

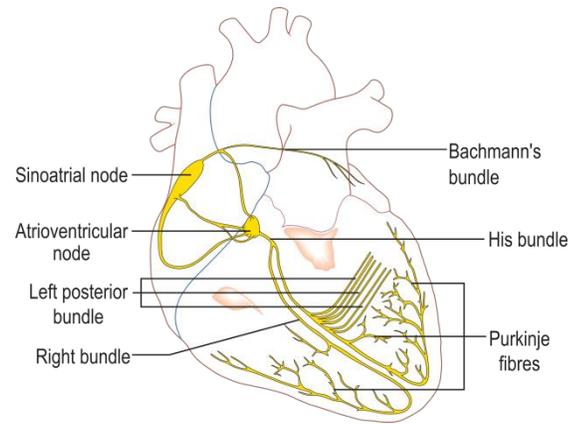


What is Atrial Fibrillation?

Atrial fibrillation (AF) is the most common **arrhythmia**, or irregular heart rhythm. It results from abnormal electrical impulses in the heart.

The heart acts as a pump, purifying blood through a series of contractions of the different ventricles and atria of the heart. These contractions make up what we hear as our heartbeat. These contractions are caused by an electrical signal from the sinoatrial node, the heart's own pacemaker (also called SA node). When the SA node sends out the signals properly, we call this "sinus rhythm".

In atrial fibrillation, abnormal and sporadic signals are generated in the atria. These extra signals confuse the heart, leading to an irregular heart rhythm. This causes blood to accumulate in the atria, preventing the ventricles from pumping enough blood. This can lead to fainting (the medical term is syncope), light-headedness, stroke, heart attack, or even heart failure. The irregular rhythm can persist for a prolonged period of time or come and go.



How Serious is AF?

The severity of AF varies among individuals. Medications are the first line of treatment for AF and can control the condition to a certain point. Catheter ablation is an invasive measure used to treat more severe cases. Surgical procedures may be recommended if ablation is not successful. If the treatment of AF is neglected, stroke and/or heart attack can occur.

Risk of Stroke

People with AF have an increased risk of stroke. Stroke is caused by clots that form in the atria due to the accumulation of blood. Clots can travel from the heart to the blood vessels of the brain and block the blood supply to the brain. Major stroke complications are paralysis, weakness, speech impairment, vision problems, decreased mobility, and difficulty in performing normal daily activities.

Risk of Heart Failure

In AF, the heart is constantly under stress because of the abnormal contraction rate and rhythm. This excessive activation leads to overworking of the heart and subsequent heart failure. Heart failure can cause shortness of breath, night time cough, distended belly and veins in the neck, swelling of ankles, weakness, and chronic fatigue.

Am I at risk?

The likelihood of developing atrial fibrillation increases with age and typically occurs in people who have underlying heart disease. The most common causes are:

- Chronic High Blood Pressure
- Heart attack
- Heart failure
- Heart valve disease
- Hyper- and hypothyroidism
- Sleep apnea
- Chronic lung disease
- Some people with AF have no apparent cause



EKG of a person in atrial fibrillation

You might also be at risk if you exhibit any of the following risk factors:

- Family history of heart conditions
- Age
- Hypertension
- Cardiovascular disease
- Excessive alcohol consumption
- Smoking
- Obesity
- Excessive stress

How can I tell if I should see a doctor about AF?

Symptoms of Atrial Fibrillation vary from person to person; while some people may not have any symptoms, others may have a variety. General symptoms include:

- Palpitations, a sensation of rapid or irregular heartbeat
- Shortness of breath
- Weakness or difficulty exercising
- Chest pain
- Dizziness or fainting
- Confusion

If you experience any of these symptoms, consult your doctor.



Visiting the doctor for AF

Atrial fibrillation can be diagnosed by an ECG (electrocardiogram) which graphically measures the electrical activity of your heart. However, you need to be in AF at the time of the ECG. Patients with paroxysmal AF might need to wear a portable Holter Monitor, which continuously records your heart activity and notes down episodes of AF.

How can I treat it?

AF treatment is centered around two goals: stabilize circulation and prevent stroke. Anticoagulation may be required to decrease the risk of stroke, while rate and rhythm control are primarily used to achieve the circulatory stability.

❖ Rhythm control

The first step is cardioversion to “reset” the heart rhythm. This can either be electrical, where the patient receives an electrical shock, or through drugs.

❖ Other options

If rate and rhythm control aren’t successful, your physician might consider a catheter radiofrequency ablation, where an electrophysiologist passes catheters through the body to the heart to find and burn the tissue responsible for causing AF. Another method is the surgical “Maze” ablation that uses incisional scars to block abnormal electrical circuits that confuse the heart and cause AF.

❖ Lifestyle changes

In addition to taking medication, a stress-free and healthy lifestyle makes it easier to manage AF. You should change your diet to include heart healthy foods that go easy on fat and salt and avoid alcohol, caffeine, and nicotine substances. You should also keep to a regular exercise regimen that keeps stress, weight, and anxiety levels under control. Include yoga and breathing exercises in your workout, as these will help increase heart health and lower stress levels.

Your physician might consider medications as well, such as anticoagulants, rate control, and rhythm control drugs.

These medications aren’t fail-safe, and come with a number of side effects, including fatigue, shortness of breath, toxicity, etc. Sometimes these medications can cause new arrhythmias to form. Your physician will prescribe the best regimen for you based on your medical history and your type of atrial fibrillation.