Helping you navigate Cardiac Surgery

Luminis Health℠

Let us be your light. We're ready to help with whatever life throws at you.

Anne Arundel Medical Center and Doctors Community Medical Center have come together to form a new, integrated health system that reimagines what community health means. For years, we've shared a dedication to compassionate care, delivered when and where people need it most. Now, we're carrying that same commitment into the future as Luminis Health—a health system that's here to embrace progress. And awaken a new era in care for our communities.

The name Luminis is symbolic of light. It signifies our commitment to being a beacon of hope and healing for our communities. Light is quite literally energy that you can see—and by joining forces and moving forward as one, we're igniting new possibilities for how and where health care is delivered.

Dear Patient,

Thank you for choosing the nationally-recognized cardiac team at Luminis Health Anne Arundel Medical Center for your cardiac surgical care. The LHAAMC cardiac team is consistently recognized for excellence from both the American College of Cardiology and the American Heart Association.

For years, the missing piece in the heart services program at LHAAMC was cardiac surgery. I joined the team in December 2020 so that patients in Anne Arundel County could receive state-of-the-art cardiac surgical care right in their neighborhood.

I brought with me more than a decade of extensive cardiovascular healthcare leadership experience.

Our patient guide will provide you with all the information you and your family need to know before, during and after your procedure.

Please keep this guide with you during your hospital stay. Your doctors, nurses and our entire cardiac health care team will be referring the contents of your patient guide while we are caring for you.

We hope you find this guide helpful in assisting you and your family through your procedure and toward a healthy recovery. If you have any questions after reviewing the information, please ask. Your cardiac health care team will be happy to answer and explain any questions you may have.

Be safe and well and here's to a speedy recovery!

Your Cardiac Health Care Team at Luminis Health Anne Arundel Medical Center

Daniel Lee, MD
Chief of Cardiac Surgery

Welcome

We're pleased that you've chosen Luminis Health Anne Arundel Medical Center for your upcoming surgery or procedure. This guide will provide you and your family with information that will help you understand your procedure and make your experience as comfortable as possible. We encourage you to ask questions whenever anything is unclear, and we wish you a speedy recovery.

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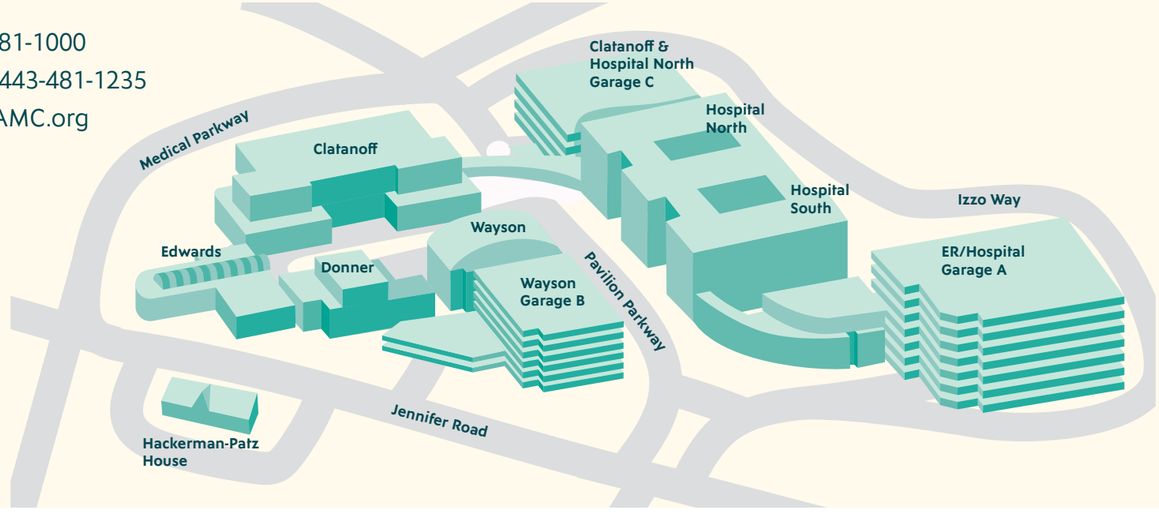
Getting here

Luminis Health
Anne Arundel Medical Center
2001 Medical Parkway Annapolis, MD 21401

443-481-1000
TDD: 443-481-1235
askAAMC.org



From Annapolis and the Eastern Shore

- Take Route 50 West to Jennifer Road, Exit 23A.
- Continue straight on to Pavilion Parkway.
- Make an immediate right onto Izzo Way.
- Follow signs to GARAGE A.

From Washington, D.C. and Points West

- Take Route 50 East to Parole, Exit 23.
- Bear right onto West Street.
- Turn right on Jennifer Road.
- Cross over Medical Parkway.
- Turn left on Pavilion Parkway.
- Make an immediate right onto Izzo Way.
- Follow signs to GARAGE A.

From Baltimore

- Take Route 97 to
- Route 50 East to Parole, Exit 23
- Bear right onto West Street.
- Turn right on Jennifer Road.
- Cross over Medical Parkway.
- Turn left on Pavilion Parkway.
- Make an immediate right onto Izzo Way.
- Follow signs to GARAGE A.

Important phone numbers

Primary Care Doctor: _____ Number: _____

Surgeon: _____ Number: _____

Pharmacy: _____ Number: _____

Cardiac Surgery Program: _____ Number: 443-481-1358

Notes: _____

_____

_____

_____

Pre-surgery contacts

AAMC's Pre-Anesthesia Testing Center: 443-481-3624

Special Dietary Requests: 443-481-6111

South Pavilion Surgical Waiting Room: 443-481-1800

Smoking Cessation Program: 443-481-5366

Hackerman-Patz House Lodging: 410-571-3100

AAMC Patient Financial Services Department: 443-481-6500

Post-surgery contacts

AAMC Patient Financial Services Department: 443-481-6500

AAMC Advocacy Department: 443-481-4821

1 Healthy heart, healthy life

You have a life to live. Memories to make. Moments to cherish. You've got this—and we've got you. Our cardiac surgery team will be by your side, guiding your journey to a healthier, stronger heart. We'll answer your questions, ease your fears and cheer your every accomplishment.

Let's get started.

Get the support you need

To rest, heal and recover

Cardiac surgery is just one step toward a stronger heart and body. That's why we make rest and recovery a priority. Our Enhanced Recovery After Surgery (ERAS) Cardiac Surgery Program ensures you get what you came for: exceptional surgical outcomes and the best possible care. With support from the ERAS Program, you'll be able to:

- Eat and drink sooner after surgery (and stay hydrated).
- Feel confident about your care plan.
- Start your rehabilitation quickly.
- Reduce the stress on your body.
- Take part in your own recovery.

At the center of ERAS is you. You're surrounded by a team of specialists across disciplines: surgeons, physician assistants, nurse practitioners, anesthesiologists, nurses, dietitians and therapists. A team with one goal in mind: Helping you heal and recover so you get back to the life you love.

We're here to help you

We're here to help you before, during and after surgery. Our team is always just a phone call away. We're ready to answer your questions, ease your concerns and champion your good health. Our plans get you out of the hospital as quickly as possible. And, our clear, detailed instructions keep you safe and healthy when you're back at home.

The most important part of your recovery plan is YOU. When you and your support person are involved, motivated and ready to participate, you'll feel better, stronger and in charge.

We want you to feel your best and get the best possible outcome from your cardiac surgery. That's why we focus on four main goals:

To empower you

Open, honest conversations help us ensure we're all on the same page. We'll walk you through your surgical plan, including the preoperative assessment, preparation for your procedure and what to expect for your recovery.

To get you moving

The sooner you move, the sooner you can start to heal. That's why our team will encourage you to get up and out of bed. The small steps lead to bigger ones.

To help you heal

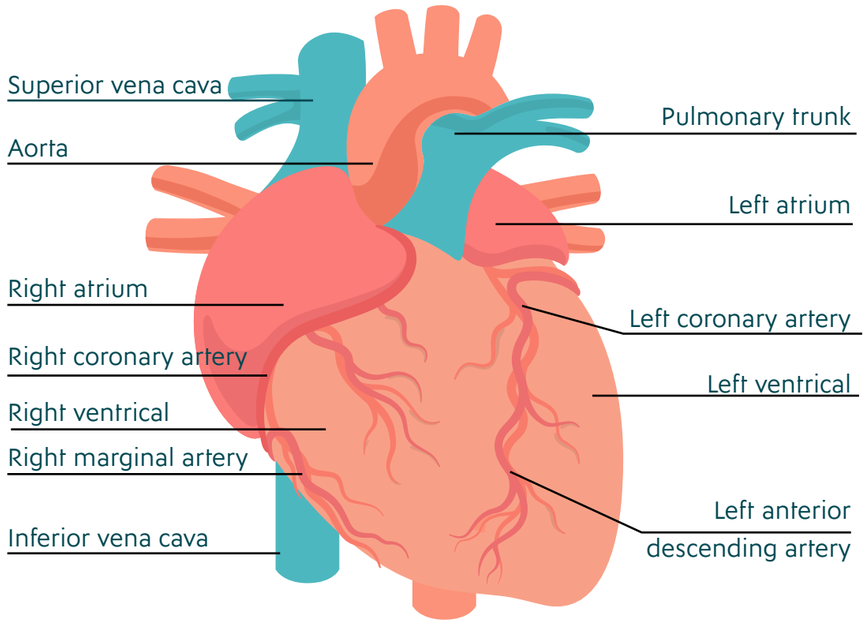
We use the latest advances in cardiac surgery and innovative pain management strategies to help reduce the physical stress of surgery and promote your healing. We lead with compassion, understanding and experience to support you at every turn.

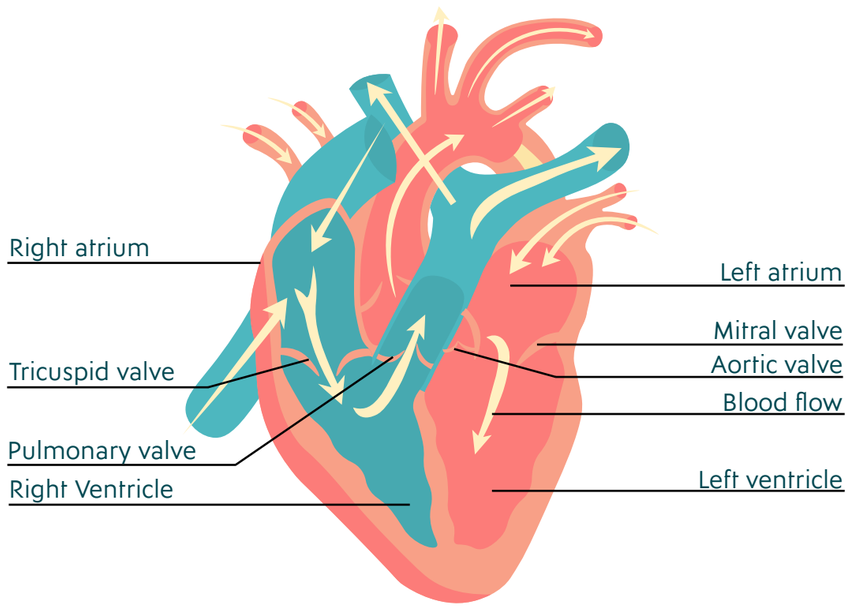
To provide a structured recovery

We tailor your recovery guideposts to your health, your needs and your goals. We support you every step of the way to ensure a thorough recovery.

Heart circulation and anatomy

Coronary artery anatomy





Heart anatomy and disease: Glossary of common terms

Aneurysm: A weakness in the vessel wall that causes a bulge (dissention) in the artery

Aortic Insufficiency: Leakage or back flow of blood from the aorta across the aortic valve into the left ventricle

Aortic Stenosis: Narrowing of the aorta that results in reduced blood flow

Aortic Valve: Valve between the aorta and left ventricle that prevents back flow of blood

Atrium: Upper chambers of the heart

Atherosclerosis: Fatty deposits in arterial walls that can lead to blockages

Cardiomyopathy: Enlargement of the heart resulting in heart muscle weakness, which can cause problems when the heart pumps; some causes are long-term heart disease, some viral infections, toxic effects of overconsumption of alcohol and unknown causes

Cholesterol: Fatty substance that can be stored on arterial walls causing atherosclerosis, which may lead to blockages

Congestive Heart Failure: Heart muscle is unable to efficiently pump blood to the body, resulting in blood accumulation in the heart chambers and lungs

Coronary Arteries: Blood vessels that originate from the aorta and are on the surface of the heart; these arteries supply the heart muscle with blood and oxygen

Coronary Artery Disease (CAD): Coronary artery disease is when a coronary artery is clogged or blocked by a buildup of fatty deposits on coronary artery walls

Coronary Thrombosis: A blood clot in a heart artery that blocks blood and oxygen from reaching the heart muscle and may cause a heart attack

Hypertension (high blood pressure): Blood pressure within the arterial walls that is greater than normal, which may result in damage to the heart, brain, eyes and kidneys

Leaflets: Small flaps within the valves of the heart that open and close with the pumping of the heart, preventing back flow into the atria or vessels

Mitral Valve: Valve between the left atrium and left ventricle

Mitral Insufficiency: Inability of the mitral valve to completely close, which can result in leakage or back flow of blood

Mitral Stenosis: Narrowing of the mitral valve opening that can result in decreased blood flow through the mitral valve

Myocardial Infarction (heart attack): Heart muscle is damaged as a result of not receiving enough oxygen

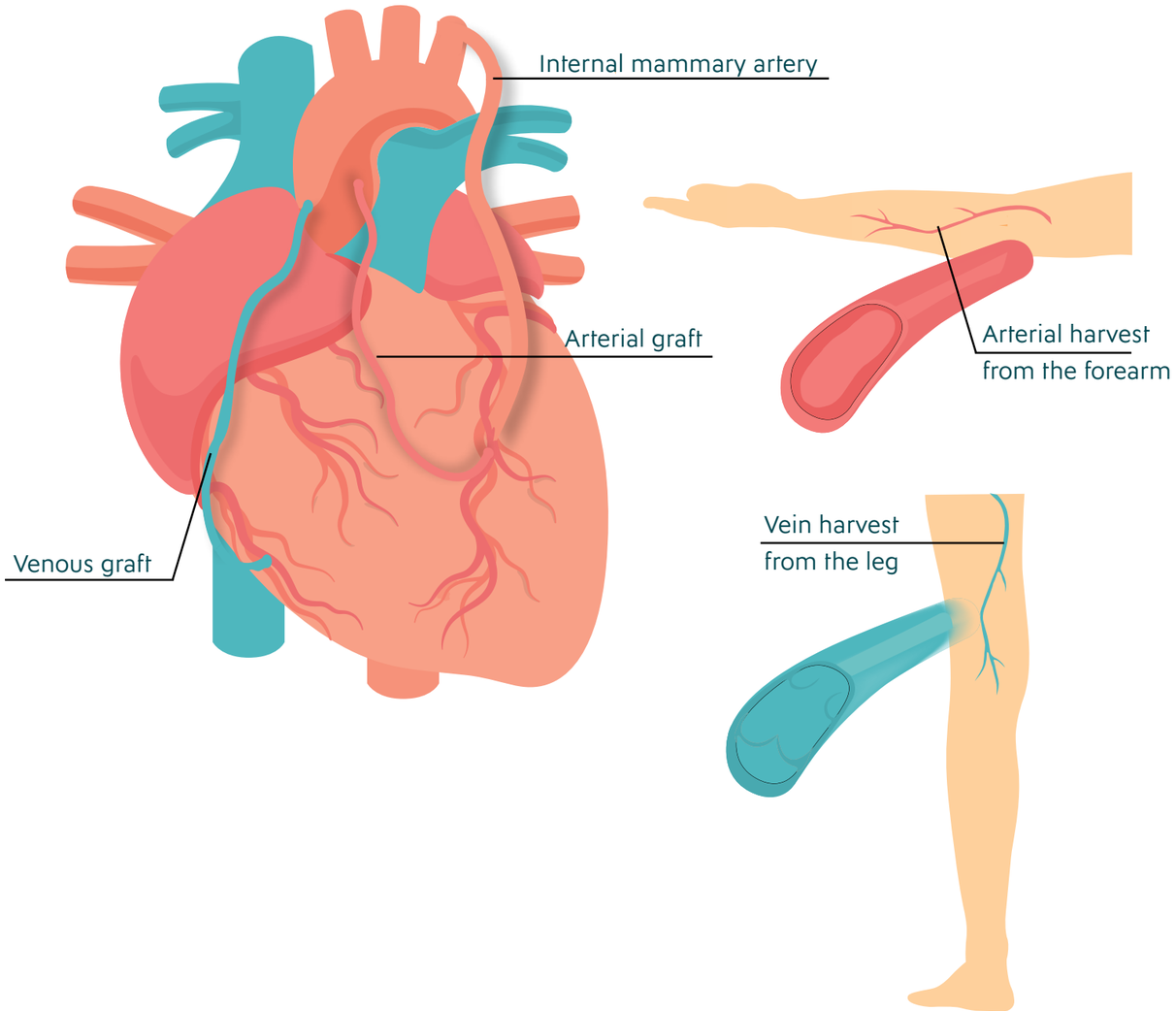
Pulmonic Valve: Heart valve between the right ventricle and the blood vessel that leads to the lungs

Stenosis: Narrowing or blockage of an artery or heart valve opening

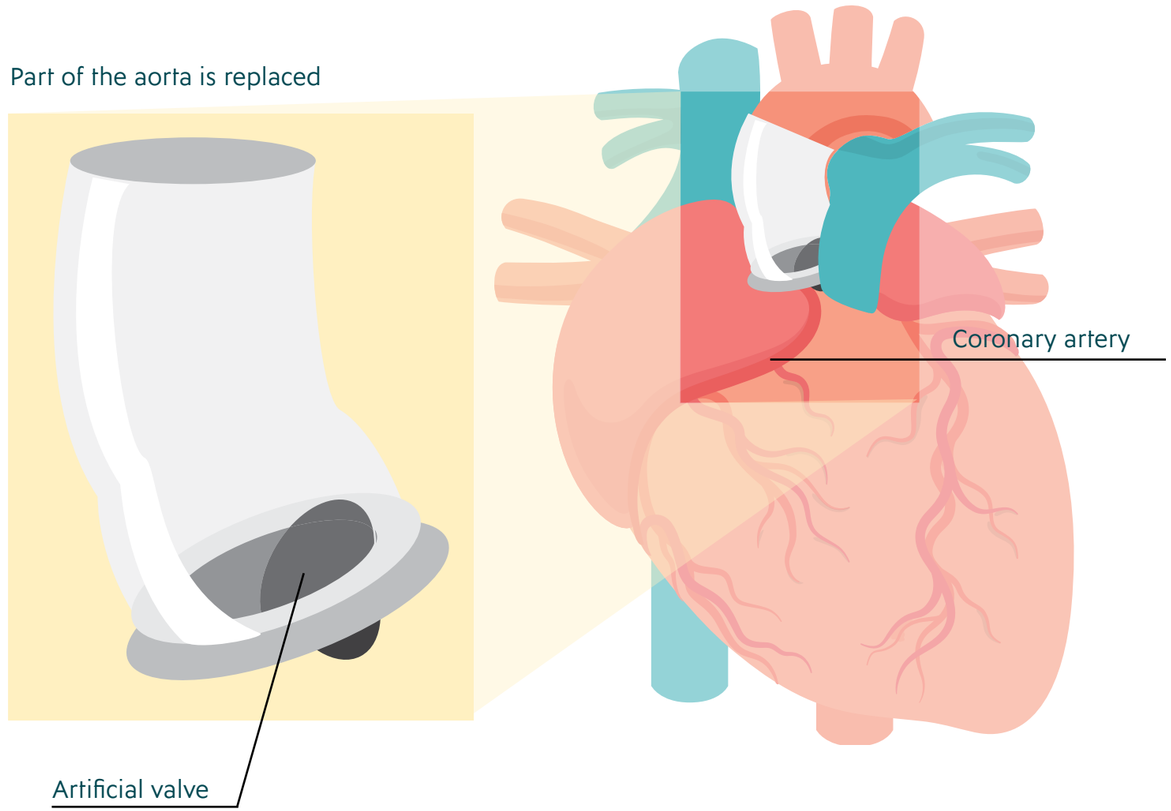
Tricuspid Valve: Heart valve between the right atrium and right ventricle

Ventricles: Lower chambers of the heart

Coronary artery bypass grafting (CABG)



Artificial valve surgery



We'll make sure you're ready

Learning that you need cardiac surgery can feel overwhelming but take heart: We're here for you. And, we'll make sure you're ready for your procedure.

Cardiac catheterization

Your doctor may order a cardiac catheterization if you're dealing with a cardiac condition or symptoms of heart disease. This procedure can accomplish four important tasks, including:

- Identifying how well your heart works.
- Determining any coronary artery blockages.
- Evaluating the function of your heart valves.
- Diagnosing specific problems with your heart to figure out the best way to correct them.

How the procedure works:

Cardiac catheterizations require some preparation. You should restrict eating and drinking, as well as limiting some medications. Your doctor gives you clear instructions before your procedure.

We perform 90 percent of cardiac catheterization procedures by inserting a small tube through the radial artery in your arm. This is known as the transradial approach. This approach significantly reduces your recovery time and risk of bleeding complications.

Sometimes the radial approach is not an option. In this case you may also have a thin tube inserted into your leg through the femoral artery. The recovery time for this approach is a little longer because you lay flat for 2-4 hours after the procedure.

We perform cardiac catheterizations in a procedure room with special X-ray and imaging machines. You're usually awake, but sedated, while this happens.

Immediately after your procedure, we'll frequently monitor your puncture site and vital signs. We'll do our best to help you go home the same day. Checking for arterial blockages, for instance, takes only minutes and you'll likely be able to return home the same day.

If we discover that you need cardiac angioplasty or a stent to treat blockages during your procedure, you may need to stay longer. If you do, we'll consult the cardiology or cardiac surgery team to further evaluate you. You'll remain safely in our care as long as needed.

Coronary artery bypass surgery

Coronary artery bypass surgery is also known as bypass surgery, coronary artery bypass graft (CABG or "cabbage") or heart bypass surgery. It's one method used to restore normal blood flow to an obstructed coronary artery.

Arteriosclerosis, atherosclerosis or both cause obstructions. Arteriosclerosis develops when your arterial wall becomes thickened, loses its elasticity or becomes hardened with calcium deposits. Atherosclerosis develops when your artery is obstructed by yellowish plaques of cholesterol, lipids or cellular debris deposits.

How the procedure works:

We don't remove blockages during bypass surgery. Instead, we create a new pathway around the blocked coronary artery. Think of this as a detour!

If you need a bypass, your care team removes a healthy vein or artery from another part of your body to use in the surgery. The healthy vessel may be a(n):

- Internal thoracic (mammary) artery, from your chest.
- Radial artery, from your arm.
- Saphenous vein, from your leg.

We attach the healthy vessel to the coronary artery beyond the blockage. This allows the blood to flow through the healthy vessel, bypassing the blocked part of the artery entirely.

In most cases, a heart-lung machine does the work for your heart during surgery. Blood is circulated through the machine to supply the blood with oxygen and pumps it throughout your body so the surgeon can repair your heart.

Heart valve surgery

Your heart's job is to pump blood throughout your body. And that starts with the heart pumping blood through the heart itself. Blood that flows between the different chambers of your heart must flow through heart valves. So must blood that flows out of your heart into your large arteries and on to other parts of your body. Your heart valves open up enough so that blood can flow through, then close to keep the blood from flowing backward.

There are four valves in your heart:

- Aortic valve
- Mitral valve
- Pulmonic valve
- Tricuspid valve

If you have a heart valve disorder, one of your heart valves isn't able to do its job properly. This may mean your valve has a leakage of blood, called regurgitation. Or, it means you have a narrowing of the valve opening, called stenosis. Or, you may have a combination of the two.

Heart valve surgery is used to repair or replace diseased heart valves.

We're here to care for you

You'll be surrounded by a team of experienced and caring professionals when you're in our care. Each one of us has a unique role and responsibility in your care before, during and after.

Cardiology team

Cardiac Surgeon: A doctor specially trained to perform your cardiac surgery

Cardiologist: A doctor specializing in the care of patients with heart disease

Electrophysiologist: A cardiologist specializing in diseases of the electrical system of the heart; also performs procedures in the electrophysiology laboratory (EP Lab)

Interventional Cardiologist: A cardiologist specializing in procedures in the cardiac catheterization laboratory

Care team

Advanced Practice Practitioners: These may include nurse practitioners (NP) and physician assistants (PA) who examine you, assist with the surgical procedures, monitor your progress and recovery, and provide treatment in collaboration with our physician team

Anesthesiologist: A doctor who is specially trained to provide close monitoring and support measures and to keep you asleep and comfortable during your operation

Cardiovascular Technologist: A person specially trained and certified to assist with procedures in the catheterization laboratory and on nursing units

Certified Nurse Anesthetist (CRNA): An advanced practice nurse specially trained to provide life support measures and to keep you comfortable during your operation

Clinical Pharmacist: A doctor of pharmacy who works closely with your doctors and nurses to ensure medications ordered for you are safe and effective while you're in the hospital

Clinical Specialist: A nurse with advanced training in cardiac recovery

Dietitian: A person who can explain and offer suggestions to improve your diet and nutrition

Occupational Therapist: A person who evaluates, assists and implements daily living activities, like bathing, shaving and household activities; makes recommendations for rehabilitation services

Patient Care Technician: The caregiver who assists you with morning care, showers and other basic care

Perfusionist: A person who operates the heart-lung machine and monitors you while the doctor operates on the heart

Physical Therapist: A person who evaluates, assists and implements activities, like walking and strengthening exercises; makes recommendations for rehabilitation services

Registered Nurse: A nurse on our cardiology team who has specialized cardiac training, administers medications and monitors your progress

Respiratory Therapist: A person who assists you with breathing treatments and breathing exercises

Social Worker or Case Manager (Nurse): A person with special training in your home care needs and issues surrounding leaving the hospital

Speech Therapist: A person who evaluates your ability to speak and swallow

2 Countdown to surgery

We want your experience to be as smooth as possible. Part of ensuring your successful recovery is making sure you understand how to prepare yourself, your caregivers and your home for your procedure and for your recovery.

3-4 weeks before surgery

Make a list and check it twice

1. Complete any needed paperwork: Find out what information is needed from your primary care doctor, surgeon's office and the hospital. Also share any disability or family leave forms you need with your surgeon's office.

2. Contact your insurance company: Find out if you need a pre-authorization, a pre-certification, a second opinion or a referral form. It's also important to know what your co-pay may be for pre-surgery, surgery and post-surgery services.

Know that Health Maintenance Organization (HMO) plans have a specific insurance registration process. You must call your HMO once your procedure is scheduled to arrange for pre-admission lab studies.

It's important to note that after your procedure you may receive several separate bills. These may come from the anesthesiologist, the hospital, the surgical assistant, and the radiology and pathology departments, if applicable. Please ask your insurance company if it has specific requirements for participation status. Also, you may receive a bill under the name of Adfinitas Health, the medical hospitalist service. The hospitalists work closely with your surgeon to manage your pain, medications and any existing or acute conditions during your hospital stay.

You may have questions about your financial arrangements. If so, please call our Patient Financial Services Office at 443-481-6500.

3. Enlist a caregiver: People with caregivers often do better after surgery and feel more comfortable as they recuperate. Choosing the right caregiver is important for your recovery. You could consider more than one caregiver, if needed. You'll want to choose someone who can offer support, motivation and assistance, being present during your time in the hospital and drving you. You'll need a responsible adult to drive you home when you're discharged and stay with you for at least the first week of your recuperation. You will need someone who can drive you to your appointments and help you at home for 2-4 weeks after heart surgery.

4. Get medical or specialty clearance: You need dental clearance prior to having a valve repair or replacement. And in some cases, you may need additional clearances. Check with your surgeon or provider about any other medical clearance you may need.

5. Have your medical information ready: Write down your medication list to bring to your appointment, including name, dose and frequency taken. You will also need to bring your advance directives, if you don't have one we can provide one for you.

6. Schedule and prepare for your preadmission testing appointment: You need to schedule your preadmission testing through your surgeon's office. Your tests are administered at Luminis Health - AAMC Wayson Pavilion, located at 2003 Medical Parkway, Suite G60. When you arrive, you'll find free parking in Garage B.

You should bring these items to your appointment:

- A photo ID
- Insurance card
- Up-to-date list of current medications, including name, dose and frequency taken
- Names of your physicians and any specialists
- Any medical records associated with your procedure

Your preadmission testing appointment is an important step in preparing for your heart surgery. An advanced practice provider (APP) takes your medical history and conducts a physical exam to make sure you're healthy enough for surgery.

During the appointment, you'll get lab work, a chest X-ray and an electrocardiogram, and any other test your teams feels are needed. You will also be given instructions for surgery day.

7. Set up care for others: If you have children or pets at home, make sure you have care arranged prior to your surgery. This keeps everyone safe while you're focused on your recovery. If you have a dog, please arrange to have someone walk your dog.

8. Share your personal contact information: Your surgeon's office schedules the planned surgery or procedure with the hospital. Please provide your surgeon's office with your correct name, date of birth and phone number. They will also need your emergency contacts information.

9. Stay healthy to reduce your risk for infection: We encourage you to live as healthy as possible before your surgery. Many factors can increase your risk for infection following surgery, including high blood pressure, high blood sugar, poor oral hygiene, obesity, smoking and steroid use. Let your surgeon know if you have any rashes, open wounds, sores, bites or infections anywhere on your body. If you have fever, cough, congestion, diarrhea or another illness 24-48 hours prior to surgery, let your surgeon know. We could postpone your surgery if you are not fit to proceed with the procedure. Focus on staying well and eating a healthy diet of lean protein, whole grains, fruits and vegetables.

10. Set up a quiet, restful recovery environment: Consider a recliner chair to help you feel comfortable while you recuperate. Many find these restful places to sleep.

1 week before surgery

5 days before

You must stop shaving five days before surgery. You will be given specific instructions on how to prepare your surgical sites before your procedure.

1 business day before

The prep team calls you the business day before your surgery between 2 and 5 pm to let you know when you should arrive. If you miss the call, you can call us back at 443-481-5700. The prep team also guides you on which medications to take or not take before surgery. Typically, we ask you to arrive two-to-three hours before surgery.

Night before

You must stop eating everything at midnight prior to your surgery except clear liquids. Please read and follow the complete guidelines found in this booklet or provided by your surgical team.

Remove any fingernail polish so the staff can monitor your vital signs accurately.

Day of surgery

You've got this. Keep in mind:

- Allow plenty of time to drive to the hospital and park. If you're already in the hospital, your caregiver should arrive two hours before your scheduled surgery.
- Do not shower the morning of your surgery, instead use the chlorhexidine cloths as instructed in this book.

Bring the following with you:

- Copy of advance directives, which you must print from **askAAMC.org/Advance-Directive**
- CPAP machine, if needed
- Insulin pump, if needed
- Eyeglasses, hearing aids and dentures (these may not be worn to surgery)
- Insurance card, driver's license or photo ID
- List of medications, dose and frequency
- One caregiver who has no symptoms or signs of any illness
- Patient Surgery Guide
- Personal hygiene items
- Robe and loose-fitting clothing to wear when discharged

Arrive on time:

- Your heart surgery takes place in the Hospital Pavilion South, 2nd floor. Park in Garage A. The attendant at the information desk located at the entrance can direct you to the elevator. Take the elevators to the 2nd floor surgical waiting area and register at the desk.
- When ready, we take you to the pre-operative area to be prepped for surgery. The nurse reviews your history and physical, starts any needed IVs and takes any necessary labs. You'll also likely receive antibiotics and other medications, as needed, once we start your IV. Your team will also prepare your skin and apply a protective dressing.

Greet your team:

- **Anesthesiologist:** Who will have you sign your consent for your anesthesia, as well as answer any last-minute questions you have about your anesthesia care
- **Operating room nurse:** Who interviews you before taking you back for your procedure and conducts a pre-anesthesia "time out" to ensure correct patient, correct procedure and correct site
- **Surgeon:** Who will have you sign your consent for the procedure, as well as answer any last-minute questions about your surgery

Reducing your risk of infection

Before surgery: Preparing your skin

Preparing the skin with an antiseptic solution before surgery can significantly reduce your risk of infection at the surgical site. Luminis Health Anne Arundel Medical Center has chosen disposable cloths moistened with a rinse-free antiseptic solution [2% Chlorhexidine Gluconate] for you to prepare your skin at home.

General instructions:

You will receive three packages of antiseptic cloths from your surgeon's office. Each package contains two cloths, for a total of 12. As directed, you will use six cloths each time you prepare your skin.

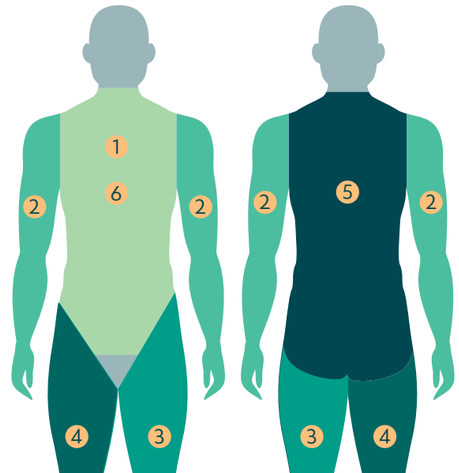
- Avoid shaving any area of your body for the two days before surgery.
- Do NOT wax for the two weeks prior to surgery.
- Cloths should NOT come in contact with or be exposed to your eyes, ears or mouth.
- Do NOT microwave cloths or flush them in toilet.
- If you have an allergic reaction to the cloths, discontinue use and notify your surgeon.

Date _____ **Night before surgery**

- Take a bath or shower with regular soap and shampoo, if desired.
- Dry off with a clean towel, making sure skin is completely dry, then wait 1-2 hours before using the cloths as directed below
- Open three packages, using both sided of the cloth as follows:
- **Cloth #1:** Gently wipe the **neck, chest and abdomen.**
- **Cloth #2:** Gently wipe **both arms** front and back using the same wipe.
- **Cloth #3**: Gently wipe your **right leg** front and back using the same wipe.
- **Cloth #4**: Gently wipe your **left leg** front and back using the same wipe.
- **Cloth #5**: Gently wipe your **back** starting at your neck going down to your buttocks. Avoid you genitals and anal area.
- **Cloth #6**: Repeat your **neck, chest and abdomen.**
- It is normal for the cloth to leave your skin feeling sticky.
- After using the closth put on clean sheets and pajamas.
- Do NOT rinse or apply lotions, moisturizers or perfume after preparing skin.

Date _____ **Day of surgery**

- **Do NOT** shower or bathe.
- **Repeat** all six wipes again in the same manner as directed above.
- **Do NOT** use any deodorants, lotions, or powders on your skin
- Brush your teeth and gums well



Mupirocin

Mupirocin nasal/topical ointment or cream is used to kill bacteria that can live in your nose and may spread to other people when you breathe or sneeze. These bacteria can also enter your surgical wound. Mupirocin is used in particular to kill a bacterium called Staphylococcus aureus (including MRSA), which is a common pathogen for infection. Many people carry Staph on their skin or in their nose without knowing it. Studies show that using mupirocin ointment prior to surgery significantly reduces the chance of a Staph infection after surgery.

Mupirocin General instructions:

- You should start mupirocin three days prior to surgery. To best protect you from infection, use this medicine for the full prescribed length of time.
- Apply mupirocin twice a day, morning and evening, to the inside of each nostril.
- Wash your hands before you use the ointment; use a cotton swab to apply a small amount of ointment (about the size of a match head) to the inside of each nostril.
- Press the sides of your nose together to allow the ointment to spread around the inside of your nostrils. Do not apply mupirocin to your surgical wound.
- Use mupirocin the morning of surgery. Then, leave your mupirocin at home. We'll provide you mupirocin in the hospital.
- Continue the mupirocin for one week after surgery.

Pre-surgery fasting guidelines

When should you stop eating and drinking before surgery?

Stop eating everything at midnight prior to your surgery except clear liquids. No food. No gum. No mints. No candy. No coffee. No chewing gum. No alcohol.

Last time to drink

You may drink 8 ounces of clear liquids between midnight and two hours prior to leaving your house for the hospital.

*See EXCEPTIONS below

Liquids

Clear liquids ONLY

Examples

The only liquids you can drink are water, clear Gatorade, clear tea and apple juice.

Diabetics may have Gatorade Zero without sugar.

***EXCEPTIONS: ALWAYS FOLLOW SPECIFIC INSTRUCTIONS FROM YOUR SURGEON.** If you have end-stage kidney disease, achalasia (difficulty swallowing), gastroparesis (slow stomach emptying), severe GERD (acid reflux) or history of a gastric bypass surgery, then all drinking must stop at midnight.

PLEASE NOTE: It's extremely important to follow the above instructions. If you don't follow the instructions, your surgery may be delayed or canceled.

For PREP questions or fasting guidelines, please call the PREP charge nurse at 443-481-3920.

Pre-Operative Notes:

What to expect

Entering the OR

Once your care team goes through the necessary steps, your operating room (OR) nurse and anesthesiologist take you to the operating room. You'll notice a lot of activity when entering the OR—it is very bright and chilly. Since we understand you may feel quite anxious, your anesthesiologist gives you medication to help you relax.

Your (OR) team may include:

- Anesthesia technologist
- Anesthesiologist
- OR nurse
- Perfusionist
- Physician's assistant
- Scrub nurse
- Surgeon
- Surgical advanced practice practitioner
- Surgical technologist

Final preparations

Once you're under anesthesia, your OR nurse inserts a urinary catheter to drain your bladder during surgery and ensure you're receiving adequate fluids. The pre-operative nurse performs final skin preparations, which may include hair clipping and the application of surgical skin preparation solutions.

Waking up

Once your surgery is completed, you'll wake up in the Post-Anesthesia Care Unit or Intensive Care Unit. Your cardiac care team will closely manage your care. Upon waking you'll likely notice:

- An incision at the center of your chest, which will be covered with dressings as well as chest tubes used to drain the fluid from your chest and temporary pacemaker wires.
- Additional dressings on your legs or arms.
- Several IVs in your arms, groin or neck.
- A breathing tube that the team will work on removing as soon as it is safe.

All IVs, tubes and lines are removed as soon as it's safe to do so.

Heart surgery and hospital stay: Glossary of common terms

Anesthesiologist: The doctor responsible for providing anesthesia during your procedure while monitoring your vital signs and administering the medications to keep you asleep for your surgery

CABG (coronary artery bypass graft): Open heart surgery using a vein graft to bypass the damaged artery to bring blood and oxygen to the heart muscle

Central Line and Arterial Line: Inserted during surgery to administer IV medications and monitor blood and heart pressure

Chest Tubes: Inserted in surgery to remove excess fluid from your chest cavity

Consent Forms: A form with the procedure, laterality (if applicable), date, time, your name, date of birth and other pertinent information that you sign to give the surgeon and anesthesiologist permission to perform the procedure

Epicardial Pacing Wires: Wires attached to the heart to help improve a slow heart rate after surgery

Foley Catheter: A drainage tube placed in your bladder to drain your urine

Heart-Lung Machine: A machine that temporarily takes over the function of the heart and lungs during surgery

Intra-aortic Balloon Pump: Circulatory assist device commonly used in heart surgery to increase the supply of oxygen and blood flow to your heart when your heart is weak

TEE (Transesophageal Echocardiogram): An ultrasound probe that is put into the mouth and through the esophagus to perform an echocardiogram

Valve Replacement or Repair: Replacement or repair of a diseased valve with a prosthetic valve or surgical repair

Ventilator: A machine that provides breathing assistance by sending extra oxygenated air into and removing carbon dioxide from the lungs

Vital Signs: Blood pressure, temperature, pulse and respiratory rate are measured to make sure you are stable

Warming Device: Warming machine that blows warm air into a blanket used to keep your temperature stable

3 The road to recovery

Your post-op journey begins in the Post-Anesthesia Care Unit (PACU) or Intensive Care Unit (ICU) as you wake up from anesthesia. Many activities and facets of your health are monitored to ensure you have all the support you need to get well.

Cardiac surgery care pathway

	Goals	Activities	Eating	Medication	Learning	
Day of	We remove your breathing tube within the first 6 hours after your arrival to the ICU.	Sit up in bed, dangle legs, and sit up in chair with help. Begin using your incentive spirometer.	You'll not be allowed to drink anything until you pass a swallowing test. Ice chips when you are awake!	We'll provide medicine to control your pain. You may get a variety of intravenous medications to help your heart recover from the operation. Most medications will be by IV. You may get insulin to keep your blood sugar regulated.	You'll receive education about your plan of care and what you should expect from now until you leave the hospital.	**Day of**
1 day after	Some of your surgical drains are taken out. Cough and deep breathe to clear your lungs and get more oxygen.	Walk 2 times a day. Stretch your arms and legs and do ankle pumps.	Start drinking clear liquids.	We'll give you medicine to control your pain and allow you to increase your activity level. You may begin some oral medications and may be on medicine to remove excess fluids (diuretics). You may get insulin to keep your blood sugar regulated.	This is a good day for you to ask questions about what to expect when you go home. You will be introduced to the Cardiac Surgery binder.	**1 day after**
2 days after	Cough and deep breathe to clear your lungs and get more oxygen. Use the Incentive Spirometer.	Walk 3 times a day. Spend as much time in your chair as you can, including for all meals. Shower/clean incisions.	Start to eat solid food. You need to eat to build strength and help your incisions heal. Drink health shakes between meals.	We'll give you medicine to control your pain, to remove fluids given during surgery, and to help you have a bowel movement. You will resume some of your usual hear medications and some new ones. You may need insulin to keep your blood sugar controlled.	Meet with care manager. You will learn about your medicines. What do you need to recover, including home equipment? Learn your activity restrictions at home.	**2 days after**
3 days after	Cough and deep breathe to clear your lungs and get more oxygen. Use the Incentive Spirometer. We may remove your drains.	Walk 3 times a day. Spend as much time in your chair as you can, including for all meals. Shower/clean incisions.	A healthy diet is still a major part of your road to recovery. Small frequent meals may be easier.	We'll give you medicines to control your pain, to help remove fluids given during surgery, and to help you have a bowel movement. You may receive medicine to regulate your heart rate or rhythm. You may need insulin to keep your blood sugar controlled.	Write questions/concerns down. We'll provide you the opportunity to discuss them with your care team. Review your medicine list. What do you need to recover, including home equipment? Learn your activity restrictions at home.	**3 days after**
4 days after	Have your pacer wires removed. Have any remaining chest drains removed.	Walk 3 times a day. Spend as much time in your chair as you can, including for all meals. Shower/clean incisions.	A healthy diet is still a major part of your road to recovery.	We'll give you medicines to control your pain, to help remove fluids given during surgery, and to help you have a bowel movement. You may receive medicine to regulate your heart rate or rhythm. You may need insulin to keep your blood sugar controlled.	You and your family will be reminded of planned discharge date and time. We'll review your home medicines. You'll learn about recovery, equipment needs and home activity restrictions.	**4 days after**
5 days after	**LEAVE HVU 11 AM:** You will receive written discharge instructions containing your final medicine list. You may have your prescriptions filled by the bedside dispense service.					

Your post-op journey

Immediately post-op

After surgery, you'll stay in the Post-Anesthesia Care Unit (PACU) or Intensive Care Unit (ICU) as you wake up from anesthesia. Initially you will have a breathing tube, this will be removed when it is safe. Your oxygen and pulmonary treatments begin shortly after you wake up, including:

- Incentive spirometer (IS) treatments every hour to exercise your lungs and prevent pneumonia
- Pulmonary exercises that include holding your heart pillow against your chest while coughing and deep breathing

A respiratory therapist visits you to monitor your progress and help decrease your oxygen as tolerated.

Many other activities and facets of your health are monitored to ensure you have all the support you need to get well, including:

Activity: Our physical therapy and occupational therapy team see you throughout your stay to assist you in regaining your strength and independence, and to help with discharge planning. You'll be up in the chair for all meals and start walking with assistance on the unit after surgery. Track your activity
when you are up to it.

Diet: Protein is important for wound healing and calories give you energy to move and heal. You'll start on a clear liquid diet and advance to solid food when your team thinks you're ready. You may have a decreased appetite, but will get some clear fluids, broths and nutrition supplements, if needed.

IV medications: Your nurses and surgical team will manage your medications to help you recover safely.

Incisions, drains and wires: We may remove your urinary catheter after surgery. Your team monitors what you drink and your urine output very closely. Your doctor also evaluates your drainage from your chest tubes.

Pain management: It's important that your pain be tolerable so you can participate in your breathing and walking therapies. Talk with your nurse when you need pain medication, before you get too uncomfortable. Taking medication at regular intervals is often the best method.

Blood tests and glucose monitoring: Your team will monitor your blood work and glucose levels very closely. You will likely be treated with insulin, even if you are not diabetic.

Teaching and discharge planning: A care manager visits to help you and your family plan for your care after discharge.

Post-op days 2-4

You'll continue your recovery in the Heart and Vascular Unit (HVU). Here, you'll continue oxygen and pulmonary treatments and your nurse begins to wean you off the oxygen therapy. You can also expect these changes to your care:

Activity: We'll keep you moving to help you heal, recover and build your strength and stamina. You'll be asked to:

- Limit napping so you can sleep at night and resume a normal wake/sleep pattern.
- Practice dressing yourself with a pair of pajama bottoms or shorts.
- Sit in a chair for all meals.
- Walk three-to-four times a day around the unit with your therapist and members of the nursing team (and track your activity).

Diet: Your family may bring in food from home to stimulate your appetite. We'll advance your diet and encourage you to increase your intake. We may add supplements like Ensure or Boost to provide nutrition and promote wound healing. Begin using the last section in this booklet to plan a heart healthy diet at home.

Incisions, drains and wires: Your physician assesses the need for chest tubes and pacing wires and removes them when they are no longer necessary. We'll remove your dressing(s) so your incisions will be open to air. If you're ready, your nurse or therapist helps you wash your incisions, bathe at the sink or shower.

Pain management: Tell your nurse when you're having pain. Managing pain effectively allows you to move around the unit, use your incentive spirometer effectively and participate in activities that promote your healing and lead to a faster recovery.

Teaching and discharge planning: A case manager assists you and your family in planning for your care after discharge. Physical therapy gives recommendations on the safest discharge plan for you. They will also arrange for equipment you might need to make your recovery easier. If possible, some of this equipment will be delivered to your room before discharge.

Your post-op journey

Day of discharge and after you return home

You may be cleared to go directly home when discharged. Or, we may discharge you to a rehab setting. There, more assistance and therapies can help you regain the strength and stamina you need to live independently. Everyone recovers at different rates, but most people need about six-to-eight weeks of healing before they can return to a normal routine. Each day you'll grow stronger, but you'll experience both good and challenging days. Take things slowly and rest when you get tired. Your recovery activities will likely include:

Additional changes to your diet: A heart-healthy diet that includes foods low in sodium, cholesterol and saturated fats (see food chart on p.52) supports your recovery. So does eating smaller, more frequent meals. If you have a poor appetite, consider supplemental drinks like Ensure, Boost or Glucerna, which is lower in sugar. It's also important to keep your blood sugars within a normal range of 80-150. Elevated blood sugars delay wound healing and can increase your risk of infection. You may continue on insulin therapy after surgery.

Continued oxygen and pulmonary treatments: You'll likely be off oxygen when it's time for your discharge. Continue your pulmonary exercises, including deep breathing and coughing exercises with pillow support, for two-to-four weeks. This helps restore your lung health and supports your recovery.

Follow-up care: You'll visit your surgeon for a follow-up appointment about two weeks after surgery, and visit your cardiologist about one month after surgery. You'll need continued support from your cardiac care team. You'll also be referred to outpatient cardiac rehab to assist in your recovery.

Gradually increasing physical activity: Follow the activity guidelines in this guide, gradually increase your activity. Continue to track it on the forms in this book. Walk three-to-four times per day and avoid heavy lifting. Your surgeon will determine a safe weight for you, usually five to ten pounds. Do not push or pull anything. Between your activities, be sure to rest with your legs elevated at heart level. Also, avoid sitting for long periods. Get up at least once an hour and walk around. Climbing steps is okay if you're up to it. Remember to go slow and rest intermittently as you climb, always use the handrail to maintain your balance.

More incision care: Wash your hands often when tending to your incisions. Most times ten incisions are closed with dissolvable sutures and sealed with dermabond glue. If steri-strips (surgical tape) are in place, you may remove them after a week if they haven't fallen off on their own. If your incision or chest drain sites are still draining, you may cover them with plain gauze and tape. Change them at least daily unless they become saturated and you need to change them more often. Once it stops leaking, leave the incision open to air.

Check your incisions daily with a mirror. Shower daily with mild soap like Ivory or Dial, and avoid using lotions or powders near your incisions. A bump at the top of the incision is normal and resolves within a few weeks to a month.

Let your surgical team know if you experience:

- Drainage (especially cloudy or foul-smelling drainage)
- Increased swelling
- Redness greater than a half inch out from your incision
- Tenderness or bruising around your incision
- Warmth over any part of your incision

Also, contact your doctor if any part of your incision comes apart or opens up.

Ongoing pain management: Expect to have some pain. We'll work with you before discharge to keep pain tolerable. We tailor your pain management plan to your needs and health. Even the type of pain medicine you're prescribed is based on personal factors, like allergies, the type and severity of your pain and your sensitivity to pain medication. Let us know about pain medicines that have worked well for you and those that didn't. We want to ensure medicine helps you feel better, not worse.

We'll likely prescribe pain medications "as needed." Taking pain medication at regular intervals, at least in the beginning, prevents the pain from getting intense. Oral pain medications take time to work and usually last from three-to-four hours.

Over-the-counter (OTC) medicines, like acetaminophen, often lessen your pain with fewer side effects. Some other OTC medications may have unwanted side effects after cardiac surgery. **Check with your surgeon before taking other OTC medication!**

Prescription pain medications can cause constipation. If you don't have regular bowel movements, contact your doctor. Drink plenty of fluids, increase fiber in your diet and take stool softeners as prescribed.

Other therapies can help with pain management, like meditation, listening to music, aromatherapy and massage. Help control your pain by getting plenty of sleep, maintaining a healthy diet and limiting the time you spend visiting with others. Limit people who stop by and how much time you talk on the phone until you feel stronger.

Slowly resume your activities of daily life: Driving, showering, cooking, cleaning and other everyday activities can be too much for a recovering patient. These regular activities start with the support of your caregiver. Slowly work your way back to caring for yourself without support, but only with the clearance of your physician and therapists. Keep in mind that you cannot safely drive a car for eight weeks and should follow your doctors guidelines regarding reiding in a vehicle. You should also use your heart pillow for cushion between your body and the seat belt.

After the hospital, your post-op journey

When to call your doctor

We're here for you. To answer your questions. To ease your fears. To rally around you on your way to a stronger heart and body. Even when you go home—from the hospital, an appointment or therapy session—know we're always just a phone call away. We have a nurse or nurse practitioner standing by during office hours, and a surgeon is always on call at night and over the weekend.

Please call your surgical team if you experience any of the following:

- Extreme fatigue
- Elevated temperature above 101 degrees F (38 degrees C), twice within 24 hours
- Pain in your calf that becomes worse with movement a few weeks after surgery
- Persistent bleeding or oozing from your incisions
- Sharp pain when you take a breath
- Skin rash
- Swelling in your ankles or leg pain
- Weight gain of more than two pounds within 24 hours
- Urinary tract infection: frequency, burning, or blood with urination

There are times when patients need to be readmitted to the hospital. We prefer you to come here to continue your care. But if you do visit another hospital, please let your care team here know. We can work with other providers to ensure everyone is up to date on the care you've received so far.

You should call 911 or go to the emergency room, if you're experiencing:

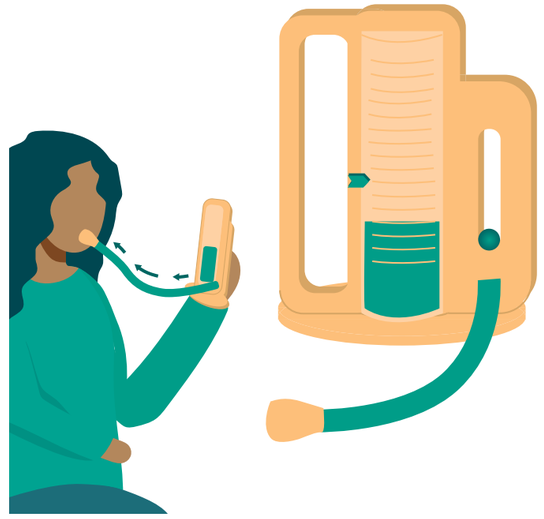
- Bright red stools
- Bright red blood when you cough
- Fainting spells
- Heart rate is greater than 150 beats per minute with shortness of breath
- Severe abdominal pain
- Severe chest pain (angina) similar to before surgery
- Shortness of breath that isn't relieved with rest
- Sudden numbness or weakness in arms or legs
- Sudden severe headache

If you go to the emergency department, let them know you recently had heart surgery and bring your heart pillow.

Using your incentive spirometry (IS) tool

Your care team prescribes this breathing exercise tool to show how well you're expanding your lungs. It helps you to take long, deep breaths. Because it makes you breathe deeply, it improves your ability to clear congestion from your lungs and keep them open after surgery, preventing complications like pneumonia. Exercises using this tool are usually recommended after:

- Any long period of time where you cannot move or stay active due to illness.
- Any other surgery, especially if you've smoked or had lung problems.
- Surgery of the chest.



1. Sit up as straight as possible, preferably in a chair or on the edge of bed.
2. Breathe out normally.
3. Place the mouthpiece in your mouth.
4. Seal your lips around the mouthpiece and suck in like a straw until you reach your marked goal. Make sure the indicator stays in the range of the two arrows to show that you're breathing slowly enough.
5. After you inhale, hold your breath for three to five seconds and then exhale normally.
6. Repeat 10 times each hour while you are awake.

After you finish, it's important to follow this with a few deep breaths and coughs, holding your pillow to splint your chest incision.

Take your time. Be sure to breathe in and out slowly. Doing it too quickly can make you feel lightheaded. If you're in pain, let your nurse know so she can give you pain medication or alternative therapies to help minimize the discomfort.

Post-surgery daily goals

Day of surgery:		Surgical procedure:			
Goals	**Post-op Day 1**	**Post-op Day 2**	**Post-op Day 3**	**Post-op Day 4**	**Post-op Day 5**
Quality of sleep					
Weight					
Blood pressure					
Heart rate					
Pain level (1-10)					
Diet					
Oxygen level					
Incentive Spriometry					
Physical Therapy					
Occupation Therapy					
Walking					
Hygiene/ Incision care					

Education:			
Wound care:	Activity:	Nutrition:	Medications:

Review progress with support person and care manager, anticipate discharge needs:

Questions for my health care team:

Post-discharge monitoring

Quality of sleep							
Weight							
Blood pressure							
Heart rate							
Pain level							
Pain medication in use							
Any other symptoms?							
Incision care							
Breakfast							
Activity							
Lunch							
Activity							
Dinner							
Activity							
Elevate legs between activity							

Concerns for my health care team:

Understanding your sternum

The sternum is the "breastbone"—the central bone over your chest that connects to your ribs to create your rib cage—protecting the heart and lungs from injury.

We cut through the sternum during surgery to access your heart. Although it's repaired during the surgery, consider it to be a broken bone until your surgeon tells you it has healed.

Sternal precautions and your recovery

It's important to take precautions and make temporary adjustments in your movements to allow your breastbone to heal from surgery. This is a critical part of your recovery.

Beginning the day of surgery, your nursing staff and rehab team instructs you in proper ways to move in and out of bed to protect your healing sternum.

During your follow-up appointments, your surgeon advises you when you can resume unrestricted activities based on how the bone is healing.

Always contact your surgeon if you notice drainage or a change in your surgical wound.

The Do's

- Get out of bed
- Walk often
- Stretch your neck
- Take deep breaths
- Hug and splint your chest with a pillow when you cough or sneeze

The Dont's

- Caution outstretched arm movements
- Limit strenuous pushing or pulling
- Avoid holding your breath when you move
- Prevent sitting for extended periods; stand or take a short walk every waking hour

Post-Operative Notes:

Home medication list

Name of Medicine	Dose	Time		Purpose of medication

Medications to keep you well

Medications are an important part of your ongoing treatment. They help prevent infection, strengthen your heart and regain your strength. During your hospital stay, we may start you on several different heart medications. Before leaving the hospital, your care team makes sure you're feeling confident about any medications you should continue to take at home. Knowing the names, dose, purpose and side effects of your medications is very important.

Here's a quick list of what medications you may be asked to take regularly. Each of these medications is important to your recovery and preventing you from coming back to the hospital. Make sure you contact your doctor if you're not able to fill or take your medication for any reason.

ACE inhibitors

- Examples: Lisinopril (Zestril/Prinivil); Enalapril (Vasotec); Ramipril (Altace)
- Purpose: Control blood pressure, treat heart failure
- Possible side effects: Dizziness, dry cough,swollen lips or tongue, kidney damage

Antiarrhythmics

- Examples: Amiodarone (Pacerone), Sotalol (Betapace)
- Purpose: Control and prevent irregular heartbeat
- Possible side effects: Dizziness, slow heart rate, thyroid or lung problems (rare)

Antibiotics

- Examples: Cefazolin (Kefzol/Ancef), Vancomycin
- Purpose: Treat or prevent infection;
- Possible side effects: Allergic reaction, diarrhea

Angiotensin receptor blockers (ARB)

- Examples: Losartan (Cozaar); Olmesartan (Benicar); Irbesartan (Avapro); Valsartan (Diovan)
- Purpose: Lower blood pressure, treat heart failure
- Possible side effects: Dizziness, kidney damage

Antiplatelet agents

- Examples: Aspirin, Plavix
- Purpose: Prevent blood clots
- Possible side effects: Brusing or bleeding

Beta blockers

- Examples: Metoprolol (Lopressor or Toprol XL); Atenolol (Tenormin); Carvedilol (Coreg)
- Purpose: Lower heart rate, optimize blood pressure, and prevent irregular heart beats
- Possible side effects: Fatigue, dizziness

Diuretics

- Examples: Furosemide (Lasix)
- Purpose: Remove excess fluid, lower blood pressure, improve shortness of breath
- Possible side effects: Muscle cramps, low potassium level

Nitrates

- Examples: Nitroglycerin; Isosorbide mononitrate (Imdur)
- Purpose: Improve chest pain, lower blood pressure, improve shortness of breath
- Possible side effects: Headache, dizziness

Statins

- Examples: Pravastatin (Pravachol); Simvastatin (Zocor); Rosuvastatin (Crestor); Atorvastatin (Lipitor)
- Purpose: Reduce cholesterol levels
- Possible side effects: Muscle pain, elevated liver enzymes

Getting you back to living

Activities of Daily Living (ADLs) are activities you do every day, such as getting dressed, showering and cooking. These daily tasks may be more difficult to accomplish after your surgery. Returning to your ADLs help you gain strength, feel more accomplished and improve your wellbeing. Here are some tips for basic ADLs, but do not forget to ask for help if you need it.

Toileting

- You should not reach around your back to clean yourself after toileting because of your sternal precautions. You can still be independent with this ADL task by reaching between your legs for cleaning or use toileting aides.

Showering

- Supervision in the shower is recommended for the first couple of times.
- Shower seats are available, if needed.
- Keep all items close to you for showering.
- Do not scrub your incision; let water run over the incision.
- When washing your hair, bring both hands up together.
- A terry cloth robe after your shower helps reduce the energy you spend drying.

Sleeping

- It's very important to keep sleeping patterns consistent for optimal recovery. You may find it most comfortable to sleep in a recliner or with a wedge in bed. You can purchase wedges at any online or home goods stores. (Amazon, Bed Bath and Beyond, etc.)

Sexual activity

- Check in with your surgeon before you resume sexual activity.

Establishing a routine

- This can help regulate sleep patterns and emotions. For example, get up, eat breakfast, and get dressed whether or not you are going anywhere. Plan time in your day for taking walks and rest breaks.

Conserving energy

- You'll tire easily after surgery. Your tolerance for activity gets better every week. Taking rest breaks and pacing yourself can help you accomplish more things in a day. Try not to do everything at once. Plan tasks that take more energy at a time when you know you feel your best. Place frequently used items in easy-to-reach places to avoid stress on your sternum.

Emotions

- You may notice your emotions are different after surgery. Feeling anxious, frustrated or depressed are common emotions to feel after heart surgery. It's okay to have all of these emotions. These feelings will return to your normal over time. If you find yourself depressed, seek help. Professionals can assist you.
- Mindfulness is a form of mental exercise that has been found effective in reducing anxiety, managing pain and improving sleep. Although the primary goal of mindfulness is not relaxation, people report feeling calm, relaxed and refreshed after practicing.

What is mindfulness?

Mindfulness is living in the present moment without judging it. Paying attention to the experience of the current moment and not holding onto it, but letting it go. It's the ability to "be present" anywhere, anytime, while doing almost anything.

Here's a mindfulness exercise you can try:

Sit down. Try for the best posture you can obtain right now. Close your eyes and focus on your breathing. Focus on the breath in and the breath out. As you do this, you should notice your body start to relax. Repeat for several minutes. You are being mindful!

Daily exercises

Getting dressed

You should get dressed while you're seated to conserve your energy and prevent falls. Clothing should be loose so that it's easier to put on.

Upper body dressing

- V-neck shirts/nightgowns or button-down shirts are easier to put on.
- For women, wearing a sports bra, surgical bra or tank top with a built-in bra may be most comfortable. Buy one-to-two sizes larger as your chest may have swelling.

Place your arms in the sleeves first (if you are putting on a button-down shirt, button the shirt except the first few buttons).

Tuck chin to chest and place the shirt over your head.

Pull the rest of the shirt down one slowly, one arm at a time.

Lower body dressing

- You're allowed to place your foot or ankle across the other knee.
- Remember to wear shoes with good traction.

Place your foot or ankle across the other knee.

If this method is too difficult, you can use adaptive equipment, such as a reacher, sock aid, or long-handled shoehorn.

Getting in and out of bed

- To get out of bed safely, you must log roll to get out of bed.
- If you need assistance, have another person support your shoulders.
- Do not let them pull on your arms.

When lying in bed, cross your arms over your chest and bend your knees.

Roll onto your side. Then, allow your legs to come off the bed.

The arm on the bed should push yourself up while utilizing your abdominal muscles. Sit in place for a few minutes before standing.

Stairs and steps

You're not restricted from doing stairs; however, we ask that you go up or down one step at a time. You may use your arms on railings for balance but don't push or pull on the railings with your arms. Your physical therapist teaches you how to safely walk up and down the stairs if needed for a safe discharge plan.

Walking

Walk several times per day to encourage strength, endurance and confidence in your abilities. It's also important to change position, or weight shift, often when seated or laying down for pressure relief. While you are hospitalized, your physical therapist, occupational therapist and other members of your care team accompany you on several walks during the day. You may need to use a walker for a period of time. We expect you to continue walking several times during the day when you're at home.

Daily exercises

Help with sitting

When sitting and standing, it is acceptable to use your fingertips for balance at the edge of the chair as long as your elbows are in front of your hips and you do not push through your arms.

Standing up from a chair without using your arms

Scoot your bottom out towards the edge of the chair while hugging a pillow to your chest.

Lean slightly forward and use the strength in your legs to stand up.

Sitting down without using your arms

While standing, back up to the chair. Feel the chair on the backs of your legs, while hugging a pillow to your chest.

Sit down using the strength of your legs. Scoot your bottom back into the chair by walking your bottom back into the chair.

Use your fingertips for balance at the edge of the chair with your elbows in front of your hips. Do not push through your arms, refer to the picture shown here.

Arm exercises

The following exercises shouldn't cause you pain. You may feel some tightness when lifting your arms above your shoulders. This is considered normal, but do not push past this point.

Hand pumps

Open and close your hands 15 times every hour. This helps with swelling and circulation.

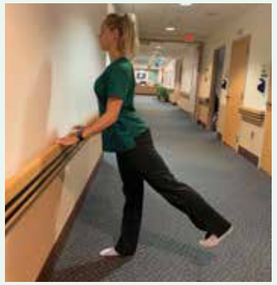
Activity Notes:

Leg exercises

The following exercises shouldn't cause you pain. You may feel some tightness. This is considered normal, but do not push past this point.

Hip extension

- Stand with good posture holding onto a countertop, sink or stable chair.
- Repeat on both legs 10 times, two-to-three times a day.



Keep your leg straight and your upper body still. Move your leg backwards. Do not bend your knee. Return slowly to the starting position.

Hip abduction

- Stand with good posture holding onto a countertop, sink or stable chair.
- Repeat on both legs 10 times, two-to-three times a day.

Keep your leg straight and toes pointed straight ahead. Move your leg out to the side. Slowly return your leg to the starting position.

Sit to stand

- Repeat five times, three times a day.

Sit with good posture and feet flat on the floor. With minimal or no use of your hands, stand up from the chair. Pause. Slowly lower yourself back to the sitting position.

Ankle pumps

- A great time to complete these is during commercial breaks while watching TV.

Pump your ankles up and down 10 times each for a half hour for circulation.

Heel raises

- Stand with good posture holding onto a countertop, sink or stable chair.
- Repeat 10 times, two-to-three times a day.

Slowly raise your heels upward until you are standing on the ball of your foot.

Slowly return to the starting position of both feet flat on the floor.

Lung exercises

After surgery, it may be difficult for you to take deep breaths. Using an incentive spirometer (IS) can lower your risk of pneumonia and encourage you to take slow, deep breaths.

Breathing

- Sit upright in a chair and hold the IS at eye level.
- Hug your pillow over your chest with one hand and hold the IS in the other hand.
- Repeat 10 times every hour that you are awake.

Close your lips tightly around the mouthpiece and slowly breathe out. Breathe in slowly through your mouth as deeply as you can. Keep the blue indicator between the two arrows. Try to get the blue piston inside the large column to rise as high as possible.

Coughing

Coughing after surgery is healthy for your lungs. Remember to provide support to your incision by hugging a pillow or blanket over your chest.

Walking for a strong heart

Walking after open heart surgery is an important part of a meaningful recovery. You'll need to walk several times per day to encourage strength, endurance and confidence in your abilities. An organized approach is key to success.

When walking keep these things in mind:

- Start with two 5-10 minute walks per day.
- Increase the number of walks daily every week until you get to three or four walks per day.
- Increase the time spent walking by one-to-two minutes each time you walk.
- Follow your approved plan for exercise from your physical therapist or cardiac rehab program.

Make your goals to walk reasonable:

- Week one goal: three walks per day for 15 minutes.
- Week four goal: three walks per day for 30 minutes.
- Walk at a comfortable pace. Don't overdo it. Remember whatever distance you walk out you have to walk back.
- Try to walk on level ground and don't overexert yourself.
- Walk in weather that is comfortable and don't walk in extreme weather, either too hot or too cold.
- Never walk alone, if possible, and don't walk with your pets.
- If there are stairs, do one stair at a time and don't pull yourself up the stairs with your arms. (See instructions for stairs on p.39.)

Don't continue walking if you have:

- Chest pain.
- Shortness of breath
- Headache
- Palpitations
- Dizziness or light-headedness
- Muscle cramps or pain
- Or, if you feel inappropriately ill or tired

Cardiac rehab

Cardiac rehabilitation can improve your health and quality of life through exercises to guide you through cardiopulmonary conditions. Our program is certified through the American Association of Cardiovascular and Pulmonary Rehabilitation.

Here, our team focuses on your cardiopulmonary fitness, along with nutritional and behavioral counseling. We support and encourage your every step to help you reach your goals. We tailor your program to your needs, and we'll start with a comprehensive evaluation to make sure we're all on the same page for your goals.

Your cardiac rehab team includes registered nurses, exercise physiologists and exercise specialists. Each is Advanced Cardiac Life Support (ACLS)-certified. Two medical directors oversee your prescribed exercise program, along with your personal physician. You'll also have access to our registered dietitian and monthly heart-healthy nutrition classes. And, if you need it, we can refer you to our wellness educational programs.

Getting started with cardiac rehab

You'll start cardiac rehab while you're still in the hospital and will continue it when you return home. Rehab has three phases to make sure you're getting the care, support and encouragement you need throughout your recovery:

- Phase I: Exercise or activity during your hospitalization with a current heart diagnosis
- Phase II: Supervised monitored exercise in an outpatient setting
- Phase III: Minimally supervised exercise in an outpatient setting

Who needs cardiac rehab?

You may need cardiac rehab if you're living with or recovering from:

- Angina
- Congestive heart failure
- Heart attack
- Heart bypass surgery
- Heart stent or angioplasty
- Heart transplant
- Heart valve surgery (repair or replacement)

Where will my cardiac rehab take place?

We're located in the Belcher Pavilion at 2000 Medical Parkway, Suite 404. Free parking is available in Garage E.

So I need a referral?

You need a referral for the cardiac rehab program. We work closely with your physician to get the referral and documentation you need to start the program.

How will I pay for my cardiac rehab?

Cardiac rehab is covered all or partly by most insurance companies. Medicare covers 80 percent for the diagnoses listed under "Who needs cardiac rehab?".

How do I schedule my cardiac rehab appointments?

You can contact our cardiac rehab team at 443-481-1929 to schedule your appointments.

4 Keeping you healthy

We know you're eager to get back to your daily life. We're here to help you recover from surgery and rebuild your strength so you can safely resume your usual activities. Before doing anything, make sure you have clearance from your care team. You can use the following as general guidelines on what you can expect as you heal.

Helping you live a heart-healthy life

Your first few weeks at home

Your first six weeks

Keep in mind that any activities that involve lifting, pushing or pulling should have a 10-pound weight limit until six weeks after surgery. Safe activities for your first six weeks include:

- Attending sports events, church, movies and restaurants
- Climbing stairs
- Cooking meals
- Light gardening (potting plants, trimming flowers)
- Light housekeeping (dusting, setting the table, washing dishes, folding clothes)
- Needlework
- Reading
- Passenger in car
- Playing cards or games
- Shopping
- Showering

Eight weeks post-surgery

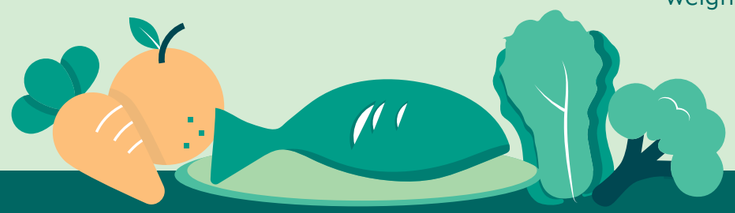
Typically, at about eight weeks post-surgery, you can return to:

- Business or recreational travel
- Driving
- Fishing and boating
- Light aerobics (no weights)
- Moderate gardening (mowing lawn, raking leaves)
- Moderate housework (vacuuming, sweeping, laundry, ironing)
- Walking your dog on a leash
- Work, as long as your job doesn't require lifting (must be approved by your surgeon)

Three months post-surgery

Typically, at about three months after surgery, you can return to:

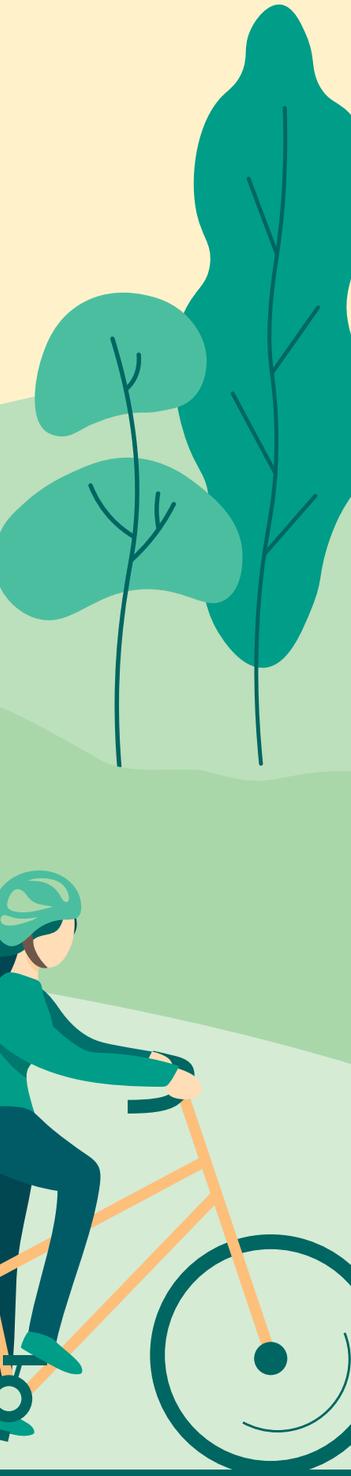
- Heavy gardening (shoveling snow, digging)
- Heavy housework (scrubbing floors)
- Motorcycle riding
- Sports (football, soccer, softball, baseball, tennis, bowling, golfing, swimming, water skiing, skydiving, hunting, jogging, bicycling, weightlifting and push-ups)



Heart-healthy nutrition therapy

A heart-healthy diet can help reduce unhealthy blood cholesterol levels, manage high blood pressure and lower your risk for heart disease. Here are a few tips to help you follow a heart-healthy diet:

- Choose heart-healthy unsaturated fats and limit saturated fats, trans fats and cholesterol intake
- Eat a balanced diet with whole grains, fruits, vegetables and lean protein sources
- Eat more plant-based or vegetarian meals using beans and soy foods for protein
- Include whole, unprocessed foods to limit the amount of sodium (salt) you eat
- Limit refined carbohydrates, especially sugar, sweets and sugar-sweetened beverages
- Use alcohol only in moderation: One serving per day for women and two servings per day for men; one serving is equivalent to 12 ounces of beer, 5 ounces of wine or 1.5 ounces of distilled spirits



Tips for choosing heart-healthy fats and carbohydrates

Instead of	Try
Whole milk, cheese, yogurt and ice cream	1%, ½% or skim milk, low-fat cheese, non-fat yogurt and low-fat ice cream
Fatty, marbled beef and pork	Lean beef, pork or venison
Poultry with skin	Poultry without skin, fish and seafood
Butter and stick margarine	Reduced fat, whipped or liquid spreads
Chips, crackers and snack foods	Raw or unsalted nuts and seeds or nut butters, hummus with vegetables, avocado on toast
Coconut oil and palm oil	Liquid vegetable oils: corn, canola, olive, soybean and safflower

Choose lean protein and low-fat dairy foods to reduce your saturated fat intake

Avoid saturated fat because of its connection to health risks. It's usually found in animal-based protein. Saturated fat is the biggest contributor to raised low-density lipoprotein (LDL) cholesterol levels in your diet. And, research shows that limiting saturated fat lowers unhealthy cholesterol levels. Eat no more than seven percent of your total calories each day from saturated fat. Ask your dietitian to help you determine how much saturated fat is right for you.

There are many foods that don't contain large amounts of saturated fats. Swapping these foods to replace foods high in saturated fats helps you limit the saturated fat you eat and improve your cholesterol levels. Also, try eating more plant-based or vegetarian meals.

Avoid trans fats

Trans fats increase levels of LDL-cholesterol. Hydrogenated fat in processed foods is the main source of trans fats in foods. You find trans fats in items like stick margarine, shortening, processed sweets, baked goods, some fried foods and packaged foods made with hydrogenated oils. Avoid foods with "partially hydrogenated oil" on the ingredient list, such as cookies, pastries, baked goods, biscuits, crackers, microwave popcorn and frozen dinners.

Choose foods with heart-healthy fats

Polyunsaturated and monounsaturated fat are unsaturated fats. They may help lower your blood cholesterol level when used in place of saturated fat in your diet. Research shows that substituting saturated fats with unsaturated fats helps cholesterol levels. Ask your Cardiologist about adding a dietary supplement with plant sterols and stanols to help lower your cholesterol level.

Limit the amount of cholesterol you eat to less than 200 milligrams per day

Cholesterol is a substance carried through the bloodstream via lipoproteins. Lipoproteins are known as "transporters" of fat. Some body functions need cholesterol to work properly, but too much cholesterol in the bloodstream can damage arteries and build up blood vessel linings. This can lead to heart attack and stroke.

People respond differently to eating cholesterol. And, there's no test available today that can figure out which people respond more, and which respond less, to dietary cholesterol. If you have a high intake of dietary cholesterol, you may experience different types of increase (none, small, moderate, large) in LDL-cholesterol levels.

Food sources of cholesterol include egg yolks and organ meats, such as liver and gizzards. Limit egg yolks to two-to-four per week. Avoid organ meats like liver and gizzards to control your cholesterol intake.

The importance of fiber in your diet

Fiber is a part of a plant that cannot be digested. It can reduce cholesterol and blood sugar levels.

There are two types of fiber; soluble and insoluble. Soluble fiber forms a gel-like substance that acts as a vacuum, engulfing cholesterol and blood sugar as it makes its way through the intestine. Good sources of soluble fiber are apples, mangoes, citrus fruits, carrots, peas, beans, oats and barley.

Insoluble fiber helps the body process waste. Good sources of insoluble fiber are nuts, vegetables, berries, beans and whole wheat flour. Increase your fiber intake to at least five-to-10 grams of fiber every few days. As you increase your fiber intake gradually, also increase the amount of water you drink. Be sure to ask your doctor if you should restrict your fluids.

Make it a habit to consume plant-based sources of fiber with every meal and snack.

Limit refined carbohydrates

There are three types of carbohydrates: starches, sugar and fiber. Some carbohydrates occur naturally in food, like the starches in rice or corn or the sugars in fruits and milk. Refined carbohydrates—foods with high amounts of simple sugars—can raise triglyceride levels. High triglyceride levels are associated with coronary heart disease. Some examples of refined carbohydrate foods are table sugar, sweets and beverages sweetened with added sugar.

Understanding nutrition

Using the Nutrition Facts label helps you make healthy food choices. Shop for foods that don't have a lot of salt, saturated fat or added sugar. Work with your doctor and RDN to understand your goals for calories, saturated fat and sodium. Then, you can use the Nutrition Facts label to help you choose foods that keep you on target.

Know the facts

Food labels carry a lot of misleading terms. Understand what they mean and always use the Nutrition Facts label to keep track of your daily saturated fat and sodium intake.

Sodium claims

- **Sodium free or salt free:** Less than five milligrams sodium
- **Very low sodium:** 35 milligrams of sodium or less
- **Low sodium:** 140 milligrams of sodium of less
- **Reduced sodium:** At least 25 percent less sodium
- **Light in sodium:** At least 50 percent less sodium
- **Salt Free:** Less than five milligrams sodium

Saturated fat claims

- **Saturated fat free:** Less than 0.5 grams of saturated fat and less than 0.5 grams trans fatty acids
- **Low in saturated fat:** One gram or less saturated fat and no more than 15 percent calories from saturated fat
- **Reduced saturated fat:** At least 25 percent less saturated fat and reduced by more than one gram of fat

Nutrition Facts

8 servings per container

Serving size **2/3 cup (55g)**

Amount per serving

Calories **230**

	% Daily Value*
Total Fat 8g	**10%**
Saturated Fat 1g	**5%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 160mg	**7%**
Total Carbohydrate 37g	**13%**
Dietary Fiber 4g	**14%**
Total Sugars 12g	
Includes 10g Added Sugars	**20%**
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Serving size: The calorie and nutrient information on the label are for one serving. The label also indicates how many total servings are in the container. If you eat more than one serving, you get more calories and nutrients. For example, on the label displayed, if you eat more than ⅔ of a cup of the food, you'll eat more than 230 calories.

Calories: Choose foods that help you get the nutrients you need without going over your daily calorie goal. Eating too many calories leads to weight gain.

% Daily value guide: The % Daily Value (DV) tells you the percentage of each nutrient in a single serving, in terms of the daily recommended amount. As a guide, if you want to consume less of a nutrient (such as saturated fat or sodium), choose foods with a lower percent DV—five percent or less. If you want to consume more of a nutrient (such as fiber), seek foods with a higher percent DV—20 percent or more.

Total Fat—saturated fat and trans fat: Choose foods with less than five grams of total fat per serving. For someone who needs to eat 2,000 calories per day, 50-75 grams per day is a good range. Try to pick foods with heart-healthy fats (monounsaturated and polyunsaturated fats).

Choose foods with less than two grams per serving of saturated fat and zero grams of trans fat. Saturated fat and trans fat are not heart healthy. A person who needs to eat 2,000 calories per day should eat no more than 11-15 grams of saturated fat in one day.

Read ingredients listed on the label. If a food has partially hydrogenated oils, then it has trans fat. If it has less than half a gram per serving, the label may still say trans fat-free.

Sodium: Look for foods that are low in sodium. Eat less than 2,300 milligrams sodium per day (or the limit set for you by your health care team).

Dietary fiber: Aim to get 25-30 grams of dietary fiber each day and choose several foods that have at least five grams of fiber per serving every day so you can meet your goal.

Sugars: Women should consume less than 25 grams of added sugars each day; men should consume less than 37.5 grams daily. Keep an eye out for these ingredients. They mean added sugar:

- Brown sugar
- Corn sweetener
- Corn syrup
- Fruit juice concentrates
- High-fructose corn syrup
- Honey
- Invert sugar
- Malt sugar
- Molasses
- Raw sugar
- Sugar
- Syrup

More heart-healthy lifestyle tips

Achieve and maintain a healthy weight

Your RDN or doctor can help you identify a healthy weight and set goals to reach and maintain that weight. You can lose weight by reducing your calorie intake and increasing your physical activity. Even a weight loss of just 10-15 pounds could reduce LDL-cholesterol by five milligrams per deciliter.

Participate in physical activity

Talk with your health care team to find out what types of physical activity are best for you. Set a plan to get about 30 minutes of exercise on most days.

Shop with your health in mind

- Convenience foods are typically high in sodium. These items include canned soups, pasta sauces, and prepackaged or frozen dinner entrees and side dishes. Read labels and choose carefully. Keep your sodium and saturated fat limits in mind as you shop.
- Instead of typical "snack" foods like pretzels, chips and crackers, have unsalted nuts, veggies with hummus or fruit with a low fat cheese stick.
- Shop for snacks that are free of trans fat. And remember, if the ingredients list includes partially hydrogenated oil, then the food has trans fat.
- Many desserts are high in added sugar and saturated fat and should be avoided. It's okay to shop for desserts once in a while if you choose wisely. Fresh fruit and nonfat or sugar-free Greek yogurt are good choices.

Know your numbers

Setting goals is a key factor in starting new healthy habits. The number below are what you should be working toward.

Weight	
Calories	
Fat (grams/day)	
Saturated fat	
Sodium	
Carbohydrates	
Fiber	
Protein	

Healthy choices from the food groups

Proteins

Recommended

- Cold cuts made with lean meat or soy protein
- Dried beans and peas
- Egg whites or egg substitute
- Fish
- Lean cuts of beef and pork (loin, leg, round or extra lean hamburger)
- Meat alternatives made with soy or textured vegetable protein
- Nuts and nut butters (unsalted)
- Skinless poultry
- Venison and other wild game

Avoid

- Bacon, sausage or hot dogs
- Cold cuts, such as salami or bologna, deli meats, cured meats, corned beef
- Fried or smoked meat, poultry and fish
- Higher-fat cuts of meats (ribs, T-bone steak, regular hamburger)
- Organ meats (liver, brains, gizzards, sweetbreads)
- Meat alternatives with high levels of sodium (>300 mg per serving) or saturated fat (>5 g per serving)
- Poultry with skin
- Salted legumes, nuts, seeds or nut/seed butters
- Whole eggs and egg yolks (more than 2-4 per week)

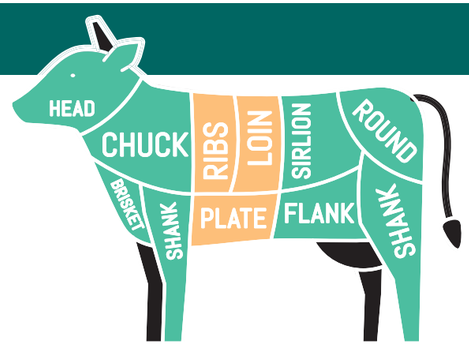
Shopping Tips

- Eat a wide variety of seafood. Fish and seafood can contain high levels of mercury. You should limit the amount of high mercury content fish and seafood you consume. Canned fish (such as tuna) can be high in sodium, choose low-sodium brands.
- Choose lean center cuts of pork and lamb.
- Replace animal protein with vegetable protein foods, like beans, lentils, tofu, nuts and seeds. Look for products low in saturated fat and sodium and high in fiber.
- Pick very lean cuts of beef and veal such as round steak, tenderloin and sirloin tips.
- When selecting chicken or other poultry, choose breast or white meat without the skin.

Go lean with protein

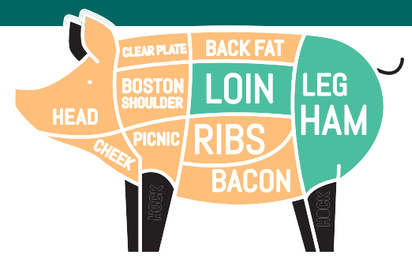
Beef

- Round steaks
- Roasts
- Top loin
- Top sirloin
- Chuck shoulder and arm
- Lean ground beef



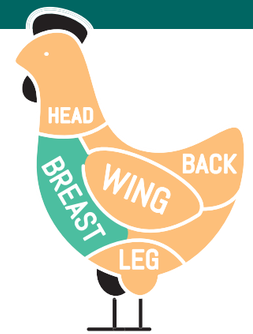
Pork

- Pork loin
- Tenderloin
- Center loin
- Ham



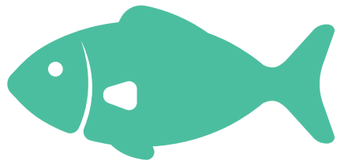
Poultry

- Skinless chicken breast
- Lean ground chicken meat
- Skinless turkey breast
- Lean ground turkey meat



Fish

- Cod
- Haddock
- Salmon
- Scallops
- Shrimp
- Clams
- Flounder
- Perch
- Tilapia
- Tuna, canned light in water



Healthy choices from the food groups

Grains

Recommended

- Brown rice, quinoa or wild rice
- Homemade bread with reduced-sodium baking soda
- Pasta, especially whole wheat or other whole grain types
- Whole grain breads and cereals, including whole wheat, barley, rye, buckwheat, corn, teff, quinoa, millet, amaranth, brown or wild rice, sorghum and oats
- Whole grain crackers, bread, rolls or pitas

Avoid

- Biscuits, cornbread and other "quick" breads prepared with baking soda
- Breads or crackers topped with salt
- Cereals (hot or cold) with more than 300 mg sodium per serving
- Instant cooking foods to which you add hot water and stir, like potatoes, noodles, rice, etc.
- High-fat bakery products, such as doughnuts, croissants, pastries and cookies
- Snacks made with partially hydrogenated oils, including chips, cheese puffs, snack mixes and butter-flavored popcorn

Shopping Tips

Choose breads and cereals that are made from whole grains and are high in fiber, including:

- Breads with at least two grams of fiber per serving
- Cereals that contain at least five grams of fiber per serving
- Whole grains (whole wheat, rye or oats as the first ingredient)

Also be sure to check the label for the amount of sodium if you're on a reduced-sodium plan.

Dairy

Recommended

- Fat-free and low-fat cheese
- Nonfat (skim), low-fat or 1%-fat milk
- Nonfat or low-fat yogurt or cottage cheese

Avoid

- Cheeses
- Cream, half & half
- Sour cream
- Whole milk, 2% fat milk or buttermilk
- Whole milk yogurt or ice cream

Shopping Tips

When choosing milk or dairy products, pick non-fat or low-fat types such as nonfat (skim), 1/2% fat or 1% fat milk. Also, look for cheeses that are low in saturated fat and sodium. Choose those types more often than regular cheese.

Fruit and Vegetables

Recommended

- Fresh, frozen, dried or canned fruit and vegetables without added fat or salt

Avoid

- Canned or frozen vegetables with salt, fresh fruit or vegetables prepared with salt, butter, cheese or cream sauce
- Fried fruit or vegetables
- Pickled vegetables such as olives, pickles or sauerkraut

Shopping Tips

Fresh fruits and vegetables do not have added fats, sugar or sodium. When you buy frozen, canned or dried fruits and vegetables, read the labels to make sure your products:

- Don't have any added sugar, sodium (salt) or salty seasonings.
- If you buy canned vegetables, make sure the label says salt-free, lower-sodium or low-sodium. (Regular canned vegetables are high in sodium.)
- Don't include sauce or gravy.

Oils and seasonings

Recommended

- Avocado
- Salad dressings made from unsaturated fat
- Seeds and nuts
- Soft or liquid margarines and vegetable oil spreads
- Unsaturated oils (corn, olive, peanut, soy, sunflower, canola)

Avoid

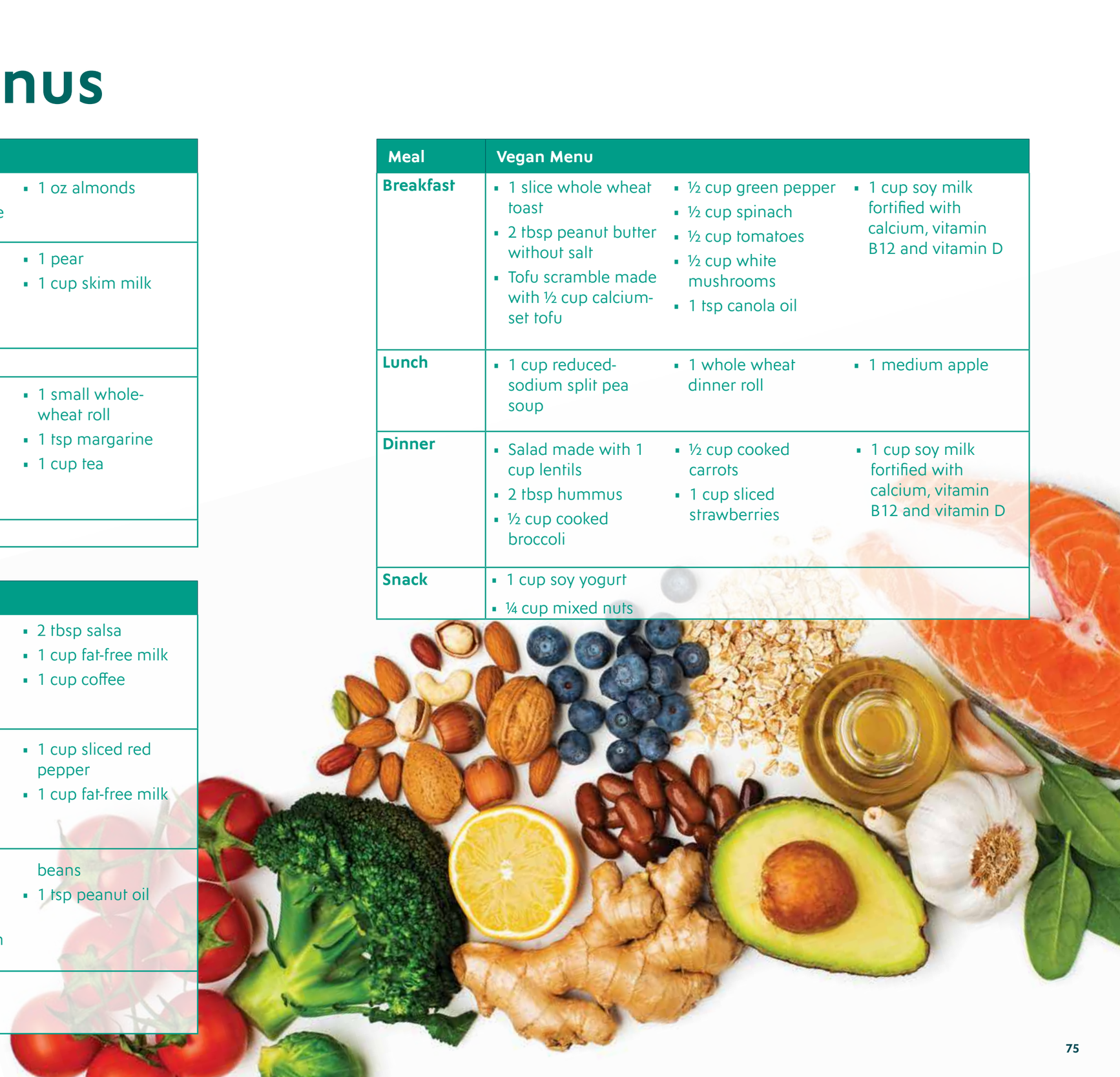
- Butter, stick margarine or shortening
- Partially hydrogenated oils or trans fats
- Tropical oils (coconut, palm, palm kernel)
- Bouillon cubes
- Candy, soft drinks and desserts
- Condiments and sauces
- Miso
- Pickles, olives and relish
- Salsa
- Salt and seasoning mixes containing salt

Heart-healthy menus

Meal	Foods		
Breakfast	▪ 1 cup oatmeal ▪ 1 cup fat-free milk	▪ 1 cup blueberries ▪ 1 cup brewed coffee	▪ 1 oz almonds
Lunch	▪ 2 slices whole-wheat bread ▪ 2 oz lean deli turkey breast	▪ 1 oz low-fat Swiss cheese ▪ 2 slices tomato ▪ 2 lettuce leaves	▪ 1 pear ▪ 1 cup skim milk
Snack	▪ 1 oz trail mix (with nuts, seeds, raisins)		
Dinner	▪ 3 oz broiled salmon ▪ ⅔ cup brown rice ▪ 1 tsp margarine ▪ ½ cup cooked broccoli	▪ ½ cup cooked carrots ▪ 1 cup tossed salad ▪ 1 tsp olive oil and vinegar dressing	▪ 1 small whole-wheat roll ▪ 1 tsp margarine ▪ 1 cup tea
Snack	▪ 1 banana		

Meal	Vegetarian (Lacto-Ovo) Menu		
Breakfast	▪ 1 cup cooked oatmeal ▪ 1 tbsp ground flaxseed	▪ 1 cup blueberries ▪ 2 scrambled egg whites with 1 tsp canola oil	▪ 2 tbsp salsa ▪ 1 cup fat-free milk ▪ 1 cup coffee
Lunch	▪ 2 slices whole wheat bread ▪ 2 tbsp peanut butter without salt	▪ 1 small banana ▪ 6 oz fat-free plain yogurt ▪ 2 tbsp hummus	▪ 1 cup sliced red pepper ▪ 1 cup fat-free milk
Dinner	▪ Stir fry made with ½ cup tofu ▪ 1 cup brown rice ▪ ½ cup cooked	broccoli ▪ ½ cup cooked carrots ▪ ½ cup cooked green	beans ▪ 1 tsp peanut oil
Snack	▪ 1 slice low-fat mozzarella cheese ▪ 1 medium apple		

Meal	Vegan Menu		
Breakfast	▪ 1 slice whole wheat toast ▪ 2 tbsp peanut butter without salt ▪ Tofu scramble made with ½ cup calcium-set tofu	▪ ½ cup green pepper ▪ ½ cup spinach ▪ ½ cup tomatoes ▪ ½ cup white mushrooms ▪ 1 tsp canola oil	▪ 1 cup soy milk fortified with calcium, vitamin B12 and vitamin D
Lunch	▪ 1 cup reduced-sodium split pea soup	▪ 1 whole wheat dinner roll	▪ 1 medium apple
Dinner	▪ Salad made with 1 cup lentils ▪ 2 tbsp hummus ▪ ½ cup cooked broccoli	▪ ½ cup cooked carrots ▪ 1 cup sliced strawberries	▪ 1 cup soy milk fortified with calcium, vitamin B12 and vitamin D
Snack	▪ 1 cup soy yogurt ▪ ¼ cup mixed nuts		



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