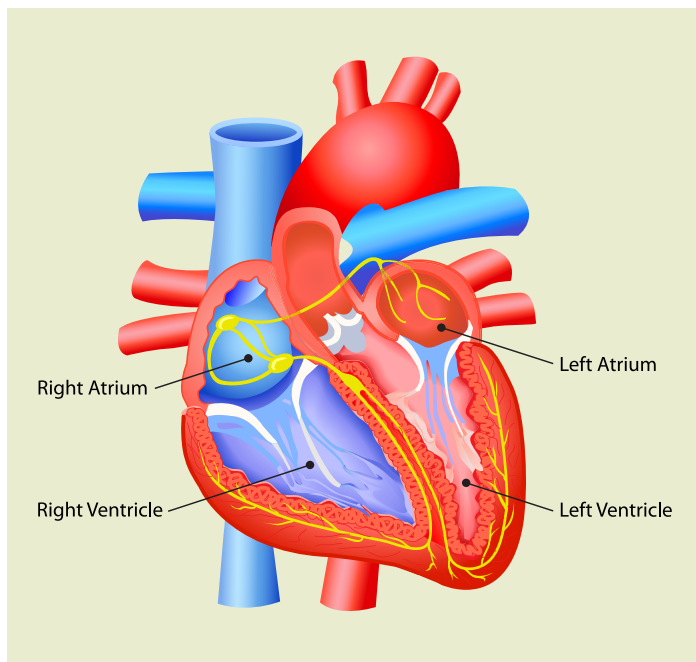


ATRIAL FIBRILLATION

What is Atrial Fibrillation?

The heart pumps blood and oxygen throughout the body, relying on electrical signals to keep its four chambers in rhythm. During a regular heartbeat, these electrical signals keep the top chambers, called atria, moving in time with the bottom chambers, called ventricles.



Atrial fibrillation, also called AF or AFib, happens when the heart's electrical system sends out irregular electrical signals that cause the atria to quiver, or fibrillate. Extra electrical signals are then sent to the ventricles, creating a fast and irregular heartbeat.

Symptoms of atrial fibrillation can include:

- Palpitations (fluttering in the chest)
- Chest discomfort
- Dizziness or light-headedness
- Shortness of breath
- Weakness
- Fatigue

Many people have minimal or no symptoms, and symptoms can vary from day to day or episode to episode.

Atrial fibrillation that comes and goes by itself is called paroxysmal atrial fibrillation, while atrial fibrillation that is present until and unless there is some intervention to stop it is called persistent atrial fibrillation.

What causes atrial fibrillation?

Age is a leading risk factor for atrial fibrillation. It is common in people over 60, and the older you get, the greater your risk.

Your lifestyle—including what you eat, how often you exercise, how you sleep, if you're under a lot of stress, whether you smoke or chew tobacco, and if you drink alcohol frequently or heavily—also plays a big part in your risk for atrial fibrillation.

Other risk factors include:

- Obesity
- High blood pressure
- Diabetes
- Sleep apnea
- Having other heart problems, like having heart failure, a prior heart attack, or previous heart surgery

Is atrial fibrillation dangerous?

Atrial fibrillation usually isn't life-threatening on its own, but it can lead to decreased quality of life and other serious or potentially life-threatening conditions, such as cardiomyopathy (weakened heart muscle) and stroke.

During atrial fibrillation the top chambers of the heart pump ineffectively, making it easier for blood clots to form. If a clot breaks loose and moves to the brain, a stroke can occur. The risk of stroke varies among people with atrial fibrillation based on age, gender, and medical history.



How is atrial fibrillation treated?

The experts at the UPMC Center for Atrial Fibrillation apply the latest in atrial fibrillation research and knowledge to create customized treatment plans for each patient. We also provide extensive education for each patient, because we know that patients who understand their diagnosis become more active in their treatment—and that can make a difference in their recovery.

Treatments may include:

- Lifestyle changes
- Medical management
- Cardioversion
- Implanted devices, like pacemakers or defibrillators
- Surgical procedures
- Catheter-based treatments, including ablation
- Left atrial appendage closure for stroke prevention

Lifestyle Changes

A healthy lifestyle is the foundation for your care strategy. Lifestyle changes that can prevent or decrease atrial fibrillation include:

- Losing weight
- Maintaining a healthy diet
- Exercising regularly
- Limiting alcohol intake
- Limiting caffeine intake
- Quitting smoking
- Implementing stress/anxiety reduction techniques

It's important to identify and treat other diseases that are often associated with atrial fibrillation, like high blood pressure, diabetes, and sleep problems.

And, it's critical to find out how likely you are to have a stroke. The experts at the UPMC Center for Atrial Fibrillation use a tool called the CHA₂DS₂-VASc, which assesses your age, gender, and medical history to determine your risk.

Medical Management

Some cases of atrial fibrillation may be managed through medications that prevent blood from clotting, or that slow or regulate the heart rate.

Medications that prevent blood clots are called anticoagulants and are commonly known as "blood thinners." These include:

- Warfarin (Coumadin®, Jantoven®)
- Apixaban (Eliquis®)
- Rivaroxaban (Xarelto®)
- Dabigatran (Pradaxa®)
- Edoxaban (Savaysa®)
- Aspirin

Medications that slow the heart rate include:

- Digitalis or Digoxin
- Verapamil
- Diltiazem (Cardizem®)
- Metoprolol (Lopressor®)
- Atenolol (Tenormin®)

And, medications that regulate the heart rate include:

- Sotalol (Betapace®)
- Dofetilide (Tikosyn®)
- Flecainide (Tambocor®)
- Propafenone (Rhythmol®)
- Amiodarone (Pacerone®, Cordarone®)
- Dronedarone (Multaq®)

Cardioversion

Cardioversion is a noninvasive procedure that restores your heart's normal rhythm with electrical shock or chemical intervention. Electrical cardioversion delivers an electrical shock to your heart via adhesive pads which are placed on your chest while you are under anesthesia. Chemical cardioversion uses medicine to achieve the same effect.

Implantable Devices

In some patients with atrial fibrillation, a pacemaker or defibrillator may be recommended. These are devices implanted in your body that can help regulate your heartbeat. Pacemakers ensure that your heart rate does not become too slow, and defibrillators can deliver a shock for dangerous, abnormal rhythms.

Surgical Procedures

Some people with atrial fibrillation are treated through surgery. This usually happens when less invasive treatments have been unsuccessful, or when structural changes of the heart exist—such as enlarged heart chambers or a leaking valve.

The MAZE procedure is the gold standard of open heart surgery for atrial fibrillation. In the MAZE procedure, surgeons use tiny incisions in your heart to create a maze-like pattern of scars in the atria, and these scars block the transmission of erratic electrical signals. Some patients may be able to have a minimally invasive MAZE procedure that does not involve opening the breast bone.

Catheter-based Ablation Procedures

Ablation is a minimally invasive surgical procedure that destroys the small areas of tissue in your heart that cause atrial fibrillation. The specialists at the UPMC Center for Atrial Fibrillation are experts at ablation techniques and have authored book chapters and research publications on the subject.

Left Atrial Appendage Closure for Stroke Prevention

Stroke prevention is a key part of atrial fibrillation treatment. Many people manage their stroke risk with blood thinner medicines, but patients who cannot take blood thinners may be candidates for permanent closure of the left atrial appendage (LAA), the part of the heart most often linked to blood clots in AFib patients.

UPMC is the first center in western Pennsylvania to offer the Watchman™ Left Atrial Appendage Closure Device, a parachute-shaped implanted device that permanently closes the LAA. UPMC's experts also use the LARIAT® Suture Delivery Device, a lasso-like device that uses sutures to permanently close the LAA.