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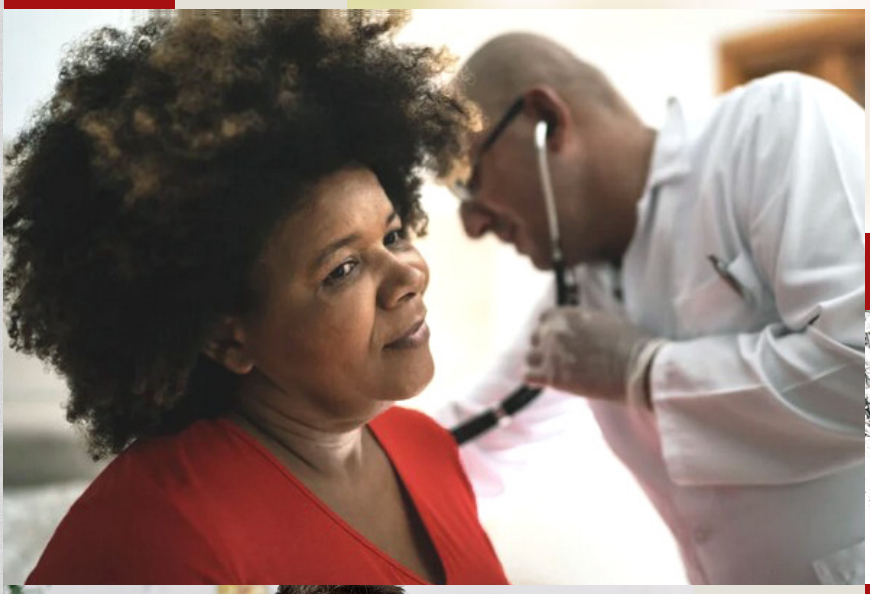
WHAT TO KNOW ABOUT ATRIAL FIBRILLATION THAT CAN SAVE YOUR LIFE



September 2023

Atrial fibrillation (A-fib) is the irregular heart rhythm and type of arrhythmia. It can interrupt blood flow, causing palpitations, chest pain, and breathlessness. A-fib increases the risk of blood clots and stroke.

It doesn't always produce symptoms, but when it does, a person may experience palpitations, chest pain or discomfort, and light-headedness.

This article will look at how A-fib affects the heart and what symptoms and possible obstacles a person may experience. It also discusses the treatment options.

WHAT IS ATRIAL FIBRILLATION

A-fib is the *most common* clinical arrhythmia worldwide. The estimates suggest that it affects up to 3 percent of the Western population aged 20 years or older.

The possibility of A-fib *increases* with age, although it can also occasionally occur among young people.

People with A-fib also may have a much faster heart rate than usual, and the heart does not pump blood around the body efficiently. Blood may collect, or pool, in the heart, which can increase the likelihood of clots.

HOW DOES ATRIAL FIBRILLATION AFFECT THE HEART?

The human heart consists of four chambers: two upper called the atria and two lower called the ventricles.

Every time the heart beats, it *pumps blood* from the atria into the ventricles and then from the ventricles around the body.

Each heartbeat starts at the top of the heart and travels down. Electrical signals control the rate at which the heart beats and coordinate the blood flow between the chambers.

When a person has A-fib, electrical signals become distorted, causing the atria to quiver, or twitch, erratically.

During the heartbeat, the heart may not pump all the blood from the atria to the ventricles, and the blood flow does not follow the usual rhythm.

Several people with an irregular heartbeat, or *arrhythmia*, do not have any symptoms. However, recognizing and treating A-fib early can actually improve the likelihood of preventing complications.

WHAT ARE THE SYMPTOMS OF ATRIAL FIBRILLATION?

Not everyone with A-fib will have symptoms, and with those who do, the symptoms may only occur intermittently. The *American Heart Association (AHA)* says that the most common symptom is a fluttering heart. Other likely symptoms include:

- *palpitations*, or the feeling of an irregular heartbeat
- breathlessness, particularly during exercise or activity
- chest pain, pressure, or discomfort
- *low blood pressure*, dizziness, lightheadedness, and fainting
- general fatigue
- confusion or feelings of unease

Doctors advise anyone who has these symptoms — regardless of whether they have already received an A-fib diagnosis — to keep a record of how often they occur and note whether they become more severe.

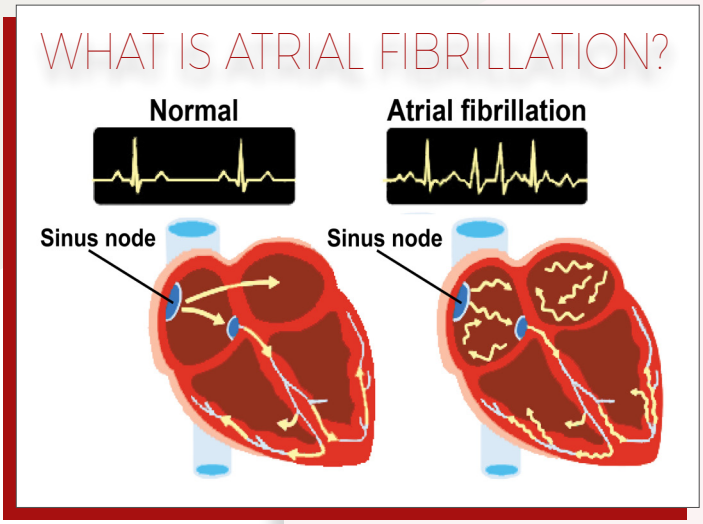
Sharing your medical information with a doctor may help them recommend the best treatment.

People with undetected or untreated A-fib have an increased risk of heart failure and *stroke*.

CAUSES OF ATRIAL FIBRILLATION

Changes in the electrical signals in the heart cause A-fib. It can happen to anyone at any age, but it is more common among older people. Other risk factors *include*:

- *hypertension*: long-term high blood pressure can place strain on the heart



- *pulmonary embolism*: this is the medical term for a blood clot in the artery that delivers blood to the lung
- *heart disease*: people with underlying heart conditions have a higher risk of A-fib. These conditions include heart valve disease, *heart failure*, *coronary artery disease*, and *heart attack*
- **alcohol consumption**: although regularly consuming large amounts of alcohol puts people at the highest risk, even modest amounts can be a trigger for some individuals. Other toxic drugs, such as methamphetamine, can also cause A-fib
- **family members with A-fib**: people that have a family history of A-fib may be more likely to experience the condition themselves
- *sleep apnea*: this can increase a person's risk of A-fib, particularly when it is severe
- **other chronic conditions**: Some long-term medical conditions — including *thyroid problems*, *asthma*, *diabetes*, and *obesity* — may add to the risk

HOW DO DOCTORS TREAT ATRIAL FIBRILLATION

Doctors tailor *treatments* for A-fib so that they are suitable for the person's age and lifestyle, heart health, and overall health. Some people may only need medications, while others may need surgical procedures to steady their heart rhythm. Doctors sometimes recommend a combination of treatments.

Medications

Prescription medicines can help control a person's heart rate, prevent clots from forming, and, for some people, normalize heart rhythm.

Managing heart rate

A person's heart rate that is high, if you can bring it down that will prevent heart failure and potentially reduce the symptoms of A-fib.

Several medications can help by slowing signals that tell the heart to beat. These include:

- *beta-blockers*, such as *metoprolol (Lopressor)* and *atenolol (Tenormin)*
- *calcium channel blockers*, such as diltiazem (Cardizem)

and *verapamil (Verelan)*

- digoxin (Lanoxin), which doctors now use more rarely

Preventing clots

A doctor may prescribe anticoagulant medications, or *blood thinners*. These blood thinning medications can make it harder for blood to clot.

Taking blood-thinning medications can increase the risk of a person bleeding. The benefits, however, for the most people, of preventing blood clots outweigh the risks of bleeding, particularly if the person is at risk of stroke.

Doctors use the *CHA2DS2-VASc score* to evaluate the risk of stroke and establish whether a person is more likely to benefit from taking blood thinners.

Some blood-thinning medications include direct-acting oral anticoagulants — similarly as edoxaban (Lixiana), *apixaban (Eliquis)*, *rivaroxaban (Xarelto)*, and *dabigatran (Pradaxa)* — and, less commonly, *warfarin*.

Anyone who is taking warfarin or any other anti-clotting agent should make sure that any medical professionals who are treating them are aware of this medication. This is especially important during the treatment of any other conditions and before surgeries.

Learn more about blood-thinning medications for heart problems

Normalizing heart rhythm

Doctors might try to return the heart rhythm to normal using medication. This is also called pharmacological or chemical cardioversion.

These so-called anti-arrhythmic medications can also help convert A-fib into a regular heart rhythm or maintain a regular rhythm.

They include sodium channel blockers, such as flecainide (Tambocor), and potassium channel blockers, such as amiodarone (Pacerone).

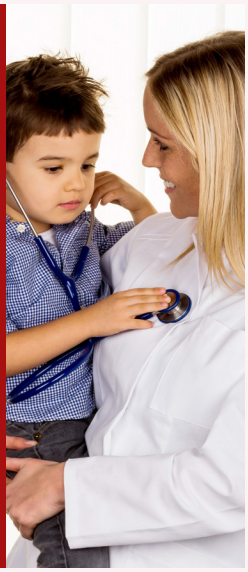
However, even after the heart rhythm returns to normal, most people need to take blood-thinning medications.

Procedures

Doctors at times recommend surgical procedures along with medication, particularly if the person is due to have heart surgery for another health condition. The options for surgery may *include*:

- **electrical cardioversion**: surgeon will deliver a synchronized electric shock to the heart. This should reset the irregular rhythm to a regular beat. Before carrying out cardioversion, they may perform a transesophageal *echocardiogram*. This involves inserting a scope down the throat to produce an image of the heart. A surgeon will carry out this procedure to ensure that no clots are present in the heart. If a clot is present, a doctor will prescribe anticoagulant medication for several weeks to dissolve it. Cardioversion will be possible after the clot has dissolved.

The signs and symptoms of AFib are different from person to person. Some people with AFib feel no symptoms at all. They may not even know they have AFib or that there is a problem. Others can tell as soon as it happens. AFib symptoms can be scary, and bothersome.



- **catheter ablation**: this destroys the tissue that is causing the irregular rhythm. The surgeon may need to repeat this procedure if A-fib returns.
- **surgical ablation**: surgeons can also remove the heart tissue causing the irregular rhythm by carrying out a form of open-heart surgery called a *maze procedure*.
- **pacemaker placement**: this device will instruct the heart to beat regularly. A surgeon will at times place a pacemaker in a person that has intermittent A-fib and ablate the native electrical system. This allows the pacemaker to "take over" and ensure that the heart beats regularly.

WHAT ARE THE COMPLICATIONS OF ATRIAL FIBRILLATION?

According to the *AHA*, for most people with A-fib, the most serious of all the risks is that it can lead to many other life threatening conditions. These include:

Blood clots

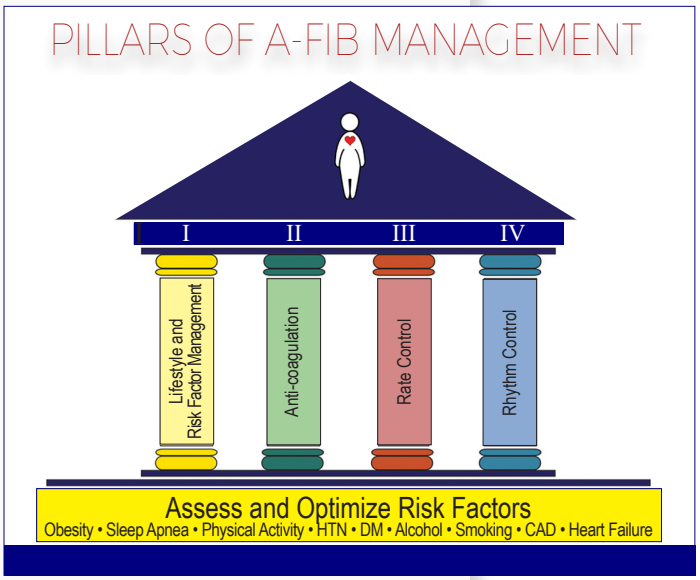
Your blood can pool in the atria if the heart is not beating regularly. Blood clots can form in these pools. A segment of a clot, called an embolus, might break off and travel to different parts of the body through the bloodstream and can cause blockages. For example, an embolus can restrict blood flow to the kidneys, intestine, spleen, brain, or lungs. A blood clot can be fatal.

Stroke

A stroke occurs when a blood clot blocks an artery in the brain, reducing or stopping blood flow to part of the brain.

The symptoms of a stroke vary depending on the part of the brain in which the stroke occurs. They can include weakness on one side of the body, vision problems, and speech and movement difficulties.

Stroke is a *leading cause* of disability and death in the United States.



Heart failure

A-fib can lead to heart failure, especially when the heart rate is high. When the heart rate is irregular, the volume of blood flowing between the heart's upper and lower chambers varies for each heartbeat. The heart muscle can tire out from beating too quickly and irregularly.

As a result, the heart may not pump enough blood to the body, and the amount of blood waiting to circulate can instead build up in the lungs and other areas.

A-fib can also worsen the symptoms of any underlying heart failure.

Cognitive problems

A *2018 study* linked A-fib with a higher long-term risk of cognitive decline and *dementia*. However, *other research* from 2019 questions this, saying that the link is unclear. More research is necessary to clarify this.

REDUCING THE RISK OF ATRIAL FIBRILLATION

Even if you are not able to modify the risk factors of aging and a family history of A-fib, there are many ways to reduce the risk of A-fib and maintain a healthy heart. In 2020, the *AHA* published a scientific statement saying that lifestyle changes can reduce many of the risks.

Keeping any underlying conditions, such as hypertension or diabetes, under control also can reduce the risk of A-fib. The AHA statement and *other studies* stress the importance of multidisciplinary medical treatment plans.

When it comes to lifestyle, the basic rules of following a *nutritious diet*, also engaging in regular physical activity, and maintaining a *moderate body weight* are important. People who smoke or drink alcohol can also reduce their risk of developing A-fib by limiting or stopping these behaviors.

SUMMARY

Recently, several studies have reported a positive impact on decreasing AFib burden from lifestyle changes that target weight loss, physical activity, and risk factor modification. Effective weight loss and increased physical fitness resulted in significant reductions in Atrial Fibrillation burden. Some of these findings suggest that a new paradigm for Atrial Fibrillation management should include a new pillar targeting lifestyle and risk factor modification and that public health initiatives and policy recommendations that target these areas might effectively reduce the incidence and burden of Atrial Fibrillation.

A-fib is a condition that causes an irregular heart rhythm. It can occur more often after the age of 65 years, and may not always have symptoms. The condition can lead to a stroke if blood pools in the heart and forms a clot that travels to the brain.

Lifestyle adjustments can also help prevent A-fib. These include avoiding smoking, limiting alcohol intake, prioritizing a heart-healthy diet, maintaining a moderate weight, and exercising regularly.

Treatment will focus on normalizing the heart rhythm in order to prevent complications. A doctor may prescribe medications that regulate heart activity and blood-thinning drugs to prevent clots. In some circumstances, they may recommend surgical procedures.

Frequently Asked Questions

What does Atrial Fibrillation feel like?

- *Many people with A-fib experience a **rapid heartbeat**, which can make it feel as though the heart is missing a beat or pounding in their chest. Others may feel dizzy, faint, or inexplicably anxious*
- *People with A-fib may have difficulty with breathing, particularly when lying down*
- *Most people will have these feelings from time to time, but anyone who notices them happening more regularly, or more intensely, may have A-fib*

Is Atrial Fibrillation life threatening?

- *A-fib's irregular heartbeat is not in itself life threatening. The issue is that it can **increase** the likelihood of a person developing blood clots, which can block the blood supply to other organs*
- *During A-fib, a person's heart is not pumping efficiently*

What is the life expectancy of a person with Atrial Fibrillation?

- *People with A-fib have an increased risk of other heart diseases and stroke, partly because risk factors for both are overlapping. When the symptoms are under control, many people **live a long and active life***
- *However, a **2020 study** suggests that people with A-fib may live 2 years less than people without the condition. The authors stress that the longitudinal study shows that this gap is decreasing*