



HEART SURGERY

A GUIDE FOR PATIENTS

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For the wellbeing of patients,
visitors and staff, St. Elizabeth
Healthcare is a smoke-free facility.

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Welcome to St. Elizabeth Heart Surgery

On behalf of the St. Elizabeth Heart & Vascular Institute and your entire healthcare team, we would like to welcome you to St. Elizabeth. This booklet has been designed to help you understand your journey through heart surgery and recovery.

The information within these pages will prepare you for the weeks to come and will equip you to achieve an optimal recovery from your heart surgery. This booklet will guide you through what to expect before, during and after your surgery, and answer the questions you might have.

Your healthcare team will consist of cardiac surgeons, anesthesiologists, nurse practitioners, physical therapists, social workers, care coordinators, nurses and nurse managers. Your entire team is dedicated to providing you with compassionate care and outstanding patient education.

We hope you find this booklet valuable while you prepare for heart surgery. We are committed to making your surgery a positive, life-changing experience.

Please bring this booklet to your Pre-Admission Testing appointment and to the hospital on the day of your surgery.

Your doctors have determined that surgery is the best treatment for your heart problem. Your healthcare team will support you before, during and after your surgery. But it is important to realize that your dedication to maintaining and improving your heart health will play a large part in determining the long-term outcome of your surgery.

This booklet is designed to provide information regarding:

- What is heart surgery.
- Preadmission testing process.
- What to expect the morning of surgery.
- What to expect during your hospital admission.
- Preparations for discharge.
- Incisional care.
- Surgical precautions.
- Restrictions after discharge.
- Commonly asked questions.
- Follow up care.

TYPES OF HEART SURGERY

The following is a description of some of the more common procedures our patients undergo in the operating room.

Coronary bypass surgery

Coronary artery bypass surgery (CABG) is the most common type of heart surgery performed in the United States. Cardiothoracic surgeons perform the procedure to bypass or create new pathways around the blockages of the coronary arteries. The veins from your legs or arteries from your chest can be used for the bypasses. Under certain circumstances, an artery may be removed from your arm to be used as a bypass graft.

Endoscopic vein harvest (EVH)

You may be a candidate for EVH, which allows the team to remove the leg vein through a small incision with minimal stress to the leg. The benefits are less scarring and less pain.

Valve surgery

Some patients may require a heart valve operation. There are two main valves on the left side of the heart that can be repaired or replaced (aortic and mitral valves). The valves of the heart are made of leaflets that separate and come together to regulate blood flow. Damage or scarring of the valves can happen due to birth defects, rheumatic fever, infections, buildup of calcium deposits, or simply wearing out from age.

Typically your surgeon will replace an aortic valve. A mitral valve may be repaired or replaced depending on the nature of the disease. There are two general types of valves that are used for replacement: tissue valves and mechanical valves.

Repair of the valve

Whenever possible, surgeons try to repair a valve instead of replacing it. The most common types of repair include placing a band around the base of the valve or repairing the valve leaflet.

Tissue valves

Tissue or biological valves are taken from a cow (bovine). Generally, patients with biological valves are less likely to require anticoagulants (blood thinners) after surgery. Biological valves may begin to wear out over time and therefore are generally not recommended for younger patients.

Mechanical valve

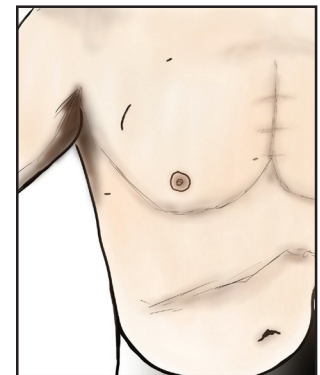
Mechanical valves are created from manmade materials. A St. Jude valve is a common example of a mechanical valve. Patients with a mechanical valve require anticoagulants (blood thinners) for a lifetime to avoid problems with blood clots. The drug of choice for blood thinning in patients with a mechanical valve is presently Coumadin, used to prevent blood from forming blood clots on the new valve. Taking this medicine as prescribed is important to prevent stroke, excessive bleeding, or failure of the valve. A blood test INR (international ratio) is used to ensure that your blood is being adequately thinned. Monitoring can be done at the St. Elizabeth Coumadin Clinic or other laboratories if more convenient. Your Coumadin dose will be based on your INR value.

It is important to keep your appointments and take your medication as prescribed.

Minimally invasive valve surgery

Minimally invasive heart surgery involves performing heart surgery through a 1.5- to two-inch incision on the right chest for the mitral and tricuspid valves (right minithoracotomy or keyhole incision), or a two- to three-inch incision in the front of the chest for the aortic valve.

In the case of the mitral and tricuspid valves, the operation can entail repairing or replacing the valve. A second small 1.5 to two-inch incision is made in the groin for the heart-lung machine.



Incision for minimally invasive mitral valve surgery.

Maze procedure

Patients who have had a history of atrial fibrillation (rapid irregular heart rhythm) may also undergo a maze procedure while they are in surgery. If this applies to you, your surgeon will discuss this additional procedure with you prior to surgery. With this procedure, the surgeon ablates or burns the abnormal pathways that are causing abnormalities in the conduction of your heart's electrical impulses.

PREPARING FOR SURGERY

Preadmission testing (PAT)

Patients undergoing scheduled surgery as an outpatient are required to attend preadmission testing, known as a PAT appointment. This is a private session to prepare you for your surgery. At this visit, the care team will obtain vital information to assist you in your care and preparation for heart surgery.

At your PAT appointment you can expect:

- A visit from an anesthesiologist to discuss your surgical history.
- Chest X-ray for a baseline picture of your lungs before surgery.
- Blood draw for labs to get baseline values for important blood values prior to your surgery.
- An EKG, a noninvasive monitoring of the electrical impulses of the heart.
- A discussion with a Cardiac Surgery Recovery nurse to talk with you about what you can expect the day of surgery and during your hospitalization.

Weeks leading up to surgery

- Stop any medications, over-the-counter medicines, supplements and vitamins, as instructed by your physician.
- Make a list of your current medications, including over-the-counter products, to bring with you on the day of surgery. This should include medication name, dose, and how often you take it.
- If you don't have them already, consider preparing a Living Will and Durable Power of Attorney for Healthcare to bring with you on the day of surgery.
- Report any of the following to your surgeon prior to surgery:
 - Fever.
 - Breathing problems.
 - Open cuts/abrasions/rashes/sores.
 - Changes in your medications.
 - Tooth pain or infection.
 - Bug bites.
 - Urinary infections.
 - Sore throat.
 - Nausea, vomiting.
 - Any change in your current health status.
 - Current use of fish oil.

Tell your physician if you have been taking any antibiotics prior to surgery. You will need a follow-up visit with your prescribing physician.

Pre-op instructions

- Do NOT clip or shave your chest hair or leg hair.
- Do NOT eat or drink anything after midnight the day of your surgery. This includes chewing gum, candy, chewing tobacco, and dip.
- The morning of surgery, you should take your regular medications at home as instructed with a sip of water.
- Coumadin, Ibuprofen, Plavix, Pradaxa, Eliquis, Xeralto, Brilanta, fish oil, vitamin E, and any supplements and anti-inflammatory products should be stopped as directed by your physician.
- Stop smoking as soon as you know you will be having surgery. No wine, beer or alcohol for 24 hours prior to surgery.
- Do not bring valuables (money, credit card, check book, etc.) or wear any jewelry the day of surgery. Remove all body piercings prior to arrival.
- Do not wear nail polish, makeup, lotion, powder, or deodorant. Dentures must be removed prior to going to the OR. We will provide a container for them.
- Do not remove hearing aids; you will need to wear them to surgery.



My procedure

Date

Time

Surgeon

THE MORNING OF SURGERY

Preparing for the hospital

The following is a list of things to anticipate the morning of your surgery:

- Plan to arrive at the hospital at 5:30 a.m. the morning of your surgery.
- Shower with Hibiclens prior to arrival. This solution was provided to you at your preadmission appointment.
- Bring your list of medications, as well as Living Will and Power of Attorney if you have them.
- Bring with you the blood bracelet from Preadmission Testing.
- You may brush your teeth the morning of surgery but do not swallow water.
- Take your normal medications at home as instructed with a small sip of water.

When you arrive

Go to the **Same Day Surgery desk on the second floor**. When you arrive:

- Paperwork you were asked to bring will be collected.
- You will be clipped by a surgery technician then shower with Hibiclens.
*****DO NOT SHAVE YOURSELF AT HOME**
- You will be dressed in hospital attire.
- You will have an intravenous catheter placed for administration of medications.
- Your family member can be with you in this area, after which they should take all your personal belongings home with them.

Prior to surgery you will experience:

- A visit from the anesthesiologist. They will place intravenous lines and catheters needed for surgery. You also may receive medication to make you sleepy.

Patients who are already in the hospital will undergo the same process and testing but will likely leave their room around 6 a.m. Their families should arrive at the hospital around 5:15 a.m.



While you are in surgery

While the patient is in surgery, the family may wait in the waiting room suite, complete with comfortable chairs, a television, and phone for contacting friends and family. The patient's family will be updated by the Cardiac Surgery Recovery unit when the patient is on the cardiopulmonary heart and lung machine and again when they are off the machine.

The average surgery length is three to four hours for a patient having coronary bypasses, and five to six hours for a patient undergoing valve surgery. Total time of surgery may vary from three to seven hours.

There is a cafeteria located on the ground floor. Hours of operation are 6 a.m. to 8 p.m.



Helpful hints for your hospital stay

- Set personal goals to maximize your potential and reduce recovery time. Listen and cooperate with your nurse.
- All patients recover differently from heart surgery. Some may encounter more problems or complications than others and therefore have an extended stay. Don't be discouraged if it takes you a little longer to feel better after surgery. You will be discharged when the doctors feel you are ready. A typical hospital stay is four to seven days after surgery.
- Follow doctor's orders to lessen the risk of complications. Medications, TED stockings, incentive spirometry (breathing exercises), blood tests, transfusions, and exercises are prescribed to maximize the safety of surgery and recovery.
- Unless instructed by their nurse, patients should never attempt to get out of bed on their own. Family members should call for nursing staff assistance and not help patients out of bed on their own.
- Patients typically spend most of their stay in CSR but could be transferred to 5D, a telemetry care unit, with nurses trained to take care of heart surgery patients.

AFTER SURGERY

Immediately following surgery

Upon completion of the surgery, the surgeon will meet with your family in a private consultation room and discuss the details of the surgery and your condition. You will be transferred to Cardiac Surgery Recovery (CSR), where you will typically stay for two to three days, and possibly even until you are discharged.

Cardiac surgery recovery (CSR)

You will likely spend the majority of your recovery time in Cardiac Surgery Recovery (CSR). Our staff is totally committed to providing outstanding patient care.

Once you are in CSR, your family may come back for short visits. You can expect to still have a breathing tube attached to a breathing machine as you awaken. The tube will be removed as soon as possible. You will be connected to many monitoring lines, IV pumps, and drainage tubes. Your nurse will be caring for you closely and will remain at your bedside. Nurses will provide you with pain medication as needed and will facilitate removal of your breathing tube as soon as possible (typically two to six hours after surgery). Rest is very important following surgery as you are still recovering. You will be encouraged to get out of bed as soon as possible and rest in a recliner chair.

After removal of your breathing tube, breathing exercises with use of an incentive spirometer (IS) are necessary to promote lung expansion and aid in prevention of pneumonia and other post-operative

complications. A pillow will be provided for splinting and protecting your chest incision. It is important to hug this tightly while coughing. Pain management is important in the days after surgery and nurses will provide you with pain medication. You should report discomfort to the nursing staff, but know it is not possible to take away all the pain of surgery.

Patients will be assisted to the chair after their breathing tube is removed. Mobility and walking will be encouraged as they are vital to the recovery process. You will have drainage tubes and monitoring lines present typically for one to two days after surgery. Once monitoring lines are removed patients are walked multiple times a day around our unit to begin the recovery process after surgery.

Blood glucose monitoring for all patients is important after surgery. All patients, even if not diabetic, will be on insulin through their IV. Well-controlled blood sugar is important in the healing process.

CSR has eight private patient suites. Each room has a flat-screen TV, wireless internet access and sitting chairs. All TVs are programmed with GetWellNetwork, an interactive entertainment and information system to make it easy for you to stay involved and keep you informed.

It is important that families understand that rest and a quiet environment are vital to patient recovery. We encourage only close family member visitation at this time. Those visiting should be in good health and over the age of 14.



What to expect each day after surgery

POST OP DAY 1

- Remove all invasive lines.
- Education of pain management and need for periods of rest.
- Education on incentive spirometer, flutter valve, cough and deep breathing.
- Education on hand hygiene.
- Education on TED hose.
- Education on benefits of lifestyle changes.
- Begin ambulation when all lines out.
- Pain management.
- Resume cardiac diet.

POST OP DAY 2

- Remove remaining lines if still present.
- Remove Foley catheter if still present.
- Continue and increase ambulation.
- Incisional dressings removed and left open to air if not draining.
- Continue with cardiac diet.
- Education on nutrition, smoking cessation, pain management, incentive spirometer or flutter valve, cough and deep breathing, hand hygiene, TED hose, exercise.
- Physical therapy if applicable.

POST OP DAY 3

- Remove wires if present.
- Remove IV in neck if present.
- Education continued.
- Watch discharge video.
- Continue and increase ambulation.
- Discharge education reinforced from video.
- Education on home incisional care.
- Education on signs and symptoms of infection and when to call physician.
- Education on normal (sleep disturbances, decrease appetite, etc.).
- Arrange discharge transportation.

POST OP DAY 4

Day of discharge if applicable

- Watch discharge video again (with family members).
- Continue and increase ambulation.
- Continue all education for discharge.
- Shower.
- Discharge to home or rehab facility (if applicable).
- Call for post-op visit with physician.
- Education on all new medications for discharge.
- Patients will usually be discharged on a beta blocker, aspirin, cholesterol medicine, Protonix and sometimes an ACE inhibitor.
- On day of discharge the goal is to discharge by 11 a.m.



Planning ahead for discharge

It is very important to plan ahead when anticipating your discharge from the hospital. While our staff will support you along the way, we suggest you think ahead to needs you may have upon leaving the hospital.

We strongly encourage family members to take time off as necessary, to help provide care at home upon and after discharge.

During admission

Patients with limited mobility or extreme weakness are evaluated by physical therapy for potential rehabilitation options. If physical therapy recommends rehab, a social service consult will be obtained. A list of inpatient and outpatient resources will be provided. Your social service care coordinator will be available to discuss your options.

Planning for discharge transportation

Don't forget to arrange discharge transportation home. We aim to discharge our patients from the hospital by 11 a.m. on the day of discharge. This will be communicated by your nurse, but please arrange for a family member or friend to be available in the morning to facilitate a timely discharge. You will be provided a pillow upon discharge. Place pillow between your chest and seat belt, to protect your incision during the ride home. It is safe for you to ride in the front seat.

Discharge planning questions

Your nurse and care team will be communicating with you about your anticipated needs at discharge. Please call the St. Elizabeth Social Worker for CSR at (859) 301-7395 with any questions.

DISCHARGE INSTRUCTIONS

Because your cardiac surgeon treated you most recently, he is the one most familiar with your case and should be called first with any questions or problems related to your surgery. You are able to reach the surgeon on-call at all times. We encourage you, whenever possible, to call during normal business hours to increase the likelihood of speaking with your own doctor.

When you leave the hospital, you will return home to continue your healing and rehabilitation process. Some of the goals of surgery were to make you feel better, increase your exercise tolerance, and improve your quality of life. In order to reach these goals, you should gradually increase your physical activity. You are unique and therefore your recovery program will be as well. Generally, it will take up to two to three months to fully recover.

Remember to take all **MEDICATIONS** as prescribed by your surgeon. These may not include all medications you were taking prior to surgery, or medications at a different dose. Do not throw away your old medications, as you may need them in the future. No grapefruit or grapefruit juice with cholesterol medication.

Wear comfortable, loose-fitting clothing that does not put undue pressure on your incisions. A supportive sports bra is recommended for large-breasted women.

You may climb **STAIRS** as needed.

You may resume sexual relations when you feel comfortable. For many people, this is two to four weeks after discharge.

DRIVING is not permitted for two to four weeks or while you are taking any pain medications. This will be discussed at your post-op visit.

Avoid lifting, pushing, or pulling anything heavier than eight pounds (about a gallon of milk) for eight to 12 weeks after surgery.

Do not cross your legs, as this may cause blood clots to form in the veins in your legs.

For minimally invasive valve surgery patients driving is allowed two weeks after surgery if narcotic pain medications are not required. Lifting should be limited to eight lbs. for the first two weeks.

TED STOCKINGS are elastic stockings that are provided during hospitalization. You should wear these during the day and remove them at night time for two weeks after discharge. They promote circulation and help prevent blood clots after surgery. Someone should help you put these on and take them off to protect your chest. Clean and rinse stockings in the sink using antibacterial soap and water.

An *incentive spirometer* and/or flutter valve is a breathing exercise device that you will receive during your hospital stay. You should continue to use this for two weeks after discharge or as otherwise instructed by your surgeon. This helps prevent pneumonia after surgery.

You should check your temperature daily after discharge for two weeks to monitor for an infection. A temperature of 101.0 F and above should be called to the surgeon's office immediately.

You should check your weight daily at home. Weigh yourself in the morning on the same scale, prior to eating and notify the surgeon with a weight gain of three pounds from your baseline weight at home after discharge.

It is important to protect your sternum or breast bone after heart surgery. A pillow is a great way for you to splint your chest. You should use this while coughing and hold onto it with both arms crossing your chest. Patients who undergo minimally invasive valve operations do not need to protect their sternum.

To prevent an increased risk of infection, keep pets away from your incisions at all times.

You should walk every day as long as you are comfortable. There is no recommended length, time or distance.

Rest between activities; a balance of rest and exercise is necessary for your recovery. It is normal to feel tired in the afternoon. If you are having trouble sleeping at night, avoid daytime naps. You will have some days that you do not do as well as others; this is normal.

You will watch a video on basic discharge instructions prior to leaving the hospital.

Post-op office visit

Call to schedule your follow-up visit after you have been discharged. You will return to see your surgeon about one week after your discharge. The office is in the hospital's Medical Office Building, on the second floor, Suite 271. Please park in parking lot 2B.

Bring your daily home care log and discharge medication list with you.

Typical exam will consist of:

- Checking vital signs and oxygen levels
- Examination of incisions
- Removal of sutures or staples if applicable

A discussion of returning to work, driving, and traveling will be held at this appointment. Typically, if stable, you are discharged back to the care of your cardiologist and will no longer need to follow up with the surgeon. You may schedule future appointments if you have problems or questions to discuss with your surgeon.



Possible complications of heart surgery

The following are some of the more common potential problems after surgery:

ATRIAL FIBRILLATION is an abnormal heart rhythm and common occurrence that about one in four patients experience after surgery. The electrical impulse is not triggered evenly in your heart. Your heart rate can be faster or slower than normal. The cause is not always known, but is thought to be related to the surgery. Occasionally, patients will remain in this rhythm for up to a month after surgery and blood thinners are required to prevent any blood clots from forming in the heart. Your doctor will order medications to return your heart to a normal rhythm. This could delay your discharge.

If you do not know how to check your heart rate, ask your nurse to teach you. A normal heart rate is 60 to 100 beats per minute.

LEG SWELLING is common after heart surgery, especially in patients who have an incision in their leg. The leg with an incision may swell more than the other leg. It is

important to keep your legs elevated (above your heart) while resting and to wear your elastic stockings. You may experience some numbness or tingling at the bottom of your leg incision.

A LUMP on top of the chest incision is normal. It is part of the surgical closure and should disappear with time.

DIFFICULTY SLEEPING at night is common. Taking pain medication before going to bed or using a recliner chair may help you sleep.

CONSTIPATION can occur due to side effects of narcotic pain medications. We recommend you use an over-the-counter laxative of choice if needed. Miralax is a good choice.

Patients who undergo bypass surgery with use of their mammary artery may experience more **DISCOMFORT**, **MUSCLE TIGHTNESS**, and **NUMBNESS** on that side of their chest.



Discharge medications

Most patients are discharged on a beta blocker, aspirin, and a cholesterol medication.

Pain medications may be prescribed and should be used only when necessary. Refills may not be prescribed.

Medication	Purpose of medication
ACE inhibitor & ARB (Lisinopril, Cozaar)	Decreases your blood pressure and decreases the strain on the heart.
Anticoagulant or antiplatelet (Coumadin, Plavix, Eliquis, Asprin, Xeralto, Brilanta)	Decreases your chance of developing a blood clot.
Beta-blocker (Metoprolol, Coreg)	Lowers blood pressure and slows down heart rate.
Calcium-channel blocker (Norvasc)	Lowers blood pressure and decreases the strain on the heart. Helps lessen or prevent chest pain or angina.
Diuretic (Lasix, HCTZ)	Gets rid of excess water, decreases swelling and can improve breathing.
Statin (Lipitor, Zocor)	Decreases your blood cholesterol level.
Potassium supplement (K-Dur)	Replaces low potassium in the body.
Fish oil	May help lower cholesterol.
Over-the-counter medications	Discuss any over-the-counter medications with your healthcare provider before taking.

AT HOME

Incision care

You should shower daily (no baths, hot tubs, or swimming pools until incisions have completely healed – at least two weeks).

You will be sent home with antibacterial soap and the appropriate amount of betadine swabs with instructions on how to clean your incisions.

A clean wash cloth should be used with each shower.

After showering, allow your incision to air dry or gently pat with a clean towel.

Once dry, use one betadine swab on each incision.

If you have endoscopic vessel harvesting incisions, do not use betadine.

Do not apply lotions, creams, or antibiotic ointment unless prescribed by the cardiac surgeon. Avoid soaps with perfumes and powder.

Remove all steri-strips in five days if still present.

You may experience minimal drainage from a leg incision or old chest tube site. Any drainage from your chest incision is ABNORMAL; please call your surgeon immediately!

Signs or symptoms of incision infection

You should examine your incisions daily and report any signs or symptoms of infection. These can include:

- Redness or swelling on the incision site.
- Drainage that is yellow, green, or pus-like.
- Increasing pain, redness, or tenderness around the incision.
- Fever.



Home exercise guidelines

Being physically active is one of the best ways to reduce your risk of heart disease. Regular exercise and physical activity have many health benefits including increasing muscular strength and stamina, decreasing weight and cholesterol, and helping control blood pressure and blood sugar levels.

Your doctor may recommend you attend Cardiac Rehab after leaving the hospital. Cardiac Rehab is a program designed to help heart patients return to their usual activities sooner. The rehab staff is there to help you reach your goals through monitored exercise sessions. The program usually lasts six to 12 weeks, with three one-hour sessions each week. In

addition to your rehab sessions, the Cardiac Rehab team will encourage you be more physically active on a daily basis.

The American Heart Association recommends 150 minutes of moderate activity a week. That is about 30 minutes, five days a week. For those already engaged in regular exercise prior to your hospitalization, you will want to start slowly to build back up to what you had been routinely doing.

For patients just starting an exercise program, a simple walking routine is a great place to begin.

EIGHT-WEEK WALKING PROGRAM

Walk at a pace that does not leave you out of breath. Move to the next level **ONLY** when you can do the previous level without problems (shortness of breath, excessive fatigue, dizziness, palpitations).

WEEK 1

Walk 2-4 minutes 4-5 times throughout the day (rest during walk if needed).

WEEK 2

Walk 4-6 minutes 4-5 times throughout the day (rest during walk if needed).

WEEK 3

Walk 6-8 minutes 3-4 times throughout the day (rest during walk if needed).

WEEK 4

Walk 8-10 minutes 3-4 times throughout the day (rest during walk if needed).

WEEK 5

Walk 10-12 minutes 2-3 times throughout the day (rest during walk if needed).

WEEK 6

Walk 12-15 minutes 2 times throughout the day (rest during walk if needed).

WEEK 7

Walk 15-18 minutes 2 times a day (rest during walk if needed).

WEEK 8

Walk 18-20 minutes 2 times a day (rest during walk if needed).

Always start out slowly (warm-up 3-5 minutes at a pace that slowly increases your heart rate and breathing), gradually increase your pace (conditioning 20-30 minutes to allow the body to adjust to increased oxygen demands) and finish slowly (cool down 3-5 minutes to allow heart rate and breathing to return to near resting levels and should include stretching).

You should stop any activity if you develop symptoms (shortness of breath, your “heart pain,” dizziness, light-headedness, nausea, faster than usual heart rate, muscle, joint or ligament pain).

Call your doctor to report these symptoms or if symptoms continue despite resting or worsen, call 911.



Cardiac Rehabilitation

What is Cardiac Rehab?

Cardiac Rehab is a supervised exercise and education program to help you develop a healthy lifestyle plan. Your individualized program includes physical activity, education, stress management, nutrition and medication counseling, and other risk factor modification assistance.

This outpatient program begins a couple of weeks after discharge, for six to 12 weeks, including:

- Three supervised and cardiac-monitored exercise sessions a week.
- Weekly education sessions offered before or after scheduled exercise.
- Individual risk factor modification counseling.
- Personalized exercise prescription.
- Regular updates to your physician on your progress.

How can Cardiac Rehab help me?

Studies show that Cardiac Rehab offers substantial benefits, such as:

- Faster recovery and return to work or other normal activities.
- Strengthened heart and lungs.
- Increased muscular strength, endurance and flexibility.
- Lower cholesterol levels.
- Lower heart rate and blood pressure.
- Reduced fatigue and increased stamina.
- Better management of blood sugar levels.
- Reduced coronary artery disease risk.
- Increased self-confidence.
- Emotional support for you and family.

Who is on the Cardiac Rehab team?

- Registered Nurses*
- Exercise Physiologists*
- Pharmacists
- Dieticians
- Physicians
- You

*RNs and EPs are ACLS certified, which means they have extra training in emergency procedures.

Will my insurance cover Cardiac Rehab?

Most insurance plans cover part or all of the cost of the Phase II monitored program.

Insurance plans vary, so check with your insurance company.

St. Elizabeth Cardiac Rehabilitation

Dearborn

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(812) 532-2614

Edgewood

830 Thomas More Parkway, Suite 102
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Ft. Thomas

85 North Grand Avenue
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(859) 572-3382

Grant

300 Barnes Road
Williamstown, KY 41097
(859) 824-8244



"Cardiac Rehab was a great experience. The staff was very helpful and caring; I never felt like a number. The nurses gave me tips, took my blood pressure and pushed me in a good way. They also taught me how to incorporate exercise into my day-to-day life." - Joe K

HEART DISEASE PREVENTION

Research has shown that the risk of developing coronary artery disease (CAD) and having a heart attack increases with each risk factor you have. It is important to be aware of your risk factors for heart disease and make necessary changes to the risk factors you can influence.

Ways to prevent coronary artery disease progression

- Maintain a healthy weight.
- Exercise or perform physical activity.
- Eat a heart-healthy diet low in fat and salt and high in fiber.
- Control your blood pressure to keep it below 140 over 80.
- Keep your cholesterol at a level that lowers your risk.
- Manage diabetes if you have it.
- Learn how to manage stress.
- STOP SMOKING!!!!

Learn more about heart disease prevention

St. Elizabeth Heart & Vascular Institute offers an eight-week program called Take Time for Your Heart to help you identify your risk and learn how you can make meaningful changes to help you live better and live longer. Each one-hour class is packed with valuable tips you can start using right away, from clinical experts including a registered nurse, pharmacist, dietician, and exercise physiologist. You'll get your own copy of the book "Mayo Clinic Healthy Heart for Life!" And you'll receive a cardiac age health risk assessment before the first class and after the last class, which calculates your cardiac age based on your personal health factors. There is a modest fee for the program, and pre-registration is required. For more information and class dates and locations, visit stelizabeth.com/taketimeforyourheart. To register, call 859-301-WELL (9355).

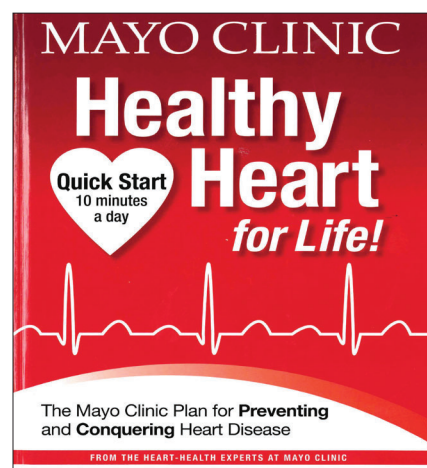
Non-Modifiable Risk Factors

- Age
- Gender
- Heredity
- Race
- Family history



Modifiable Risk Factors

- Exposure to tobacco.
- High blood pressure.
- High cholesterol – having a total cholesterol greater than 200 milligrams or having an HDL (good) cholesterol level less than 40 milligrams. HDL prevents cholesterol from building up in arteries.
- Physical inactivity.
- Excess body fat.
- Diabetes.
- Stress.
- Drinking too much alcohol can raise blood pressure, cause heart failure, and lead to a stroke.



Healthy eating helps

After heart surgery, patients are encouraged to eat a heart-healthy diet. Healthy eating can improve several of your risks at once. Cholesterol and blood pressure levels get better with eating healthier. This generally means a diet low in cholesterol, saturated fats, and salt. Heart surgery patients should also limit their caffeine consumption.

If you have diabetes, healthy eating can help you manage your blood sugars. To get started, talk to your healthcare provider or dietitian.



Tips to help you get started eating well:

- Talk to your healthcare provider or dietitian about healthy eating.
- Choose a variety of food to help you keep on track. Eat basic foods, like vegetables and fruits. Decrease the amount of processed foods you eat.
- Decrease the amount of salt (sodium) you take in. A healthy diet has 2,000 mg or less of sodium per day.
- Eat more foods rich in fiber, such as vegetables, fruits, nuts and whole grains.
- Keep your portion sizes reasonable. Serve meals on smaller plates and eat only half your meal at the restaurant. Take the other half home for another meal.
- Manage calories. A food diary can help you keep track of calories you eat at each meal/snack.
- Eat only a small amount of saturated fats each day. Stay away from trans fats completely if possible. Saturated fats are found in fatty meats, cheese and whole milk. Trans fats are found in processed foods.
- Create a healthy eating plan you can stay with for the rest of your life.

Heart-smart substitutions

Instead of	Do this
Whole or 2% milk and cream	Use skim milk.
Fried foods	Eat baked, steamed, boiled, broiled, or microwaved foods.
Lard, butter, palm and coconut oils	Cook with unsaturated vegetable oils, such as corn, olive, canola, safflower, sesame, soybean, sunflower, or peanut.
Fatty cuts of meat	Eat lean cuts of meat or cut off the fatty parts.
One whole egg in recipes	Use two egg whites.
Sauces, butter, and salt	Season vegetables with herbs and spices.
Regular hard and processed cheeses	Choose low-fat, low-sodium cheeses.
Salted potato chips	Choose low-fat, unsalted tortilla and potato chips or unsalted pretzels and popcorn.
Sour cream and mayonnaise	Use plain low-fat yogurt, low-fat cottage cheese, or low-fat or “light” sour cream.

Avoid processed meals and deli meats and fast food. They are cured and therefore loaded in salt. Eat fresh fruit and vegetables whenever possible.

Stopping tobacco use

How can I quit smoking? By getting support!

St. Elizabeth Healthcare offers a FREE seven-week smoking cessation program in cooperation with the American Lung Association® called Freedom from Smoking®. This program is designed to help you take charge of your efforts to quit smoking or using other forms of tobacco. For more information, please call **(859) 301-5570**.

Other resources

- **Counseling from your doctor or nurses**
- **National tobacco quit line**
800-QUIT-NOW (784-8669)
- **American Lung Association Freedom from Smoking**
ffsonline.org
- **American Cancer Society Quit for Life Program**
(800) 227-2345
- **American Heart Association**
heart.org



Tips to help you quit smoking

- **Make a plan.** Set a date and choose a time to quit when there is a little less stress in your life.
- **Remove every cigarette, lighter, match and ashtray from the house and the cars.** Don't let anyone smoke in the house or car.
- **Change your routine.** Choose a healthy alternative to smoking such as walking after a meal instead of smoking. Start walking before you stop smoking, to help you get into the routine before you even stop. You can also change your routine by going places that do not allow smoking such as libraries, theatres and grocery stores.
- **Stock up on fresh fruits and vegetables, hard candies or chewing gum.**
- **Reward yourself each day** that you do not smoke. For example, watch a movie, visit friends, take a walk or do a hobby.
- **Sometimes it may be necessary to use medication.** The use of medication or nicotine replacement therapy may be helpful in your quest to quit smoking.



Lowering blood pressure

Your heart pushes the blood throughout your body. This pressure is pushed against the walls of the blood vessels. Too much pressure damages the artery lining. High blood pressure not only damages your arteries, but it damages your heart, kidneys, and increases your risk for heart attack and stroke.

Blood Pressure	Systolic Pressure (top #)	Diastolic Pressure (bottom #)
Normal	Less than 120	And less than 80
Prehypertension	120-139	Or 80-89
Stage 1 Hypertension	140-159	Or 90-99
Stage 2 Hypertension	160 or higher	Or 100 or higher

What can I do to lower my blood pressure?

- Lose weight if you are overweight.
- Become more active.
- Decrease your salt intake.
- Eat heart-healthy foods low in fat and cholesterol.
- Take your medication every day if prescribed to lower your blood pressure.

Managing stress and depression

Handling stress

Stress is a normal part of life. It can result in energy that can be directed toward growth, healing, action and change. Stress can also be negative. It can result in feelings of anger, tension and depression. Emotions such as stress and anger have been linked to the development of heart disease.

You can't remove all the stress from your life, but the goal is to recognize what is causing you stress and learning how to deal with those stressors.

Dealing with your feelings

You may feel afraid, depressed, or angry. It is natural for people to feel this way. You may also be in denial of your condition. Having a heart problem may take away a sense of control and cause a feeling of helplessness, stress and anxiety. Taking new medications and changing your lifestyle or habits can be frustrating.

Dealing with feelings of depression

It is natural to feel sad or overwhelmed after you have had heart surgery. Depression is a medical problem that can be treated. Don't be embarrassed to tell your physician how you are feeling. People who are depressed are less likely to take care of themselves.

Having social support

Your friends and family are a wonderful support system for you to get you back on track with your life. Spend time with the people who like doing the same things you do. If you feel like you are overwhelmed or stress is taking control over you, talk to your physician for direction. Your clergy and other support groups can be helpful for you too.

Sleep

Getting enough sleep is very important for both heart health and your overall health. Most people should get seven to eight hours of sleep every night.

If you are having trouble sleeping, talk with your healthcare provider about what you can do. You may have a sleep disorder. Sleep disorders such as obstructive sleep apnea can affect heart health and overall health. Treatment for sleep disorders is essential to help you decrease serious heart complications.

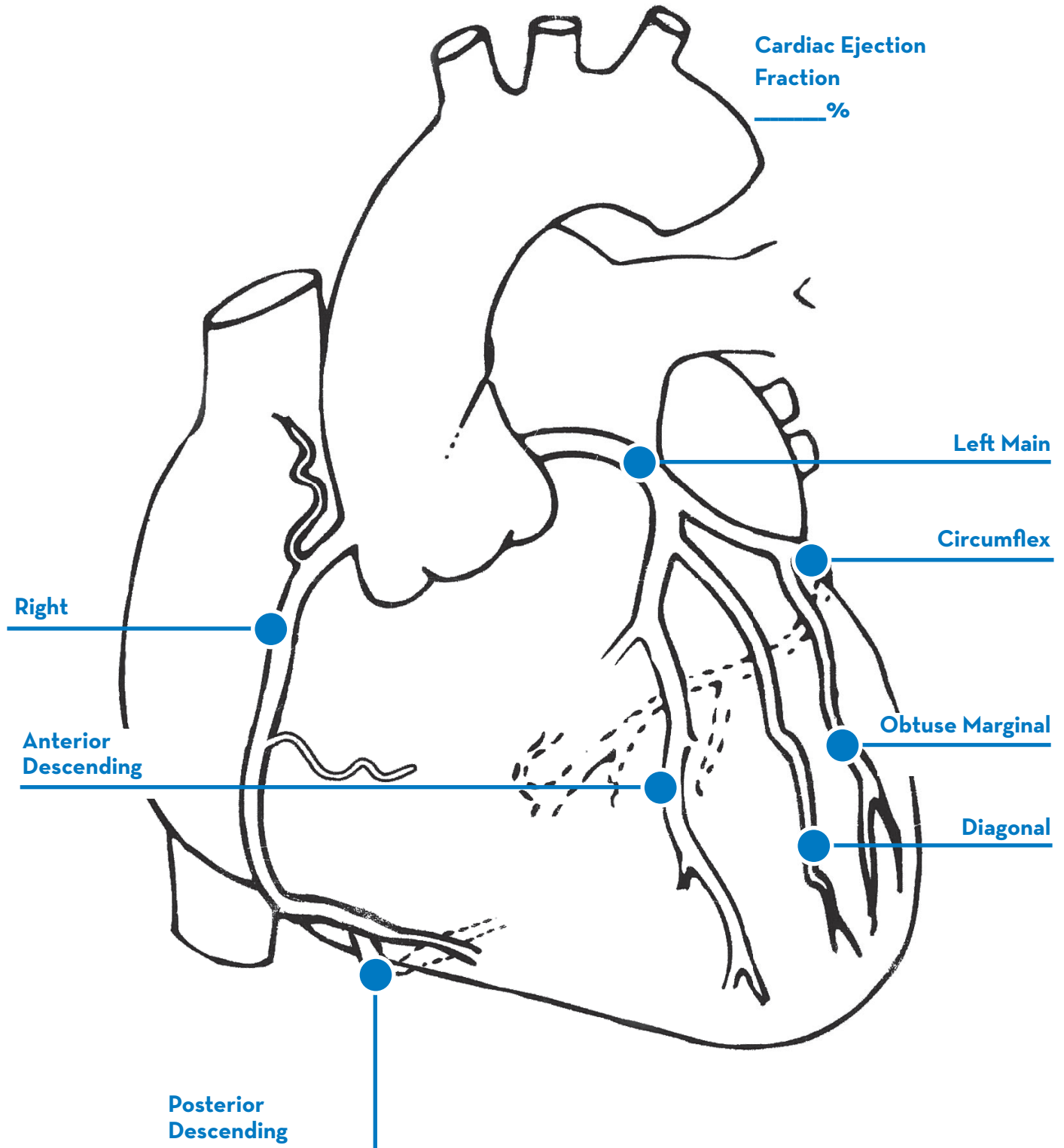
Alcohol

Too much alcohol can raise levels of triglycerides in the blood, raise blood pressure, and cause heart failure. Decrease your alcohol intake to moderate amounts such as one to two drinks per day for men and one drink per day for women.

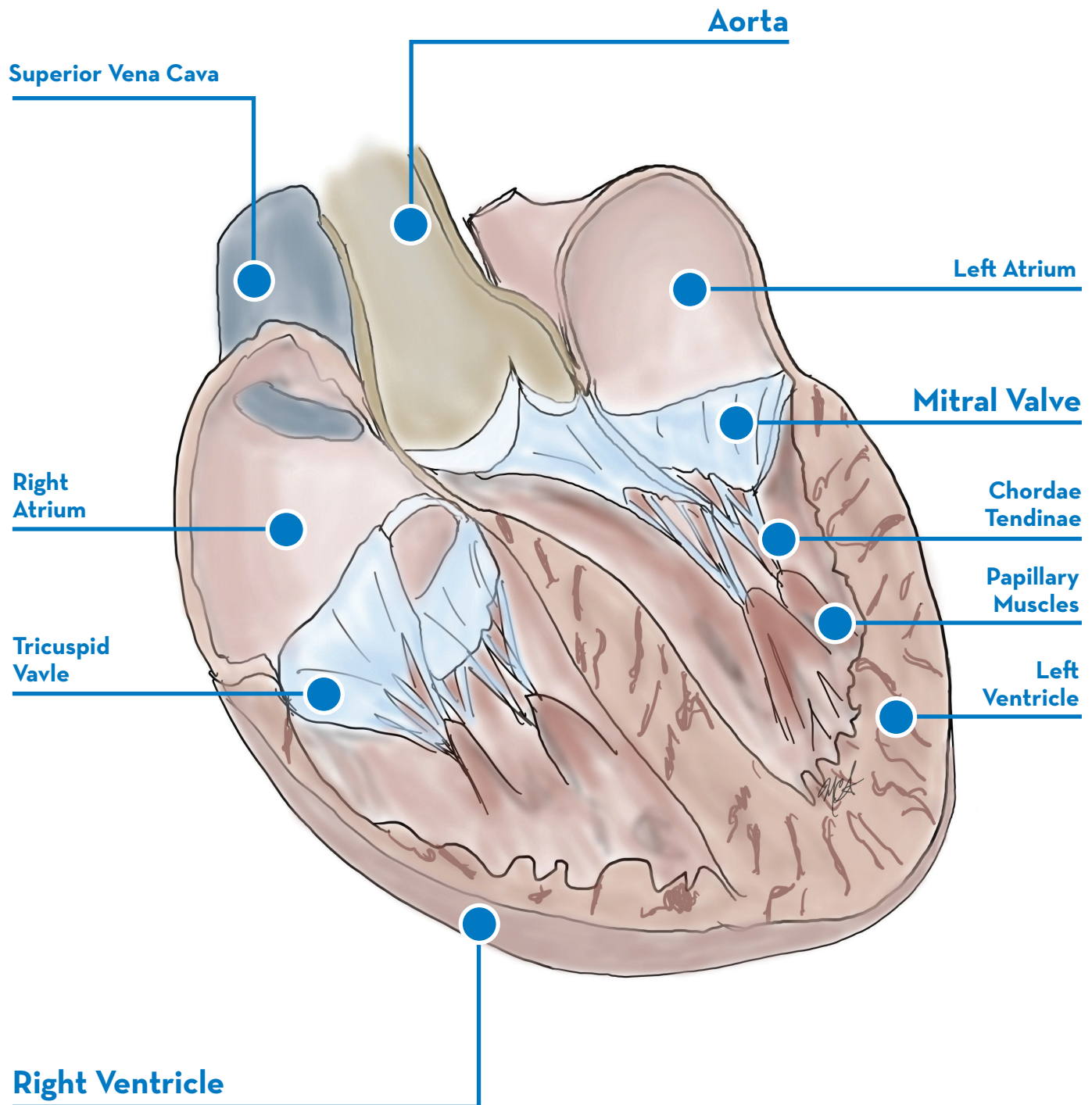
Techniques that can help you cope with stress

- Positive self-talk.
- Humor.
- Exercise.
- Eating healthy.
- Relaxation techniques.
- Taking time for you.
- Music.
- Gardening.
- Walking.
- Limiting your intake of caffeine, alcohol, nicotine and sugar.

HEART SURGERY DIAGRAM: ARTERIES



HEART SURGERY DIAGRAM: VALVES



Apps

Smoking Cessation



Kwit - Quit
smoking
cigarettes



LIVESTRONG
MyQuitCoach



Smoke Free
Quit Smoking
Now

Healthy Eating & Lifestyle



Fooducate



Lost It!



MyFitnessPal



My Plate
Calorie Tracker

Resources

- stelizabeth.com
- stelizabeth.com/healthyheadlines
- mayoclinic.org
- heart.org
- diabetes.org
- fda.gov/food
- choosemyplate.gov
- cdc.gov/heartdisease