



American  
Heart  
Association

American  
Stroke  
Association®

Living with   
**Atrial Fibrillation**





# U NDERSTANDING **Atrial Fibrillation**

An estimated 2.7 million Americans are living with atrial fibrillation (AF). That makes it the most common heart rhythm abnormality in the U.S.

AF itself usually isn't life-threatening. But it can lead to other serious problems. These include chronic fatigue, congestive heart failure and stroke.

The good news is that AF can be treated and controlled with help from your healthcare provider. If you've been diagnosed with AF, careful management can help reduce your risk of major health problems.



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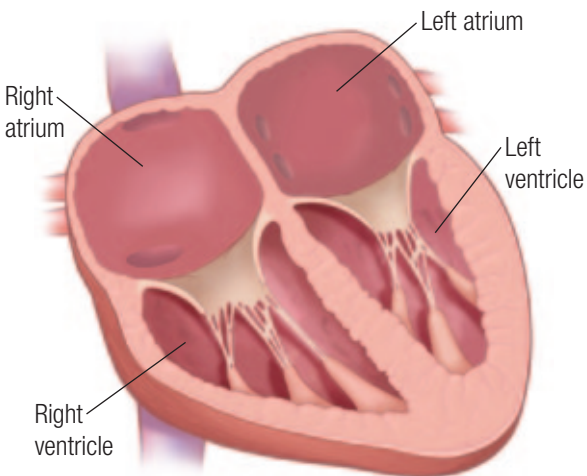
# HE HEART *and* How It Works

Your heart is an amazingly coordinated system. Muscles work to pump blood throughout the body, and an electrical system tells the heart when to beat.

## The Heart as a Pump

The heart has four chambers. The two top ones are the atria. The right atrium receives blood from the body. The left atrium receives blood from the lungs.

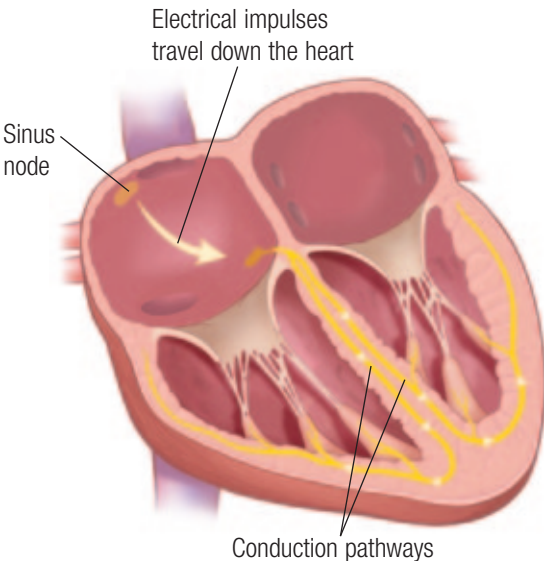
The ventricles are the main pumping chambers. They are below the atria. The right ventricle pumps blood to the lungs, where it's refreshed with oxygen. The left ventricle pumps oxygenated blood all through the body.



## Electrical Cells Signal the Pump

The sinus node is a group of heart cells in the wall of the right atrium. It acts as the heart's pacemaker. Electrical impulses sent from the sinus node signal the heart muscle to contract. This begins each heartbeat. These impulses follow conduction pathways to travel across the heart muscle in an orderly fashion. This causes the heart to beat steadily.

Each electrical impulse normally spreads over the atria first. These chambers contract, which helps blood flow into the ventricles. Next, the electrical impulse spreads to the ventricles, causing them to contract and pump blood out to all the body's cells.

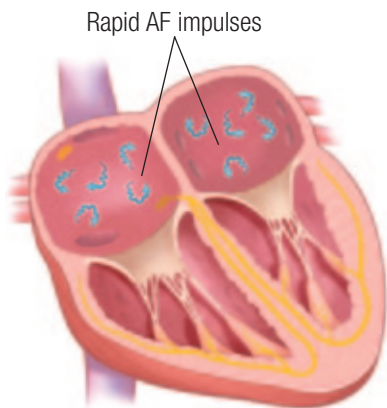


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## TRIAL FIBRILLATION: A Problem *with* *the Heart's Rhythm*

With AF, your heart's electrical impulses lose their regular rhythm. The impulses no longer come from the sinus node. Instead, they come from other parts of the atria. When someone is in AF, they have an irregular heartbeat. During AF, the impulses are very rapid (more than 300 beats per minute) and uneven. In response to these impulses, the atria contract quickly and unevenly. This means they aren't able to pump blood the way they should. In atrial fibrillation, the atria quiver like a bowl of gelatin, instead of pumping rhythmically and forcefully.

Sometimes rapid AF impulses cross to the ventricles. This causes them to beat rapidly and irregularly as well. However, this ventricular rate is much slower than the atrial rate. It usually ranges from 120 to 160 beats per minute.



Several abnormal impulses form inside both atria.

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# HAT CAUSES

## Atrial Fibrillation?

Often, the cause of AF is unknown. But certain factors can make you more likely to develop it. AF often affects people who have coronary heart disease or who've had a heart attack. Other conditions linked with AF include:

- *High blood pressure*
- *Recent heart surgery*
- **Valvular** heart disease (affecting one or more of the valves)
- *Inflammation of the heart muscle (**myocarditis**) or lining of the heart (**pericarditis**)*
- *Congenital heart defect (one present at birth)*
- *Overactive thyroid gland*
- *Acute or chronic lung disease*

Older people are more likely to have AF than younger people. In fact, the risk of AF increases with age. Atrial fibrillation is the most common heart arrhythmia in persons over the age of 65. Diabetes, excessive alcohol use and stimulant drug use are other factors that increase the risk of AF.

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## HAT ARE The Risks?

Although atrial fibrillation can feel weird and frightening, an AF episode usually doesn't have harmful consequences by itself. The real danger is the increased risk for stroke. Even when symptoms are not noticeable, AF can increase a person's risks for stroke and related heart problems.

**Usually, the most serious risk from AF is that it can lead to other medical problems, including:**

- *Stroke*
- *Heart failure*
- *Chronic fatigue*
- *Additional heart rhythm problems*
- *Inconsistent blood supply*

### Atrial Fibrillation and Stroke

During AF, some blood may not be pumped from the atria into the ventricles efficiently because the atria are quivering like a bowl of gelatin instead of pumping forcefully and rhythmically. Blood that's left behind can pool in the atria and form blood clots. If a blood clot leaves the heart and enters the bloodstream, it can travel to your brain, block an artery or blood vessel in the brain and cause a stroke.

Everyone with AF is at risk for a stroke, but some people are at greater risk than others. These include individuals who have already had a stroke or transient ischemic attack (TIA) as well as people over age 75 and those with hypertension, heart failure, or diabetes.



## Atrial Fibrillation and Heart Failure

Heart failure means the heart isn't pumping enough blood to meet the body's needs. AF can lead to heart failure because the heart is beating so fast that it never properly fills up with blood to pump out to the body. As a result, when the heart can't pump the blood forward, symptoms develop because:

- **Blood can “back up” in the pulmonary veins** (the vessels that return oxygen-rich blood from the lungs to the heart), which can cause fluid to back up into the lungs.
- **When AF causes heart failure, fluid in the lungs can cause fatigue and shortness of breath.** Oxygen-rich blood is not being delivered to the body and brain, causing physical and mental fatigue and reduced stamina. Fluid also can build up in the feet, ankles, and legs, causing heart-failure related weight gain.

## S YMPTOMS OF Atrial Fibrillation

Some people who have AF don't feel a thing. Others notice changes in their heartbeat right away. Many people feel a fast, uncomfortable, irregular heartbeat. It's sometimes described as a “flopping” or “fluttering” feeling in the chest. Dizziness, sweating and chest pain or pressure also can occur, particularly when the ventricular rate is rapid.

# TREATING

## Atrial Fibrillation

Treating AF correctly is the best way to reduce your risk for major vascular events, including stroke. Your treatment depends on the underlying cause and type of AF, your own symptoms, and your level of disability. Your healthcare provider will work with you on the best way to treat your AF. But all AF treatment plans should include three goals:

- *Control your ventricular rate within a relatively normal range*
- *Restore a normal heart rhythm, if possible*
- *Prevention of blood clots from forming and causing strokes*



## Controlling Your Heart Rate

Your ventricles are your heart's main pumping chambers. Your ventricles respond to AF by beating rapidly and irregularly. That causes the racing or "flopping" feeling in your chest. To control your heart rate, your doctor may prescribe medications to slow down the rate at which the ventricles contract. These medications may include a beta-blocker, a calcium channel blocker, or digitalis. Controlling the ventricular rate will:

- *Normalize your heart rate.*
- *Decrease your heart's workload.*
- *Reduce your discomfort.*
- *Prevent congestive heart failure.*

## Restoring the Proper Rhythm

To restore normal rhythm, the problem electrical signals must be stopped. Your doctor may recommend using medication. Another option is to apply an electrical shock to the chest (called cardioversion) after you're given a short-acting anesthetic to put you to sleep for a few minutes. (See page 12 to learn more.) Sometimes a combination of the medication and cardioversion is used.

## Preventing Clots with Medication

Your doctor will likely prescribe medication to prevent blood clots from forming within your heart due to your AF. Warfarin and aspirin are the two most commonly used, but there are also new oral antithrombotic agents, which might be prescribed. All these medications reduce the blood's ability to clot (coagulate). This helps reduce the risk of stroke in most patients with AF.

Warfarin, an anticoagulant (blood thinner), is currently the most commonly used drug for preventing blood clots. If you are taking warfarin, your healthcare provider will do a test called a Prothrombin Time (ProTime or PT). The results of this test are called an "INR" number. Checking the INR helps to keep your blood clotting at a safe and effective level. To be sure you're getting the right dose of warfarin, you should have an INR test at least once a month.

Newer anti-clotting medications do not require the frequent monitoring to check blood levels and may be an appropriate alternative to decrease stroke risk.

Aspirin has an anti-clotting effect. It makes blood platelet cells less likely to form clots and is often used in patients who have lower risk for having a stroke.

You are encouraged to work with your healthcare professional to decide on the most appropriate medication to take based on your personal stroke risk and response to the anti-clotting medication. If the dose is incorrect, these medications can cause abnormal bleeding or fail to protect you against clot formation. Visit [heart.org/AFib](http://heart.org/AFib) to learn more and get the most current scientific updates.

## Medication Precautions

Call your healthcare provider right away if you have any unusual bleeding or bruising while taking these medications. If you forget to take your daily anticoagulant dose, **don't** take an extra one to catch up! Follow your healthcare provider's directions about what to do if you miss a dose.

Talk to your healthcare professional about switching from one anticoagulant to another (including changing to a generic version). Be extra careful. Even small variations in the amount of the dose of a medication can cause problems.

Always tell your doctor, dentist and pharmacist that you take one of these medicines. This is especially important before you start taking a new medication or have any procedure that can cause bleeding.

Discuss any new medications with your healthcare providers. Many drugs change the effects of these agents on the body. Even vitamins (and some foods) could change the effect.

All medications have advantages and disadvantages in preventing strokes due to AF. But the benefits outweigh the potential risks in terms of safeguarding your health. Please discuss which medication is best for you with your healthcare provider.



# OTHER TREATMENT Procedures

Other treatments may control or stop the electrical impulses that cause AF.

## Electrical Cardioversion

**Electrical cardioversion** is a procedure that delivers a small electrical shock to the heart from outside the chest wall. This stops the heart's electrical activity briefly. The normal rhythm produced by the sinus node can then take over. Cardioversion can treat AF, but it is not a cure. Your healthcare provider can tell you if this procedure might help you.

## Catheter Ablation

To control the ventricular rate during AF, a **catheter** (thin wire) is inserted through a blood vessel to the heart. It delivers radiofrequency energy to destroy abnormal electrical cells. This is called a **catheter ablation**. It prevents the ventricles from beating too fast. If a catheter ablation is done, a permanent pacemaker will be implanted to maintain a normal heart rate.

The ablation procedure will control the ventricular rate and reduce your symptoms. However, your atria will still have AF.

You'll still have an ongoing risk for blood clotting and stroke. To manage this, you'll need to take anticoagulants indefinitely.

## Surgery

Another alternative treatment for AF is a surgery called the Maze Procedure. Incisions are made in the atria during open-heart surgery. Then, the incisions are sewn up. The scar tissue left behind blocks AF's abnormal electrical paths.

Finally, remember that researchers continue to make progress in finding ways to prevent or cure AF. Visit us online at [heart.org/AFib](https://www.heart.org/AFib) for ongoing updates on emerging treatment options for AF and other resources and information to help you manage your condition.



# WHAT YOU CAN DO to Reduce Your Risk

The best thing you can do is to follow your treatment plan and take things one day at a time.

## Take Your Medications

Take all medications exactly as directed. Managing your AF requires a steady amount of each medication in your body. That's why it's critical to follow your healthcare provider's instructions.

## Live a Healthy Lifestyle

Make healthy lifestyle choices. Ask your healthcare provider for smart eating guidelines. Don't smoke. If you do smoke, quit now. Choose a physical activity program that you can stick to and enjoy.

## Ask for the Support You Need

Your symptoms aren't easy for others to see. It may be hard for family, friends or employers to understand how AF affects your health and daily life.

Explain your condition, treatment plan and any lifestyle changes to your friends and family. Ask for their encouragement and support. This can help you live your life with as few disruptions as possible.



# FOR MORE INFORMATION

We have many educational booklets to help you make healthier choices to reduce your risk, manage disease or care for a loved one. Topics include:

- *Nutrition and weight management*
- *Smoking*
- *Cholesterol*
- *High blood pressure*
- *Physical activity*
- *Controlling risk factors*
- *Cardiovascular conditions*
- *Treatments*
- *Procedures*
- *Stroke and more*

To learn more, call us toll-free at **1-800-AHA-USA1 (1-800-242-8721)** or contact your nearest American Heart Association office. You can also visit our Web site, **heart.org**.

For information on stroke, call **1-888-4-STROKE (1-888-478-7653)** or visit us online at **strokeassociation.org**.

## HEART ATTACK *Warning Signs*

Some heart attacks are sudden and intense, but most of them start slowly, with mild pain or discomfort. Here are some of the signs that can mean a heart attack is happening.

- **Chest discomfort.** Most heart attacks involve discomfort in the center of the chest that lasts more than a few minutes, or that goes away and comes back. It can feel like uncomfortable pressure, squeezing, fullness or pain.
- **Discomfort in other areas of the upper body.** Symptoms can include pain or discomfort in one or both arms, the back, neck, jaw or stomach.
- **Shortness of breath.** This may occur with or without chest discomfort.
- **Other signs.** These may include breaking out in a cold sweat, nausea or lightheadedness.

As with men, women's most common heart attack symptom is chest pain or discomfort. But women are somewhat more likely than men to experience some of the other common symptoms, particularly shortness of breath, nausea/vomiting and back or jaw pain.

**If you or someone you're with has any of these symptoms, immediately call 9-1-1 or your emergency response number. Don't wait longer than five minutes before calling for help. You need to get to a hospital right away. (Calling 9-1-1 is almost always the fastest way to get lifesaving treatment.)**

## STROKE *Warning Signs*

- Sudden numbness or weakness of the face, arm or leg, especially on one side of the body
- Sudden confusion, or trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness or loss of balance or coordination
- Sudden, severe headache with no known cause

If you or someone with you has one or more of these signs, don't delay! Immediately call 9-1-1 or your emergency response number so an ambulance (ideally with advanced life support) can be sent for you. Also, check the time so you'll know when the first symptoms appeared. **It's very important to take immediate action.** If given within three hours of the start of symptoms, a clot-busting drug can reduce long-term disability for the most common type of stroke.





For heart- or risk-related information,  
call the American Heart Association at  
1-800-AHA-USA1 (1-800-242-8721)  
or visit us online at heart.org.

For stroke information, call our American Stroke  
Association at 1-888-4-STROKE (1-888-478-7653) or visit  
strokeassociation.org. For information on life after stroke,  
call and ask for the Stroke Family Support Network.

The statistics in this brochure were up to date at publication.  
For the latest statistics, see the Heart Disease and Stroke Statistics  
Update at heart.org/statistics.

VISIT US AT:  
[Heart.org/afib](http://Heart.org/afib)



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The American Heart Association/American Stroke Association's work to promote awareness  
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