

ATRIAL FIBRILLATION (AFIB OR AF)

Afib affects about 2.7 million people in the United States. The heart has an electrical system, which provides signals to the chambers of the heart indicating when they should contract (squeeze) or relax. Afib is caused by chaotic electrical signals, which make the upper chambers of the heart (the atria) quiver, instead of fully contracting.

For someone with Afib, there are around 300 signals per minute in the atria, so fast that the atria can't squeeze. In Afib the heart rate can be very irregular or fast (rapid). If you have this condition, your heart beats without any order. This makes it hard for your heart to pump blood.

Afib is progressive and chronic, meaning that if it is not treated, it will worsen. Episodes will become more frequent and last longer and eventually become permanent. When untreated, Afib can lead to heart failure or cause a stroke. It is important to see a doctor if you have symptoms of Afib, because it becomes harder to treat once episodes become more persistent. Afib, often starts paroxysmal then becomes persistent or permanent.

What are the symptoms of Afib?

- Feeling overtired or having little to no energy (most common)
- A faster than normal or irregular heart rate
- Shortness of breath
- Heart palpitations
- Trouble with everyday exercises or activities
- Pain, pressure, tightness, or discomfort in your chest
- Dizziness, lightheadedness, or fainting
- Some patients feel no symptoms at all

What puts you at risk for Afib?

You are more likely to have AFib as you age. Other things that increase your risk are:

- High blood pressure
- Health conditions such as diabetes, lung disease or thyroid disorders
- Sleep apnea
- Heart valve surgery
- Heart surgery
- Drinking too much alcohol
- Smoking
- Obesity

For ½ of patients, Afib is from lifestyle, ½ is aging/genetics/other factors



Diagnosis

→ **EKG:** Afib is diagnosed by an electrocardiogram (EKG), which is a test performed in a doctor's office that records the electrical activity of your heart.

→ **Heart Monitors:** These devices record the heart's rhythm while wearing the device. Once the doctor diagnoses Afib, the proper treatment can be started. This can be a 24-48-hour Holter monitor or a 14-30 day event monitor.

→ **Apple Watch:** These can take a quick reading of your heart rhythm that you can send to your doctor for review. Please ask your nurse for more information on this.

Types of Afib

Paroxysmal Afib: Episodes that last < 7 days; They start/stop on their own

Persistent Afib: Episodes that last > 7 days; nearly always requires treatment to resolve

Permanent Afib: is when Afib is chronic, ongoing and resistant treatment attempts

Treatment: Based on results of your evaluation and after discussion with your doctor you will develop a treatment plan. In general, treatment of Afib has 3 components or goals:

1. *Anticoagulation: To prevent blood clots and stroke*
2. *Choosing rate or rhythm control*
3. *Lifestyle Modification*

1. Anticoagulation:

Because the atria quiver during Afib, blood can pool forming a blood clot. If this clot travels, it can cause a stroke. Anticoagulants are prescribed to prevent a blood clot. Options include warfarin, Eliquis, Xarelto or Pradaxa. Doctors can calculate a patient's stroke risk based on age and other medical conditions (such as heart failure, high blood pressure and diabetes). Your doctor will discuss with you if an anticoagulant is recommended for you.

2. Rate or Rhythm Control:

A) Rate Control: This slows down the heart rate, allowing the ventricles to pump more blood to the rest of the body and keeps the heart from weakening. This can help relieve symptoms. Examples of medications used are Beta blockers (metoprolol, atenolol, carvedilol, nadolol, bisoprolol), or calcium channel blockers (diltiazem, verapamil).

B) Rhythm Control: This aims to restore and maintain normal (sinus) rhythm. By doing this the heart pumps more efficiently alleviating symptoms. This can be done by three different ways

i) Cardioversion: This is a brief shock performed at the hospital as an outpatient procedure used to temporarily restore sinus rhythm

ii) Medications called antiarrhythmics: examples are Amiodarone, Tikosyn, Sotalol, Flecainide, Propafenone, Mexiletine, Dronedarone.

iii) Ablation: this is a surgical procedure done as an outpatient that uses heat or cold to isolate the pulmonary veins, where the electrical signals that trigger atrial fibrillation are thought to originate from.

3. Lifestyle Modification:

Without addressing lifestyle factors such as obesity, smoking, excessive drinking, exercising regularly and treating conditions such as diabetes, hypertension and sleep apnea, other treatments are less likely to be successful.