, there is a 3rd floor surgical reception area for families.

- Your loved ones should check in with the volunteer.
 - In this area, you will find an electronic patient tracking board that looks like a large TV screen. You will be able to track your loved one with a case number given to you by the preoperative nurse.
 - In addition to the tracking board, you can sign up for periodic text messages. These text messages will update you on your loved one's progress throughout surgery.
 - Once the tracking board progresses to brown, you can expect a visit or a call from the surgeon or a team member.
 - Once you have spoken to a team member, please move to the CICU which is on the 5th floor. Make sure to pick up the phone (on the right side of volunteer desk) and let the CICU know you are in the waiting area.
- Once the surgeon or team member contacts your family, and you have moved to the 5th floor CICU, expect to wait about an hour while nurses conduct post op assessments.
- Be aware, you may look "puffy" and have multiple wires and tubes attached to your body. These tubes and wires are used to monitor your condition and help you recover safely.
- Please remember, not all these devices and monitoring equipment pertain to all patients, for example, the Transcatheter Aortic Valve Replacement.
- Before you are transferred to the Surgical Telemetry Unit (8-9), some of the monitoring devices and tubes will be removed.

If you have any questions, or if it's after hours, please call the CICU at 860-714-7058.

Chawla Surgical Pavilion (Unit 8-9)

Monitoring and Care

Once your surgeon determines it is appropriate, you will be transferred to the step-down unit (8-9) to finish your recovery. The staff on 8-9 is specifically trained for post open heart care.

- You will continue with IV lines, drainage tubes, small pacing wires, and monitoring equipment.
- Your blood pressure, heart rate, oxygen level, and temperature will be monitored every four hours and as needed.
- Your blood glucose will be monitored every two hours for the first two days after surgery and then less frequently starting on day three. Blood glucose control helps to prevent infection and promotes healing.
- Nurses will change your dressings daily. This is a good time to look at your incisions with your nurse.

Environment

Your room will be cleaned daily. Please let your nurses know if this is not up to your standards.

It may be difficult to get rest at night due to admissions or emergency situations. To reduce nighttime distractions, staff can crack doors, dim lights, and avoid overhead paging. If this is not enough for a restful sleep, there are ear plugs available.

Safety

You are at a higher risk of falling while in the hospital. Please do not get out of bed or the chair without calling for assistance.

Education

The nurses will spend time teaching you about your medications and important side effects as they give them. Ask as many questions as you would like.

You will learn about self-care and symptom monitoring so that you feel comfortable when it is time for discharge.

Collaboration

Your surgical team will round on the unit every weekday morning between 9 and 10 a.m. This is a great time to ask questions and participate in your care.

Your leadership team (Nurse Manager or Assistant Nurse Manager) will round throughout the week. If you need assistance at any other time, there is a charge nurse available on each shift.

What You Need To Do

Incentive Spirometer: You should use your incentive spirometer ten times every hour when awake. (See page 25 for directions.)

Cough and Deep Breathe: Deep breathing expands your lungs and helps to prevent pneumonia.

Walk: Activity will increase from sitting in the chair to walking in the hallways. You should spend most of the day out of bed. This decreases your risk of pneumonia, clots, skin breakdown, and more!

Daily Weights: You will be weighed every morning. You should start tracking your daily weights and continue doing so at home.

Foot/Leg Pumps: These will be provided for you. They should be worn at night and during the day when resting. They help your circulation and prevent clots.

Pain: Be sure to ask for pain medications as you need them. Your nurses will work with you to make you as comfortable as possible.

Going Home After Cardiac Surgery

Discharge

A case manager will discuss options for care after you leave the hospital. Depending on your needs, you may need a skilled rehab facility. If going home, a visiting nurse is highly recommended to help you transition to caring for yourself.

A member of the Hoffman Heart Cardiac Rehabilitation team will speak with you about options for outpatient follow-up.

If you are being discharged to home, arrangements should be made to be picked up before 11 a.m., unless other plans have been discussed with your team.

Care of Your Incisions:

- Shower every day but no tub baths until incisions are healed
- Wash incisions with warm soapy water on fingertips; avoid abrasive washcloths or loofahs
- Wash, rinse, and pat dry incisions using a clean towel daily
- Keep incisions clean and dry
- No lotions, powders, creams, or deodorant on incisions until healed
- Chair may be placed next to or in shower on a non skid surface as needed for sitting

Check Your Incisions Daily and Notify Your Surgeon for Any of These Symptoms:

- Redness, swelling, or increased tenderness to the incision
- New drainage from incision or change in color or consistency in drainage
- Temperature greater than 100 - 101° F orally

Sternal (Breastbone) Precautions:

- Incisions and chest wall discomfort may occur for several weeks
- You may have numbness in the left or right side of your chest if the internal mammary artery was used for one of your bypass grafts
- The sternum (breastbone) takes 8-10 weeks to heal
- Support your chest with your hands or a pillow when coughing or sneezing
- Wear a supportive bra (without underwire, front closure)
- Wear your seatbelt/ shoulder harness while riding in the car
- You may ride in the front seat, despite airbags
- No driving for 3-6 weeks following surgery. Check with your surgeon at post operative appointment
- You may do light housework, cook light meals

Activities to Avoid for 4-8 Weeks During the Healing Process:

- Lifting anything heavier than 10lbs including children, pets, or groceries
- Yard work such as raking, mowing, gardening, and shoveling
- Housework such as vacuuming, washing floors, windows, or carrying trash
- Opening jars, windows, or doors, that may be stuck

SWELLING IN YOUR LEGS

You may have swelling in your legs, ankles, and feet especially if you had a leg incision to remove veins for bypass grafts. This swelling may last for several months.

And, Remember To:

- Elevate your legs above level of heart when lying down or sitting in a recliner
- Notify your physician if leg swelling increases or becomes uncomfortable
- Weigh yourself daily first thing in the morning after urinating and before you eat and record. Notify physician if weight gain greater than 2 pounds per day or 5 pounds per week
- Check with your physician before dental procedures especially if you had valve surgery
- Check with your doctor about shoveling snow
- Do not smoke. Stay away from smoke. This includes cigars, cigarettes, pipes and second hand smoke.

BACTERIAL ENDOCARDITIS PRECAUTIONS:

- You are at risk for infective (bacterial) endocarditis because of your heart valve surgery.
- It may be recommended to take antibiotics prior to some types of procedures including dental work. Please discuss with your cardiologist before doing so.
- It is your responsibility to tell all your physicians and your dentist about your valve surgery. Your physician and dentist may consult your cardiologist for detailed information.
- Always carry your valve identification card and show it to your physician and dentist.
- Good oral hygiene is very important to help prevent an infection that can grow on your new heart valve. See your dentist regularly and follow their recommendations closely.

Educational Resources

Educational, family and friend resources can be found at www.trinityhealthofne.org

Resources Include:

- Amenities
- Visiting Hours
- Directions
- Dining Options
- Pharmacy
- Gift Shops
- Banking
- Spiritual Services
- Local Accommodations

Additional Resources:

- The American Heart Association
www.americanheart.org
- National Heart, Lung and Blood Institute
www.nhlbi.nih.gov/health
- Mended Hearts
www.mendedhearts.org
- The Society of Thoracic Surgeons
www.sts.org



Saint Francis Hospital
Trinity Health

**The Hoffman Heart and
Vascular Institute of Connecticut**

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