

AFib Disease Progression

AFib is a progressive disease. AFib can cause changes in the atria that may become permanent and make you more prone to having even more episodes. Many studies have shown that “AFib begets AFib” – meaning that the more AFib you have, the more likely you are to have more frequent and longer lasting episodes.

It is also important to understand that the longer you have had AFib, especially if you are in persistent AFib,

the more difficult it is to treat and achieve normal sinus rhythm. This is true for any form of treatment, either medical therapy or ablation procedures.

There are many treatment options both in terms of stroke prevention and to improve quality of life.

Learn more at stvhs.com/afib.

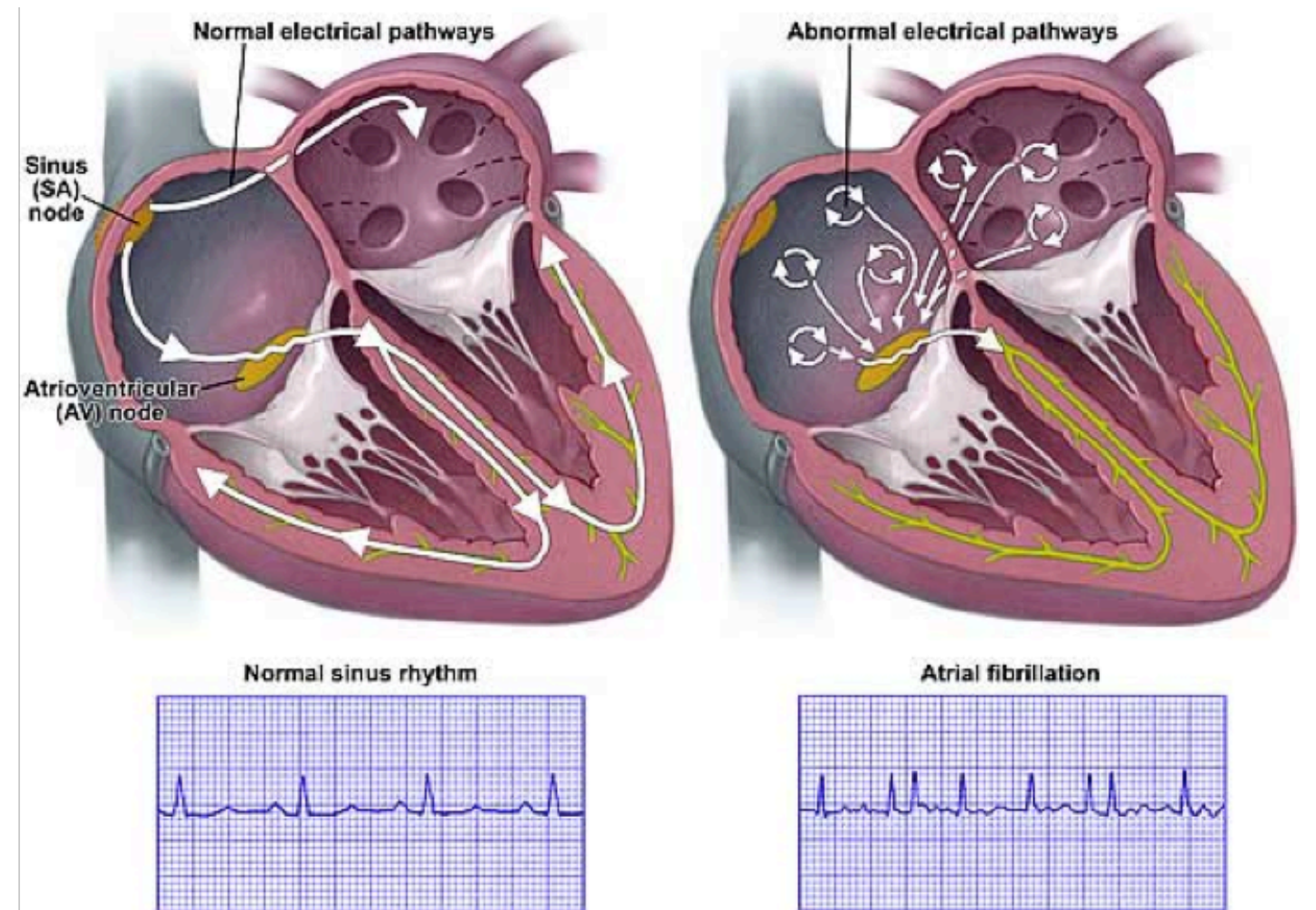
Information provided by Jose Osorio, MD



2660 10th Avenue South
POB 1, Suite 101
Birmingham, AL 35205
1-855-STV-BEAT or
205-939-7936
Fax: 205-939-7935
Email: HEART@STVHS.com
Website: stvhs.com/afib

What is AFib? What is atrial fibrillation?

AFib is an abnormal rhythm that occurs in the top chambers of your heart – the atria. When in atrial fibrillation, there is fast and chaotic electrical activity in the atria. In other words, instead of the atria having organized rhythm and motion, the atria goes so fast that there is no meaningful contraction. Many impulses will reach the AV node and, that will govern how fast the lower chambers (the ventricles), will contract, or how fast your heart beat will be.



What causes atrial fibrillation?

AFib may occur in patients with no heart disease or even patients with no medical problems at all. More commonly, it is associated with cardiovascular diseases such as hypertension, coronary artery disease, or congestive heart failure. There is also a strong link between AFib, obesity, and obstructive sleep apnea (OSA). Recent studies have shown that many patients have genetic traits that will predispose them to atrial fibrillation.

The most common causes and risk factors for AFib include:

- Older than 60 years of age
- Obesity – as the size of the body increases, the size of the heart and the stress on it increases, making the risk of AFib higher.
- Obstructive sleep apnea – in patients with OSA, there are changes in the pressure inside the chest that can cause stretching in the atria and increase risk of AFib. CPAP and weight loss can help significantly.
- Diabetes can cause many changes in the heart, including risk of blockages and increase in scar tissue formation.
- Heart problems:
 - High blood pressure
 - Coronary artery disease
 - Prior heart attacks
 - Congestive heart failure
 - Valvular heart disease (most commonly, mitral valve leakage)
 - Prior open heart surgery
- Thyroid disease – some forms of AFib seen in patients with thyroid problems can be cured by treating the thyroid.
- Chronic lung disease – patients with advanced lung disease are not only at higher risk of developing AFib, but they also have difficulty controlling the disease.
- Excessive alcohol or stimulant use
- Serious illness or infection
- Pectus excavatum (sunken chest wall deformity)

What are the dangers of atrial fibrillation?

Atrial fibrillation, and the lack of organized electrical activity, have two consequences that are the root cause of all the problems and symptoms created by this condition.

- The atria cannot contract, or squeeze to help push blood forward
- Electrical impulses will reach the AV node very fast, and the AV node regulates how many impulses will be conducted to the ventricle.

The lack of contraction, and the fast irregular pulse, can lead to problems created by atrial fibrillation.

- Increased risk of stroke
- Symptoms associated with afib
- Risk of developing Congestive heart failure

Some people live for years with atrial fibrillation without problems. However, if not properly treated, atrial fibrillation can lead to future problems.

Increased risk of stroke

Atrial fibrillation causes the atria to beat so fast and irregularly that there is no meaningful contraction or motion in the upper chamber of the heart. There are areas in the upper chamber where blood can stay relatively stagnant when in AFib – The left atrial appendage being the most important one. This makes the blood more likely to clot.

If a clot develops in the appendage and is pumped out of the heart, it can travel to the brain, where it will cut off circulation, resulting in a stroke. People with atrial fibrillation are 5 to 7 times more likely to have a stroke than the general population. It is estimated that more than 90% of strokes happening in patients with AFib come from blood clots formed in the left atrial appendage. Clots can also travel to other parts of the body (kidneys, heart, intestines) and cause other damage.

Increased risk of stroke, continued

Studies have shown that the risk of stroke increases when patients have other risk factors. We typically use the CHADS2 or CHADS2-Vasc risk scoring systems to predict one's annual risk of stroke.

The more risk factors for stroke a patient has, the higher the annual risk of stroke. That is, your risk of having a stroke each year will increase significantly the more points you have.

There are now many strategies to reduce the risk of stroke. This decision is always individualized, based on one's risk factors and other conditions that may contraindicate the use of certain drugs. Please refer to separate section about stroke for more details.

Symptoms associated with AFib

AFib can cause many symptoms, and while some patients are extremely symptomatic, others can't even tell. The right treatment option for you will depend on how symptomatic you are. Most patients start by having occasional episodes, lasting minutes or few hours. The disease then progresses to more frequent and longer lasting episodes. This progression varies from patient to patient. Lifestyle modification and treatment of other conditions that can cause or worsen AFib (such as hypertension, obesity, obstructive sleep apnea) may affect the progression.

Atrial fibrillation can feel like different things to different people. A few of the symptoms of AFib include:

- Racing, irregular heartbeat
- Fluttering in the chest
- Heart palpitations
- Dizziness
- Weakness
- Chest pain
- Shortness of breath
- Sweating
- Fatigue when exercising
- Faintness

Atrial fibrillation causes heart failure

Atrial fibrillation can decrease the heart's pumping ability. The irregularity can make the heart work less efficiently. In addition, atrial fibrillation that occurs over a long period of time and is not well treated can significantly weaken the heart and lead to heart failure. Heart failure is typically seen in patients who have had very fast heart beats for long periods of time – many months. If diagnosed and treated quickly it can be reversible.

Types of atrial fibrillation

Paroxysmal AFib

Episodes that typically last less than 24 hours (up to 7 days) and terminate spontaneously.

Persistent AFib

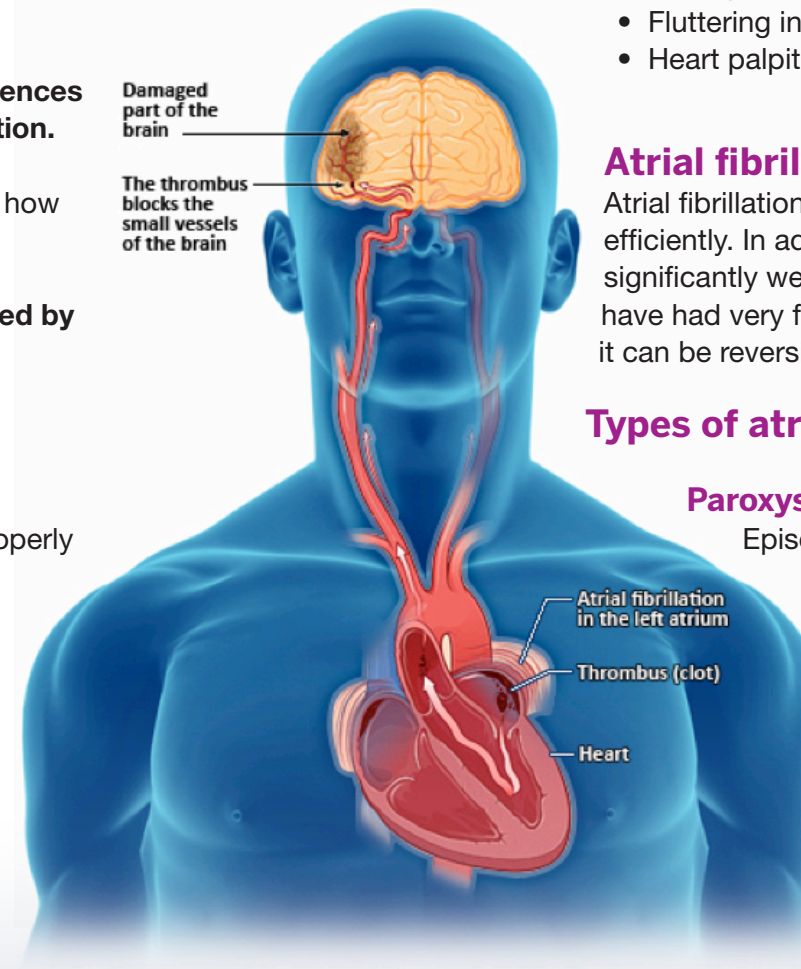
Episodes that last beyond seven days or require intervention to terminate, such as medications or electrical cardioversion.

Longstanding persistent AFib

AFib that lasts longer than one year.

Permanent AFib

Patients who we can no longer restore normal sinus rhythm. Either because a decision has been made not to try by any means (including catheter or surgical ablation) or because attempts have failed.



Atrial Fibrillation and Stroke: blood clots can form in the left atrium, and if they dislodge can go to the brain, cutting off circulation which will cause a stroke.