



# Atrial Fibrillation and Atrial Flutter



**THE OHIO STATE UNIVERSITY**

WEXNER MEDICAL CENTER



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**Talk to your doctor or health care team if you have any questions about your care.**

For more health information, go to [patienteducation.osumc.edu](http://patienteducation.osumc.edu) or contact the Library for Health Information at 614-293-3707 or [health-info@osu.edu](mailto:health-info@osu.edu).

# Atrial Fibrillation and Atrial Flutter

These are problems with the rhythm of your heart beat that start in the upper chambers of your heart called the **right atrium and left atrium** or atria.

- **Atrial fibrillation** is also called **atrial fib** or **A-fib**. It causes your heart to beat faster or slower than normal and in an irregular rhythm.
- **Atrial flutter** can cause your heart to beat faster but in a regular rhythm. Sometimes this problem can lead to atrial fibrillation.

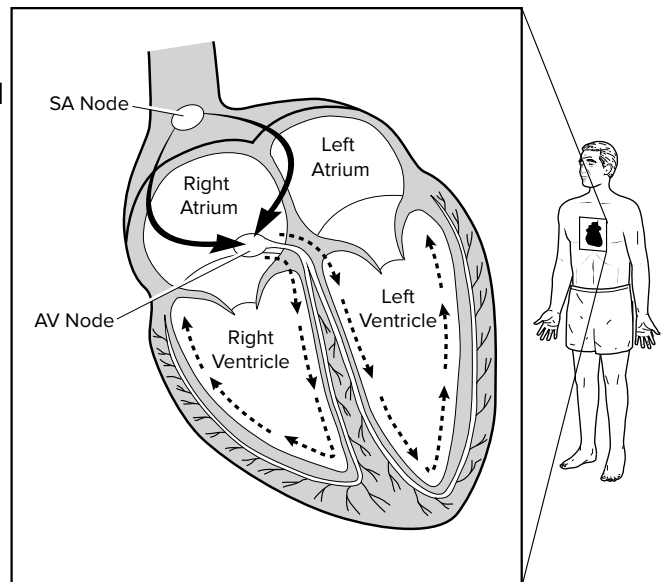
Atrial fib or flutter may happen for a short time and then stop or it may become more frequent and require treatment. Having atrial fib or flutter can put you at risk for forming blood clots in your heart. A clot could break loose and cause a stroke or other serious problems by blocking blood flow to other organs.

## Normal heart beat pattern

For most people, the heart pumps or contracts and relaxes to a regular beat.

What allows your heart to beat normally is an electric pulse that starts at the **SA node**.

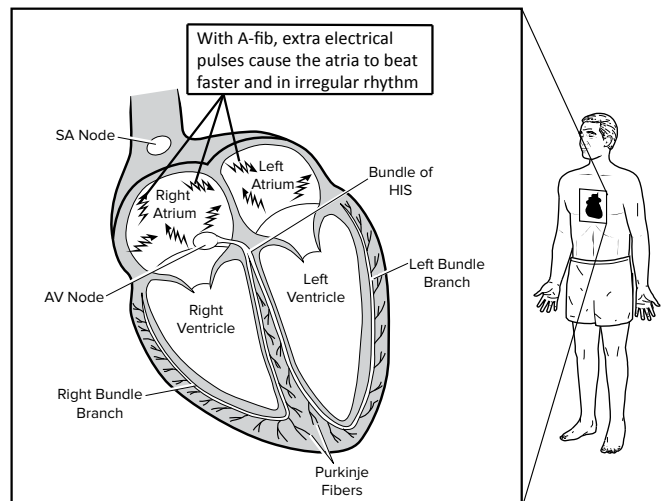
The SA node is above the upper chambers of the heart. SA stands for sino-atrial node. It is your heart's **natural pacemaker**. It sends electric signals to the rest of your heart to contract and pump blood.



## Atrial fib or atrial flutter

With atrial fib or atrial flutter, the SA node may not start the electric pulse. Instead, there are several signals coming from other parts of the atria. The heart beats in an irregular rhythm causing poor blood flow out of the heart. The rate of atrial fib can be fast or slow.

The poor blood flow can cause blood clots to form in your heart. If a clot breaks loose, it could cause a stroke or damage other organs in your body.



## Signs of atrial fib or flutter

You may have one or more of these signs if you have these heart problems:

- Fast or irregular heart beat
- Feel a throbbing, pounding, fluttering or thumping in the chest, also called palpitations
- Shortness of breath
- Chest pain
- Feel light-headed, dizzy or faint
- Feel weak or get tired easily, especially after exercise

## Risk factors

You may be more at risk for atrial fib or flutter if you have:

- High blood pressure
- Heart valve problems
- Heart defects
- Sick sinus syndrome, when the natural pacemaker of the heart is not working
- Previous history of open heart surgery
- Other heart disease such as coronary heart disease, heart failure or cardiomyopathy

Other things that can increase your risk include:

- Being 55 years of age or older
- Being overweight
- Having other health problems such as sleep apnea, diabetes, thyroid problems, emphysema or other lung diseases
- Using stimulants, such as alcohol, caffeine or tobacco
- Family history of atrial fib or flutter

## Testing

You may have one or more of these tests to check your heart:

- **Electrocardiogram (ECG):** Checks the electric signals of the heart. Stickers are placed on your chest, and arms or legs then wires are attached. Readings allow doctor to check how fast your heart beats and in what rhythm it beats.
- **Heart monitor:** Devices worn for a few days (Holter monitor) or as long as a month (event monitor) to check your heart rate and rhythm. Allows you to record signs and symptoms by pressing a button, so your doctor can check the time against your rhythm recorded on the monitor.
- **Echocardiogram:** Also called an echo or cardiac ultrasound, this test creates pictures of the heart using sound waves. This allows your doctor to see the size and shape of your heart and how well the chambers and valves are working.
- **Nuclear Stress test:** Medicine is used to speed up your heart to measure how the heart, lungs and muscles function when more blood and oxygen are needed.
- **Trans-esophageal echocardiogram (TEE):** A probe on the end of a flexible tube is put into your mouth and down into your esophagus. The probe takes ultrasound pictures of the heart from inside the esophagus. This allows your doctor to look at the back side of the heart to see if there are problems with the valves or any blood clots in the heart.

If you would like more information about any of these tests, please ask your health care team.

# Treatment

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The goals of treatment for atrial fib and flutter are to:

- Control your heart rate
- Prevent blood clots
- Help your heart beat at a more normal rhythm
- Treat other conditions that might cause atrial fib or make it worse

Your doctor or health care team may talk to you about one or more of these treatment options, based on your condition.

## To control your heart rate

Different medicines may be used to control your heart rate. Talk with your doctor, nurse or pharmacist if you have any questions about your medicines.

### Beta blockers

Beta blockers improve the heart's ability to relax and block the effect of other hormones in the body (adrenaline or norepinephrine).

They slow the heart rate and help control blood pressure. These medicines are used to treat high blood pressure, heart failure, angina (chest pain), and may be used after a heart attack to slow the heart rate.

**Side effects may include:** dizziness, slow heart rate, fatigue, shortness of breath when first starting medicine, and sexual dysfunction.

#### Medicine names:

- carvedilol (Coreg)
- atenolol (Tenormin)
- metoprolol (Toprol-XL, Lopressor)
- propranolol (Inderal)
- bisoprolol (Zebeta)
- other \_\_\_\_\_

### Calcium channel blockers

This type of medicine lowers blood pressure by slowing the heart rate and widening the blood vessels. This lessens the amount of work the heart needs to do. These medicines are used to treat high blood pressure, angina (chest pain), and slow the heart rate.

**Side effects may include:** dizziness, light-headedness, shortness of breath, slow heart rate, and constipation.

#### Medicine names:

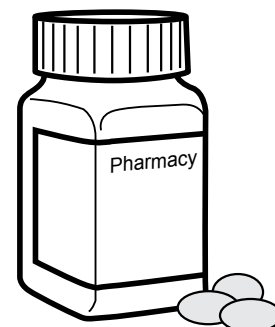
- diltiazem (Cardizem, Dilacor, Tiazac)
- verapamil (Calan, Isoptin, Covera)

### Digoxin (Lanoxin)

Digoxin can strengthen the heart muscle, so it pumps better. It also helps control the rate of your heart. It is used to treat heart failure and atrial fibrillation.

Digoxin may build up in your body, causing the amount of the drug in your blood to be higher than normal. **Your doctor may order a blood test to check your level.**

**Side effects may include:** loss of appetite, nausea and vomiting, diarrhea, frequent headaches, changes in vision, and skipped or slow heart beats.



## To prevent blood clots

### Blood thinning medicines (anticoagulants and antiplatelets)

Blood thinners are medicines used to keep harmful blood clots from forming in your body. Blood thinners can also prevent existing blood clots from getting bigger. These medicines do not really “thin” your blood, but make it harder for a blood clot to form.

**Anticoagulant** medicines increase the time it takes for your blood to clot and make it harder for a blood clot to form. These medicines include:

- warfarin (Coumadin or Jantoven)
- heparin
- dabigatran (Pradaxa) - do not remove from packaging until ready to take dose because medicine is sensitive to moisture and air
- rivaroxaban (Xarelto)
- fondaparinux (Arixtra)
- enoxaparin (Lovenox)
- dalteparin (Fragmin)
- apixaban (Eliquis)
- edoxaban (Savaysa)

**Antiplatelet** medicines prevent the platelets in your blood from sticking together and forming a blood clot. Aspirin is an antiplatelet medicine. Your doctor may order **aspirin** in addition to other blood thinning medicine.

Ask your doctor, nurse or pharmacist for more specific information about the medicines you are ordered.

Review **Safety When Taking Blood Thinners** on page 8 of this book if you are taking any blood thinner medicines.

### Special notes about warfarin

- **If you take warfarin (Coumadin), you will need to watch the amount of vitamin K rich foods you eat.** Keep the amount of vitamin K in your diet the same from week to week. A high increase or a high decrease in vitamin K foods you eat may cause problems in the way your blood clots. Foods high in vitamin K include: green leafy vegetables, spinach, broccoli, cabbage, greens (collard, turnip, beet, mustard and dandelion greens) kale, and Brussel sprouts. For a more complete list, ask your doctor or dietitian for the patient education handout Diet and Warfarin (Coumadin).
- Check with your doctor or dietitian before you take any dietary supplements like Ensure or Boost. Some supplements contain high amounts of vitamin K.

### Follow up and lab tests with warfarin

- Be sure to see your doctor as directed to manage your condition and to check how your medicine is working.
- Warfarin works best when taken as directed by your doctor. It is important to **have blood tests done as ordered by your doctor, especially if you take warfarin (Coumadin)**. The test is called **international normalized ratio (INR)**. INR is a calculation of how long it takes for your blood to clot. A normal INR for someone who does not take warfarin is 1.0. The higher the INR measurement, the longer it takes for your blood to clot. It is normal for your INR measurement to change slightly from time to time. Warfarin will cause the INR to increase, which prevents blood clots from forming easily.

## Procedure to preventing clots from forming in your heart

There is a pouch, called an appendage, in the left atrium of your heart and this is where most clots form in your heart. A procedure called a **left atrial appendage occlusion device insertion** that can be done to close off the opening of the appendage from the heart.

If you are not able to take blood thinner medicines, your doctor may talk to you about this procedure to prevent blood clots from forming in your heart.

## To have a more normal heart rhythm

### Anti-arrhythmics

**Anti-arrhythmic** medicines slow the heart rate to allow the heart's electrical system to beat normally. These medicines are used to treat irregular heart rhythms, such as atrial fibrillation or ventricular tachycardia. They will not cure the abnormal rhythms, but they will help to control them.

These medicines are often started in the hospital to check how your body will respond. Likely you would be in the hospital for 2 or 3 days and your heart rate and rhythm and blood work would be checked.

#### Medicine names:

- amiodarone (Cordarone, Pacerone)
- dofetilide (Tikosyn)
- dronedarone (Multaq)
- flecainide (Tambocor)
- propafenone (Rythmol)
- sotalol (Betapace, Sorine, Sotylize)

### Procedures

- **Cardioversion:** This is a low energy electrical shock to change your heart rhythm back to normal rhythm.

- **Ablation:** Procedure done to block abnormal electrical signals in the heart.
- **Pacemaker:** Placed to allow doctors to treat your A-fib with medicines without worrying about your heart rate becoming too slow. After some types of ablation, you might need a pacemaker.
- **Heart surgery:** The thoracoscopic Maze procedure is a minimally invasive surgery for treating A-fib.

## To treat other conditions

- **If you are overweight,** talk to your health care team about healthy weight loss. Ask about an exercise program that would be safe for you to follow to help you control your weight.
- **If you snore, wake up coughing during the night, or have trouble staying awake or concentrating because you are tired,** you may be sent for a sleep study to check if you have sleep apnea.
- **If you smoke or use tobacco products,** talk to your team about support to quit. There may be programs or classes in your area to help you quit.
- If you want to drink **alcohol,** be sure alcohol will not interact with any medicines you need to take. Limit alcoholic drinks to 1 a day for women and 2 drinks a day for men.
- **Manage any chronic health problems** with your health care team to keep them under control. For example:
  - Control your blood sugar if you have diabetes.
  - Take your blood pressure medicines and manage your stress if you have high blood pressure.
  - Use your CPAP if you have sleep apnea.

# Safety When Taking Blood Thinners

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## Bleeding precautions

**When you take blood thinners, you are at a higher risk for bleeding.** Always follow these safety precautions to prevent bleeding.

### Prevent falls and other injuries

- Make your home a safe environment. Ask for the patient education handout, [Fall Prevention at Home](#).
- Ask for help with walking.
- Avoid drinking alcohol when taking blood thinners.
- Bending over, with your head lower than your shoulders, may cause you to get dizzy and fall. When you bend, make sure to bend your knees and keep your head up.
- Do not play contact sports or do other activities where you could get hurt, such as football, hockey or skiing.
- Wear protective gear, such as helmets and elbow and knee pads, during non-contact sports.

### Protect your skin

- Use an electric razor when you shave.
- Wear gloves when you use sharp tools, such as knives or scissors, and when you work with plants or yard tools.
- Do not walk barefoot or wear open-toed shoes or flip-flops. Wear supportive shoes or non-skid slippers to protect your feet.
- Keep your nails trimmed and clean.
- Check your skin for any sores or open cuts that could bleed.

- Do not cut corns or calluses on your feet or hands. Talk to your doctor if you have these problems.
- Do not wear tight fitting clothes or elastic, including tight socks, undergarments and pantyhose.

### Prevent constipation

- Drink 8 to 10 cups of non-caffeinated fluid each day and eat a healthy diet.
- Do not strain when having a bowel movement. Ask your doctor about a stool softener or a laxative that is safe to use.
- Do not use enemas, suppositories and any harsh laxatives that could cause rectal bleeding.
- Exercise to help with constipation.

### Keep your mouth healthy

- Use a soft toothbrush or WaterPik.
- Do not use harsh or abrasive toothpaste.
- Use waxed dental floss.
- Do not use toothpicks.
- Check your mouth each day for bleeding or sores.
- If you wear dentures or a retainer, remove these for at least 8 hours each day to give your mouth a rest. Do not wear dentures or retainers that do not fit well.
- Talk to your doctor and your dentist about your medicines before you have any dental work done.



## Prevent and treat nose bleeds

- Use a humidifier to add moisture in the air, especially if you have the heat on in your home.
- Do not blow your nose hard or with force.
- Watch for nose bleeds, especially after you sneeze. If you have a nose bleed:
  1. Apply pressure and ice to your nose and the back of your neck.
  2. Sit with your head and body leaning forward. Do not lie down or put your head back.
  3. If the bleeding lasts more than 30 minutes get medical care.

## Follow up

- See your doctor as directed to manage your condition and to check how your medicine is working.
- Blood thinner medicines work best if they are taken as directed by your doctor.
- Have blood tests done as ordered by your doctor. A **prothrombin time (PT or Protime)** test checks to see how long it takes for your blood to clot. It is measured in seconds.
- Tell your doctors, pharmacist, dentist and any of your health care team members if you take blood thinners.
- Keep an up-to-date list of all your medicines with you. Make sure to include the dose, amount and how often you take the medicine.
- **Talk to your doctor or pharmacist before you take any new medicine to make sure it is safe for you to take with your blood thinner.** This includes any vitamins or herbal supplements, prescription medicines and over the counter medicines and remedies. Do not take any new medicines that contain aspirin, such as pain relievers or cold or stomach medicines.

## Before tests or procedures

- If you are going to have a test, procedure or surgery, you may be told to stop taking your blood thinner and then restart it later. Talk with the doctor who ordered your blood thinner and the doctor who ordered your test, procedure or surgery about how to take your blood thinner.
- If you have a stent, do NOT stop taking your medicines to prevent clots without first talking to the doctor who put in your stent. For more information, ask for the patient education handout, [Protect Your Stent](#).

# Know Your Stroke Risk

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## Higher risk of stroke

Having atrial fib or flutter can increase your risk of having a stroke. A stroke happens when a blood clot blocks the blood flow to part of your brain causing damage.

Stroke risk is higher for women and people over 75 years of age. It is also higher in people with:

- High blood pressure called hypertension
- Diabetes
- Heart failure
- Heart or blood vessel diseases, such as coronary heart disease, heart attack, peripheral artery disease (PAD) and transient ischemic attack (TIA)

Talk to your health care team about your risk factors and what you can do to reduce your risk.

## Follow up care

- Take your medicines as directed. Review the drug information for any medicines you are taking.
- Be sure to ask your doctor, nurse or pharmacist if you have questions about your medicines.
- Keep your appointments to have lab tests done.
- Keep your appointments with your doctors to manage atrial fib or flutter and any other health problems you have.
- Do not stop taking any of your medicine without first checking with your doctor.

## Call 911

Call 911 if you have any **stroke signs**:

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

Call 911 if you have signs of **heart or breathing problems** such as:

- Chest pain
- Shortness of breath
- Feel your heart is pounding, thumping, beating very fast or very slow
- Feel light-headed, dizzy or faint
- Feel weak or get tired easily, especially after exercise
- Anxiety
- Confusion
- Sweating

STROKE IS AN EMERGENCY

**BE FAST**



**B = BALANCE**  
Sudden loss of balance  
or coordination



**E = EYES**  
Loss of vision in one  
or both eyes



**F = FACIAL DROOP**  
or uneven smile



**A = ARM NUMBNESS**  
or weakness



**S = SLURRED SPEECH**  
Difficulty speaking or  
understanding



**T = TIME**  
Call 911 and get to the  
hospital immediately



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