



## Atrial Fibrillation

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### What is atrial fibrillation?

Atrial fibrillation is a change in your heart rhythm. It causes an irregular and sometimes very fast heartbeat.

### How does it occur?

An electrical impulse in your heart causes it to pump. Normally, this impulse starts in the right upper chamber of the heart (the right atrium). It then moves along a pathway to the lower chambers of the heart (the ventricles).

In atrial fibrillation, the electrical signal in the upper part of your heart is chaotic. The atrial muscles quiver. The electrical impulses reach the lower chambers of the heart irregularly. The irregularity can make it harder for your heart to pump efficiently. The heart may also beat very fast.

Common causes of atrial fibrillation are:

- heart disease, including coronary artery disease, heart enlargement due to many years of high blood pressure, and heart failure from other causes
- damage to the mitral valve (located between the upper and lower left heart chambers), usually due to rheumatic fever or mitral valve prolapse, a malfunction of the valve.

Other causes of atrial fibrillation include:

- an overactive thyroid gland
- pneumonia
- chronic lung disease
- heavy drinking of alcohol.

Sometimes no cause for atrial fibrillation can be found.

## **What are the symptoms?**

The most common symptoms are:

- irregular heartbeat
- fast heart rate
- dizziness and lightheadedness
- heart palpitations that feel like a sudden pounding, fluttering, or racing in the chest
- weakness
- fatigue
- shortness of breath.

Some people may have chest pain. When atrial fibrillation affects the pumping of your heart, your blood pressure may fall and you may feel lightheaded or faint.

Occasionally, the first symptom is a stroke, caused by a blood clot that formed in the fibrillating atrium and traveled to the brain.

Some people have no symptoms.

## **How is it diagnosed?**

Your healthcare provider will ask about your symptoms and examine you. The diagnosis can be confirmed with an electrocardiogram (ECG). An ECG measures the electrical activity of your heart. It will show a special pattern when atrial fibrillation is occurring. Sometimes atrial fibrillation comes and goes before it can be seen on an ECG. In this case, you may have to wear a Holter monitor or event recorder to record your heart rate. The Holter monitor is a portable ECG used to detect heart rhythm problems.

Your provider will use your medical history, physical exam, and blood tests to look for a treatable cause of the abnormal heartbeat. You may also have an echocardiogram. This test uses sound waves to make images of your heart. It is a way to check for problems with the structure of the heart, such as an abnormal mitral valve.

## **How is it treated?**

Treatment depends on:

- the cause of the fibrillation
- the severity of your symptoms
- your medical history.

If a medical problem is causing atrial fibrillation, treating the problem usually causes the rhythm to go back to normal.

If your symptoms are not severe, treatment is usually a medicine to keep your heart from beating too fast. Medicines that can keep the heart from beating too fast are beta blockers, digoxin, and the calcium channel blockers diltiazem and verapamil.

Atrial fibrillation can cause blood clots to form in the heart. Blood clots in the heart can break off and cause a stroke. If your medical history puts you at high risk for forming a blood clot, you may need to take blood thinners, such as warfarin (Coumadin), to prevent a stroke.

If your symptoms are more severe, you may be better off having your heart back in a normal rhythm. To get your heart back in a normal rhythm, you may be treated with anti-arrhythmic medicines. You may be treated with cardioversion. For this procedure an anesthetic is given to keep you from feeling pain and then an electrical shock is applied to your chest that causes your heart to begin beating normally again.

If medicines don't work, your provider might suggest a procedure called radiofrequency ablation to keep your heart from going back into atrial fibrillation. This procedure uses electrical energy delivered to the inside of the heart to treat abnormal heart rhythms. It blocks abnormal electrical pathways in the heart and helps stop abnormal heart rhythms.

### **What are the complications?**

The most serious complication of atrial fibrillation is a stroke caused by a blood clot in the brain. During atrial fibrillation, blood clots can form in the heart. Clots may then travel in the bloodstream to the brain, where they can block blood flow to a part of the brain and cause a stroke. The risk of a stroke can be reduced by blood thinners.

### **How can I take care of myself?**

- Take your medicines as prescribed.
- If you take anticoagulants, keep appointments for follow-up blood tests.
- Contact your healthcare provider right away if you have any new symptoms or symptoms that come back, such as falling or fainting.

### **How can I prevent atrial fibrillation?**

The best prevention is to have a heart-healthy lifestyle. Eat a healthy diet, stay fit with the right kind of exercise for you, do not smoke, and limit your use of alcohol. If you have heart disease or high blood pressure, follow your healthcare provider's advice closely.