

Your guide to atrial fibrillation



Ascension

More than 120 years ago, the Austin community raised \$5,000 to build the region's first hospital, the Seton Infirmary, which was opened by the Daughters of Charity in 1902.

As a nonprofit healthcare system, philanthropy continues to play a crucial role in the history and success of Ascension Seton. Our supporters' generosity ensures we take care of everyone in our community, especially the poor and vulnerable. We would not be able to serve our communities without the generous support from our donors and volunteers.

Over the years, grateful patients and their families have made generous contributions that have directly supported the hospital's capital and programmatic needs, medical research, training programs, and more. Your donation isn't just an opportunity to say "thank you" to your clinical team, it is also an opportunity to ensure world-class healthcare is available to everyone who needs it.

100% of every donation supports the care of Central Texans.

There are many ways to give:



Donate to Ascension Seton Foundation.

Your gift will make a difference in the lives of Central Texans and our community. supportseton.org/gift



Give in a way that is meaningful to you.

You can establish an endowment, make a gift in honor of your caregiver(s), or create a planned gift. However you choose to give, you have a lasting impact. Find out how at supportseton.org/give.



Share your story.

You can bring hope and inspiration to others by sharing your Seton story with us. supportseton.org/share-your-story



Volunteer your time.

Our volunteers make each Ascension Seton hospital feel like home. supportseton.org/volunteer



Learn more

If you would like to learn more about Ascension Seton, the Ascension Seton Foundation, and how philanthropy impacts our future, please reach out to:

David Lawrence at
david.lawrence@ascension.org



Welcome

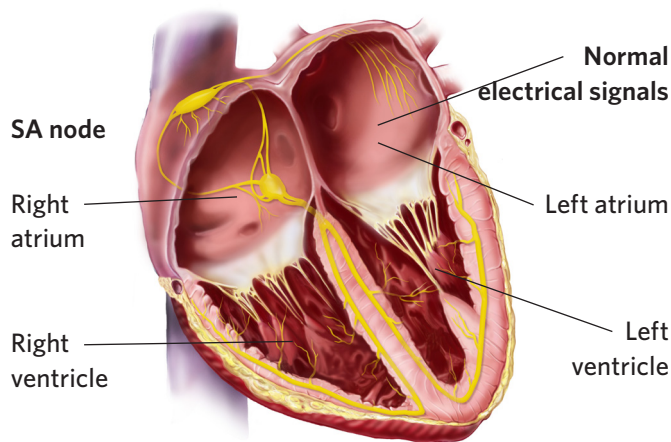
More than 12 million Americans have atrial fibrillation (AFib). In fact, it is the most common global cardiac arrhythmia. With advancement in medical therapies and procedural treatment of AFib, we strive to create self-management skills to prevent unnecessary emergency and hospital admissions. Your electrophysiologist will discuss with you a variety of noninvasive as well as invasive treatments during your initial visit. We offer active research and clinical trials featuring the latest medical and technological advancements. Your electrophysiologist and advanced practice provider will create an AFib plan designed specifically for you to help you control your AFib. Our goal is to bring together Ascension Texas Cardiovascular electrophysiology and cardiology specialists to individualize treatment to modify risk factors that reduce/eliminate your AFib. This booklet is intended to be a general guide to help understand the treatments for AFib and the importance of lifestyle modification.

Ascension Texas Cardiovascular Atrial Fibrillation Center is here to guide you on whatever treatment plan you decide. Our highly trained staff will provide intensive education material and help answer your questions during your decision-making process. We have multiple offices throughout Central Texas and can perform many procedures at your local hospital for your convenience. Please call our center at 512-324-AFib (2342).

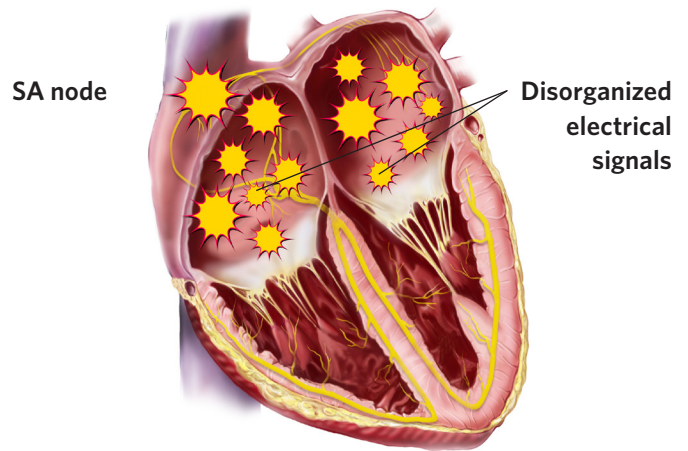
What is atrial fibrillation (AFib)?

The electrical system of the heart is powered by an impulse in the upper chamber of the heart called the atrium. With AFib, the normal cycle of electrical signals is interrupted by multiple impulse sites in the left atrium, which leads to a fast chaotic heart rate. When the heart beats fast for an extended period of time, the heart muscle can weaken, causing heart failure symptoms. Also, the heart does not efficiently empty, causing the blood to pool and clots to form. If a clot enters the bloodstream, then it can cause a stroke. AFib is not life-threatening, even though it may feel like it. With appropriate anticoagulation (blood thinners), rhythm control, and anti-arrhythmic therapy, you can control your AFib without going to the emergency room.

Normal electrical conduction



Atrial fibrillation



©Boston Scientific Corporation. Used with permission

Symptoms

- Palpitations: fast, fluttering or pounding, irregular heartbeat
- Chest discomfort
- Fatigue, lightheadedness
- Reduced ability to exercise
- Shortness of breath
- Weakness

Causes

There are a number of health risk factors for developing AFib. The goal of the Atrial Fibrillation Clinic is to focus on those factors that you can change. We will help you to identify those markers and help you manage them. You may be referred to the Prevention Clinic, to provide medical therapies and create habits that modify your lifestyle to lower your burden of AFib.

Type of AFib

There are four major stages of atrial fibrillation (AFib)

Paroxysmal AFib

The first stage is when your heart goes in and out of atrial fibrillation on its own. These events may last a few seconds or as long as a few days. Many people are not aware that they have atrial fibrillation or feel intermittent fast heartbeats for years without medical treatment. Other people will feel each chaotic change in their heart rhythm and seek medical treatment immediately.

Persistent AFib

This is the next step that occurs. The abnormal heart rhythm lasts more than a week and will return to normal rhythm easily with intervention by medications or cardioversion. Many people have multiple symptoms, such as fatigue and reduced ability to exercise.

Long-standing persistent AFib

Your atrial fibrillation event lasts longer than a year and even with intervention does not easily return to normal rhythm. Symptoms at this stage can vary. The longer this goes without treatment, the harder it is to manage. It may become permanent or lead to severe complications such as blood clots or stroke.

Permanent AFib

Your heart is constantly in an irregular rhythm and does not maintain normal rhythm with medicines, cardioversion or other therapies. Treatment plans are limited.



Risk factors

Risk factors that you can manage

- Nutrition and weight loss
- Increase exercise or activity
- Stress management
- Sleep apnea and sleep hygiene
- Tobacco/smoking
- Alcohol reduction
- Management of blood glucose/glycemic control
- Management of cholesterol levels

Medical conditions that contribute to AFib

- Chronic kidney disease
- Chronic obstructive pulmonary disease and other lung problems
- Diabetes
- Heart failure
- Heart valve diseases or surgeries
- Coronary disease and heart attacks
- High blood pressure
- Hyperthyroidism
- Obesity and obstructive sleep apnea
- Infections
- Congenital heart defects
- Gender
- Family history
- Advanced age (older than 60)

CHA ₂ DS ₂ VASc Risk factor score		
C	Congestive heart failure	1 point
H	Hypertension	1 point
A ₂	Age > 75 years	2 points
D	Diabetes mellitus	1 point
S	Previous stroke or TIA	2 points
V	Vascular disease, CAD	1 point
A	Age 65-74	1 point
Sc	Sex category female gender	1 point
Maximum total score= 10		

Your doctor will want to know what type of atrial fibrillation you have. Knowing how often you are in atrial fibrillation can help with your care for the best outcome. You may be asked to wear a continuous monitor on your chest for 14 days or longer. This will show your burden or how much time you are in atrial fibrillation. If it does not reveal anything or your doctor needs more information, you may need an implantable loop recorder that will continuously monitor your heart rate for 3-4 years.

Treatment

You will discuss treatment plans as well as medication therapy. Often, a combination of medications and procedures are needed to keep you in a normal rhythm. When atrial fibrillation is caught early, many times medications alone will control your arrhythmia. New guidelines show that atrial fibrillation ablation should be considered as early intervention. If untreated, your atrial fibrillation will progress to longstanding or permanent atrial fibrillation.

Medical therapies

Oral anticoagulation therapy

Based on your personal risk factors for stroke (see chart on previous page), your provider may recommend taking a blood thinner (oral anticoagulation) for life. These medications reduce the risk of stroke when taken exactly as prescribed. Depending on your insurance coverage, the cost for the anticoagulation can be difficult. We can provide information to get these medications at a lower cost or switch to another affordable blood thinner. Please discuss this with your electrophysiologist and staff.

Rate-controlling medications

Beta blockers, calcium channel blockers and other rate controlling medications will help improve your blood flow from the heart. They will slow your heart rate, allow your heart to work better and may decrease your symptoms.

Anti-arrhythmic medications

Rhythm controlling medications work in conjunction with the rate-controlling medication to keep your heart in rhythm and pumping smoothly. There are several different medications, and a few require hospitalization before starting them.



Procedures

Cardioversion

This is a procedure that is done in the hospital and uses energy shocks to restore your heart to normal rhythm. Sometimes cardioversion is done alone or in conjunction with anti-arrhythmic medications for a better outcome.

Atrial fibrillation ablation or pulmonary vein isolation ablation

This is an in outpatient surgery procedure. The use of heat or cold energy is the traditional way to create scars in the heart to block the chaotic signals and restore to normal heartbeat. The newest technique is pulse field ablation, a non-thermal treatment.

Hybrid procedure for atrial fibrillation

Hybrid surgical-catheter ablation is a treatment option for patients with long-standing persistent atrial fibrillation. Your electrophysiologists and cardiac surgeons combine catheter ablation with thoracoscopic surgery to create scarring to treat your atrial fibrillation as well as close the left atrial appendage. The treatment is a two-stage procedure, which will require two separate hospitalizations.

Atrioventricular nodal ablation (AV nodal)

AV nodal ablation is a procedure that uses energy to disconnect the signals from the top of the heart to the lower chamber. This should stop the fast heart rate. You will still need to be on a blood thinner since this procedure will not fix your atrial fibrillation. It will just slow your rate down. A pacemaker is placed to control the slow heart rate.

Left atrial appendage closure device

Placement of this device can prevent strokes from occurring in people with atrial fibrillation. In your left atrium, there is a pouch (appendage) where blood can pool to create a clot. The device will prevent blood clots from leaving the pouch and going into the bloodstream, which causes strokes. The closure device allows you to stop taking blood thinners. This is an outpatient procedure and you do not need to stay overnight in the hospital.

What is AFib ablation?

The ablation *approximately 2-3 hours*

Once you are asleep, your doctor will insert several catheters into the large veins in your right groin. These catheters are advanced through the blood vessels and into the upper chambers of the heart.

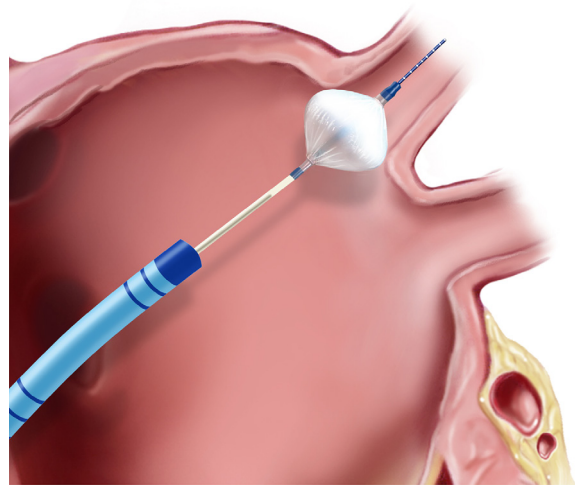
The catheters consist of:

- An intracardiac ECHO (ICE) ultrasound probe, which allows the doctor to view the structures of the heart.
- A mapping catheter that measures the electrical impulses inside the heart.
- The ablation catheter, which ablates the electrical impulses that are causing atrial fibrillation. These may be **cryo** (freezing), **RF radiofrequency** (heat) energy or **pulsed field**, a non-thermal tissue selected approach.

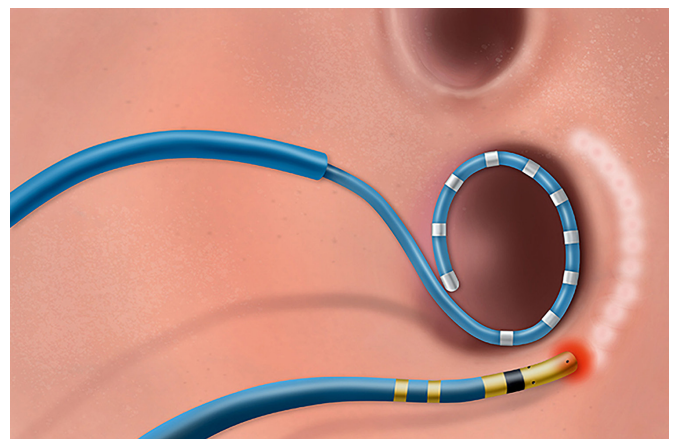
After the catheters are in place, the doctor views a monitor to assess your heart's conduction system. Energy is delivered to the area around the pulmonary veins and/or portions of the heart causing the arrhythmia. Applying energy to the tissue creates a wall or barrier to stop abnormal electrical impulses, thus preventing atrial fibrillation. When the ablation is finished, the catheters will be removed and pressure applied to the groin site to prevent bleeding. A suture is placed and will be removed before leaving for home.

Note: It is not normal to have a Foley urinary catheter after the procedure, but if you receive a diuretic to expel the fluid that was given during the procedure, or if you have trouble expelling urinating, one will be used. In addition, you will not be able to get up to the bathroom for approximately 6 hours. If you have any history of prostate problems or other urinary issues, please provide the office nurse with your urologist's information before the procedure.

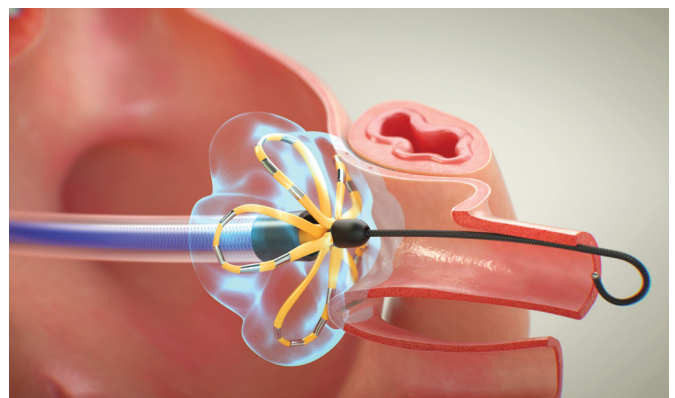
Cryoballoon ablation of the pulmonary vein



Radio frequency current ablation of pulmonary vein



Pulsed field ablation of pulmonary vein



What is a left atrial appendage occlusion (LAAO)?

Left atrial appendage occlusion (LAAO) with devices like the WATCHMAN™ device is indeed a significant advancement in reducing stroke risk for certain patients.

Purpose

The left atrial appendage (LAA) is a small pouch in the heart where blood can pool and potentially form clots, which can lead to strokes, especially in patients with atrial fibrillation (AFib). AFib can cause irregular heartbeats and increase the risk of clot formation.

Mechanism

The WATCHMAN device is designed to be implanted at the opening of the LAA. It blocks off the appendage, which prevents blood from pooling and clotting inside it. By sealing the LAA, the device reduces the risk of these blood clots escaping and causing strokes.

Procedure

The implantation of the WATCHMAN device is minimally invasive and typically done through a catheter-based approach. This means it is inserted into the heart through a blood vessel in the groin and guided to the LAA under imaging guidance.

Safety and efficacy

Success rate

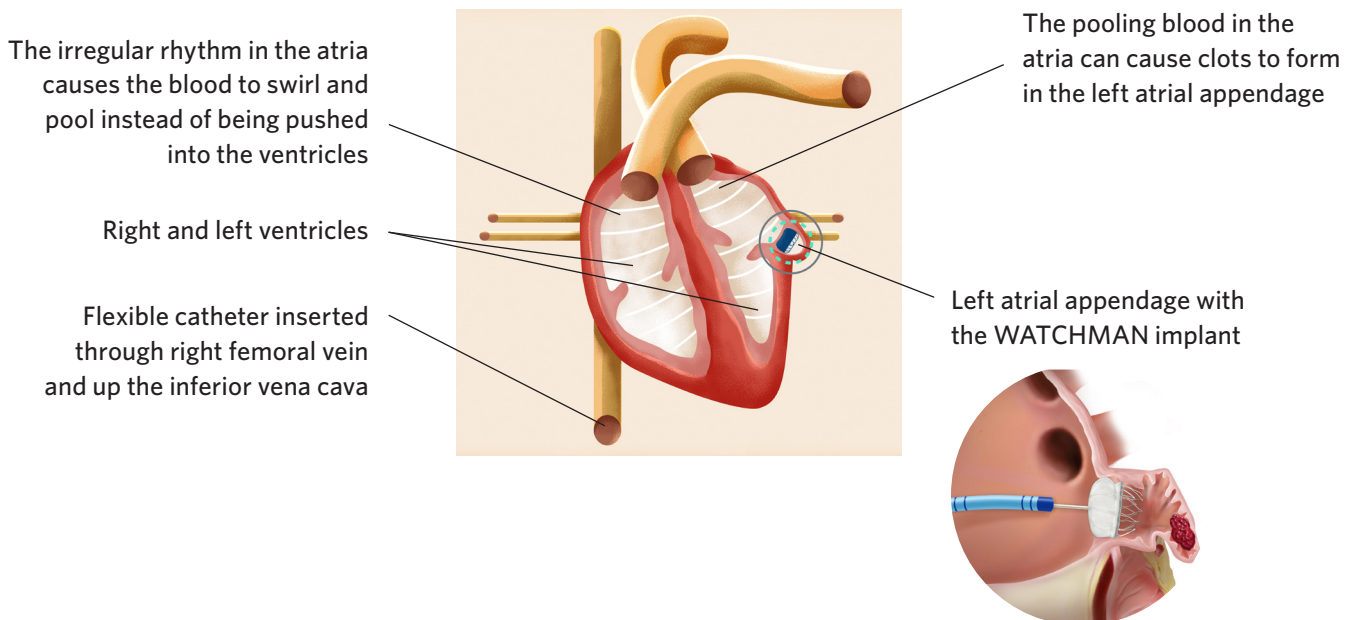
The WATCHMAN device has shown a high success rate, with studies reporting around 99% effectiveness in sealing the LAA.

Complications

Major complications associated with the procedure are relatively low, with rates around 0.5%. These may include issues like pericardial effusion (fluid around the heart) or device embolization (movement of the device).

Candidates must meet all the criteria below to be qualified for the WATCHMAN.

- Have a diagnosis of non-valvular AFib
- Have a CHA₂DS₂-VASc of ≥ 2 for men and 3 for women
- Have reason to be off blood thinners



Your procedure

Physician consult

Before proceeding with an ablation, you and the physician will discuss your specific case and determine the best course of action. During this appointment, the doctor will give you an estimated success rate based on your medical history and review the benefits and risks.

Meals

- Eat a normal meal the evening before your procedure.
- Do not eat anything after midnight the night before your procedure, unless instructed otherwise.
- Do not use tobacco products within 12 hours of your arrival.

What you should wear

- Please remove all makeup and nail polish before coming to the hospital.
- Do not apply lotion before coming to the hospital. Wear comfortable clothes.
- You will change into a hospital gown before the procedure.
- Please leave all jewelry and valuables at home.
- Do not bring your medication to the hospital. Only bring a list of your medications with you.

Medications

Our nurse will either give you medication instructions at time of appointment or call you with instructions. You may be asked to stop your anti-arrhythmic medication 2-3 days prior to your procedure. If you are taking oral anti-coagulants (OAC) such as Xarelto, Eliquis, Pradaxa or Coumadin (warfarin), the nurse will give you specific instructions in preparation for the ablation. If you miss any doses of your OAC before your procedure, please notify your nurse. Your doctor may want you to have a transesophageal echo before the ablation.

A special note about Coumadin: If you are already on Coumadin (warfarin), have your INR checked every week for the 3 weeks prior to the procedure. Send these results to your nurse. Also, take these results with you to the procedure and give them to the nurse and/or physician. If you do not have a doctor to manage your Coumadin, please let us know and we can make arrangements with our Coumadin clinic. Managing Coumadin can be done through most cardiologist's offices and some primary care doctor's offices. You will also be asked to have your INR once a week for 3 weeks after the procedure.

When you arrive

On the day of your procedure, go to the north entrance at Ascension Seton where you can use valet parking. Valet parking is free on the day of your procedure. You will register in Day Recovery. Your family is welcome to accompany you to this area. The nurse will draw blood for lab work and start an IV (intravenous line), that will be used to deliver fluids and medications, during and after the procedure. Your EP doctor and anesthesiologist will see you before the procedure to answer any further questions you might have. The anesthesiologist will review all your medications and determine the safest anesthesia plan for you. They will help to ensure your safety during the procedure. Please be aware you may have several hours to wait between arrival at the hospital and your procedure, which will allow for your blood work and other tests to be done.

Preoperative preparation *approximately 45 minutes*

You will be taken to a special room called the EP (electrophysiology) lab for the ablation and your family will be shown to the waiting area. You will be connected to several monitors that will check your heart rhythm and vital signs throughout the procedure. You will be given general anesthesia; in other words, you will be asleep throughout the procedure. Once you are asleep, multiple areas on your body will be cleaned with an antiseptic solution. The catheter insertion sites (right groin) will be shaved and sterile drapes will be placed to cover you from your neck to your feet.

Transesophageal echocardiogram (TEE):

If you are having a TEE, it will be performed by a cardiologist or cardiac anesthesiologist before the procedure and takes approximately 15 to 30 minutes. The ultrasound allows the cardiologist to look inside the heart chambers. The TEE will verify you do not have a blood clot within the upper chambers of your heart. You will receive a light sedation and may have a local numbing spray for your throat. The cardiologist will have you swallow a long, flexible tube with an ultrasound on the tip. Most people do not remember the procedure once sedation is given.

What your family can expect during the procedure

Once you are taken back to the pre-op holding area, it will be about 5 hours until your family sees you again. Please have one family member leave a contact number so a nurse can call with updates during the procedure. Your family may leave the hospital or grab something to eat at this time. Once you are back in the Day Recovery and awake, they can be with you.

Recovery room *(2-3 hours)*

Following the ablation, you will be taken to a recovery room where you will receive close monitoring while you wake up from the anesthesia. At this time, the doctor will inform your family of your progress.

Hospital stay

When you are awake, you will be taken to the Day Recovery room where your family can be with you again. Upon arrival at the room, you will be placed back on a heart monitor and your heart rhythm will be observed at all times. You will lie flat in bed for approximately 4-6 hours after the procedure. Lying flat reduces pressure to the groin sites and prevents bleeding from this area. Your nurse can provide pain or nausea medicine or help reposition you if you have pain at the site. When you are awake enough, you will be given fluids to drink and small amounts of food if you are able to tolerate it. When bed rest is completed, the suture is removed and you may walk around.

You will be released home after you meet these goals:

- Ambulate without difficulty or problems, including shortness of breath or chest discomfort.
- Urinate without problems or pain.
- Tolerate medications by mouth without nausea.

What is lifestyle modification?



Studies have shown that patients who underwent aggressive lifestyle intervention with exercise, yoga, stress management and dietary changes leading to weight loss had notable reduction of AFib burden without antiarrhythmic drugs or atrial fibrillation ablation.

- Patients who were able to lose 10% of weight led to 40% reduction of AFib burden and greater than 90% of patients maintained sinus rhythm 5 years after AFib ablation.
- In addition, patients who undergo an aggressive risk factor modification program with weight loss, exercise, treatment of sleep apnea and reduction of alcohol intake typically had fewer ER visits, hospitalizations and procedures and needed fewer medications as compared to patients not participating in the program.



Weight management resources

Calorie counting

- myplate.gov/myplate-plan

Calorie counting apps

- myfitnesspal.com
- calorieking.com
- loseit.com

Other resources

Shopping healthy on a budget

- myplate.gov/app/shopsimple

Low calorie diet plans

- pcrm.org/health-topics/weight-loss
- cdc.gov/healthyweight

Dietitians

- Nourish
 - Visit dietitian nutritionist, Erin Rigney at usenourish.com
- H-E-B Nutrition Services
 - Visit licensed dietitians at HEB.com

Fitness apps

- PEAR Health Labs | Adaptive Digital Coaching Software
 - Accepts Medicare patients with prediabetes
- Nike Training Club App
 - Home Workouts. Nike.com

Programs

Lifestyle program (free)

- diabetes.org/project-power

Commercial weight loss programs

- diet.mayoclinic.org
- Diet Center: 800-656-3294, dietcenter.com
- Jenny Craig: 888-964-6465, jennycraig.com
- Nutri/System: 877-336-0305, nutrisystem.com
- Weight Watchers: 800-651-6000, weightwatchers.com
- Noom: noom.com

Clinical weight loss programs (self-paid)

Some healthcare providers run clinical programs. They generally are very low-calorie diets that should be done under medical supervision.

- yourbetterhealth.com
- Optifast: 800-662-2540, optifast.com

Community weight loss programs

- Overeaters Anonymous: 505-891-2664
Find a meeting at oa.org
- TOPS (Take Off Pounds Sensibly): 800-932-TOPS, tops.org
- Find a meeting at tops.org

Bariatric surgery

- American Society for Metabolic and Bariatric Surgery, asmbs.org
- Bariatric surgery in Texas, ascension.org



Scan the QR code for meal planning resources

AFib worksheet

Stroke prevention

My CHA₂DS₂VASc score is:

Based on your score the guidelines recommendation for anticoagulation are:

- Eliquis (apixaban)
- Xarelto (rivaroxaban)
- Pradaxa (dabigatran)
- Coumadin (warfarin)
- Aspirin
- Left atrial appendage closure device (LAACD)

Rate management

How to manage your heart rate with atrial fibrillation:

Beta blockers _____

Calcium channel blockers _____

Digoxin _____

Pacemaker/AV nodal ablation _____

Rhythm management

Acute (short-term treatment)

Electrical cardioversion _____

Pharmacological cardioversion _____

Intermediate (long-term treatment)

Catheter ablation _____

Antiarrhythmic drugs _____

Class 1C

Flecainide _____

Propafenone _____

Class III

Amiodarone _____

Tikosyn (Dofetilide) _____

Sotalol _____

Multaq _____

Risk factor modification (RFM)

1. Weight management

- BMI _____
- Recommended BMI is 25 kg/m and lower. Initial weight loss goal of 10%. We recommend that you exercise 3-4 times a week for 30 minutes and increase to 250 minutes weekly.

Referral to prevention clinic

2. Sleep apnea

- We may recommend an evaluation by a sleep specialist. If you have been diagnosed with sleep apnea, we recommend you use your CPAP/BiPAP.

Referral for sleep study

3. Blood pressure

- Your BP today _____
- Current recommendations are that your blood pressure is below 120/80. If you have a diagnosis of hypertension, we recommend strict compliance with medications and low sodium.

Referral back to PCP or cardiologist

4. Diabetes

- Current recommendation is A1C less than 6.5%. We recommend healthy lifestyle changes, and if not at goal in 3 months, consider medical therapy. Talk with PCP or endocrinologist.

5. Alcohol intake

- Current recommendations are for you to drink no more than two drinks per day for men and one drink per day for women. For information on ways to cut back on alcohol consumption, visit sunnyside.co.

6. Cigarette smoking

- Smokers are at a significantly higher risk for developing AFib and cardiovascular diseases.
- For information on smoking cessation, visit lung.org.

Home treatment plan

Patient home medications for AFib

Rate-control medications:

Antiarrhythmic medications:

Blood thinner:

Acute exacerbation of AFib

Step one

- Remember, most episodes of AFib do not require an emergency department visit.
- AFib is rarely a life-threatening emergency.

Step two

- Try to relax and rest.
- Check your heart rate and blood pressure.
- Use your Kardia or smartwatch to check the rhythm.
- Record your readings on paper.

Step three

If systolic blood pressure (top number) is above 110 and heart rate is over 110, take:

Step four

After 30 minutes, re-evaluate your symptoms, heart rate, and blood pressure.

When to call the EP team

- Consistent HR > 160
- Blood pressure < 100/50
- Feeling faint or dizzy

If you are experiencing any of these symptoms, call the EP team, Monday-Friday, 8 a.m.-5 p.m. at 512-324-AFIB(2342) or after hours, call the Medical Exchange at 512-324-3440.

If you are experiencing severe chest pain, consistent heart rate > 180 or any severe symptoms, consider going to the ER.

Atrial Fibrillation Clinic

The Atrial Fibrillation Clinic at Ascension Texas Cardiovascular will provide an efficient gateway referral to electrophysiology for management of atrial fibrillation, antiarrhythmic medication, risk factor modification, oral anticoagulation, and left atrial appendage occluder candidates.

Treating atrial fibrillation from a whole new perspective.

Atrial fibrillation is the most common global arrhythmia, affecting 37% of people over age 55.

Our integrated Atrial Fibrillation Clinic helps patients develop AFib self-management skills to prevent unnecessary ER visits and hospital admissions.

Steps to successful management of AFib often include treatment of obstructive sleep apnea, obesity, high blood pressure and eliminating the use of alcohol and tobacco.

Services we provide

At Ascension Texas Cardiovascular, our patients are cared for by multiple specialists across a variety of disciplines. The most common services we provide include:

- Arrhythmia management
- Antiarrhythmic medication management
- Risk factor modification management
- Anticoagulation medication management
- Left atrial appendage occluder candidates



The Atrial Fibrillation Clinic at Ascension Texas Cardiovascular will not only increase adherence to guideline-based care, but will reduce repeat visits to the emergency room, improve patient quality of life, and decrease risk of stroke.



Meet the care team



Kristopher Heinzman, MD
Cardiac Electrophysiologist



Thomas Kurian, MD
Cardiac Electrophysiologist



Mauricio Hong, MD
Cardiac Electrophysiologist



Kunal Shah, MD
Cardiac Electrophysiologist



Joshua Davis, DO
Cardiac Electrophysiologist



**Stephanie Targac-Cortes,
MSN, FNP-C**
Cardiac Electrophysiologist



Michael Gilheany, APRN
Cardiac Electrophysiologist



**Holly Gureski, MSN,
AGACNP-BC**
Cardiac Electrophysiologist



**Vernell O'Hare, AGACNP-BC,
FNP-C**
Cardiac Electrophysiologist



William Hunter MSN, FNP-BC
Cardiac Electrophysiologist



Patient referrals

For patient referrals and scheduling, please contact the AFib Clinic directly at 512-324-AFIB (2342) or via email: ascensioentexassep_afib@ascension.org

Locations



Ascension Seton Health Center Lamar
1004 W. 32nd St., Suite 300
Austin, TX 78705

Ascension Seton Williamson
301 Seton Parkway, Suite 302
Round Rock, TX 78665

Ascension Seton James Casey
4207 James Casey St., Suite 215
Austin, TX 78745

Ascension Seton Hays
1180 Seton Parkway, Suite 450
Kyle, TX 78640

Ascension Seton Highland Lakes
200 John Hoover Parkway
Building 1, Suite B
Burnet, TX 78611

Ascension Seton Bastrop
630 Highway 71W, Suite D
Bastrop, TX 78602



Ascension

[ascension.org](https://www.ascension.org)

Ascension Texas

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