A patient's guide to understanding **Atrial Fibrillation.** Information that will help you stay healthy.

What is Atrial Fibrillation?

Normally, the heart beats at an even, steady pace. The speed and pattern of the heartbeat is called **rhythm**. The rhythm helps the heart pump the right amount of blood to all parts of the body.

In **atrial fibrillation** (or A-Fib), the upper chambers of the heart beat in a fast, uneven manner. This irregular and rapid heartbeat can cause symptoms like:

- Dizziness or lightheadedness
- Palpitations or fluttering in the chest
- Sensations of a racing heartbeat
- Shortness of breath

A Risk Factor For Stroke

If it is not treated, atrial fibrillation can lead to serious health problems. For example, people who have atrial fibrillation are at a much higher risk for stroke. By working closely with your health care provider, serious health problems often can be prevented.

How The Heart Works

Learning how the heart works will help you understand atrial fibrillation. Inside the heart there are four chambers-there are two on top and two on the bottom.

The upper chambers (atria) collect blood as it comes into the heart. As the heart beats, they contract and push blood into the lower chambers. The lower chambers (ventricles) then contract and pump blood out of the heart.

The contraction and relaxation (beating) of the chambers is regulated by the heart's electrical system. This system is made up

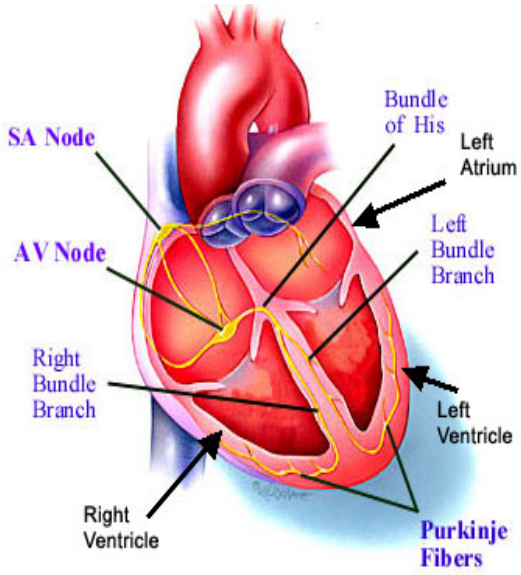
of cells. Some of the cells form nodes. Signals from the cells tell your heart when to beat.

How Your Electrical System Works

Signals from the SA node tell the upper chambers
when to contract (beat).

Signals from the SA node are transmitted by the AV node. The AV node sends these signals to the lower chambers.

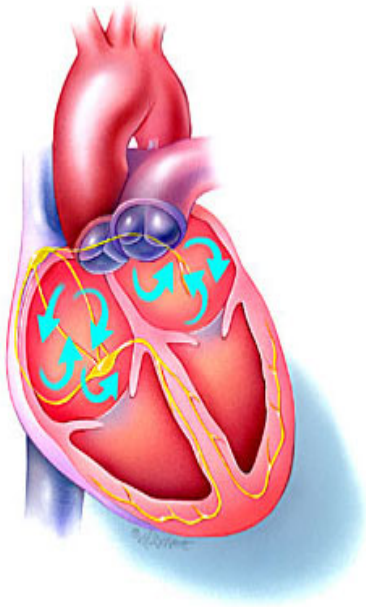
Pathways in the muscle walls carry signals through the lower chambers. These signals tell the lower chambers when to contract and pump blood.



In atrial fibrillation, cells in the upper chambers send more than the normal amount of signals.

Extra signals make the upper chambers beat in an irregular manner. They actually beat so fast that they quiver instead of contracting.

The upper chambers do not push enough blood into the lower chambers, blood tends to pool inside the upper chambers. This blood is prone to forming clots that can break off and travel to the brain. When this happens brain cells are damaged. This is called a stroke.



Your Treatment

Your doctor will decide which treatment is best for you based on your individual needs.

Medication

Antiarrhythmic medications help restore normal heart rhythm. They include beta blockers, calcium channel blockers and digoxin (or digitalis).

Anticoagulant medications prevent blood clots from forming in the heart's upper chambers. Anticoagulants include medications like Coumadin® also known as Warfarin. If you take an anticoagulant, blood tests will need to be done so your doctor can see how long it takes your blood to clot. Results of the blood tests will determine the medication dose.

Since anticoagulants can cause excessive bleeding, it's important to report any of these signs of bleeding to your doctor right away:

- Nose bleeds or bleeding gums
- Excessive bleeding or bruising
- Black or tarry stools

Tell any health care professional you see that you are taking an anticoagulant. Talk to your doctor before taking any prescription or nonprescription medications. Certain medications, such as antibiotics, and some over-the-counter anti-inflammatory medications, like Motrin® or Advil®, can affect the way an anticoagulant medication works. Also check with your doctor before you drink alcohol.

Cardioversion

A procedure called **cardioversion** may be used to restore the heart to its normal rhythm.

In **external cardioversion** a device called a defibrillator is used to deliver an electric shock to the heart. The shock stops the heart's electrical activity for a split second. At the end of this procedure the heart should return to a normal rate and rhythm.

In **internal cardioversion** an atrial cardioverter defibrillator device is implanted under the skin. Wires from the cardioverter run through veins to the heart. This device delivers a shock to the heart when it senses atrial fibrillation.

Catheter Ablation

In **catheter ablation**, a thin tube (catheter) is threaded through a blood vessel into the heart. The catheter is positioned in the cells that are causing the irregular rhythms. Through the catheter, a radiofrequency energy is applied to a small area of tissue. This energy destroys only the problem cells so they can no longer send the signals that are causing the irregular rhythms.

Pacemaker Implantation

Sometimes catheter ablation is used to knock out the AV node so it cannot send signals to the lower chambers. When the AV node is destroyed, a pacemaker is permanently implanted in the chest. The pacemaker then signals the lower chambers to contract.

Other Treatments

New ways to treat atrial fibrillation are being developed. Your doctor may recommend a new type of treatment. Any treatment that is not listed here will be explained to you.

A Word About Caffeine

Caffeine raises your heart rate and blood pressure. People with atrial fibrillation should avoid products that contain caffeine, like coffee, tea, soda pop, chocolate, diet pills and some over-the-counter pain relievers and cold medications.

Lifestyle Changes

Your doctor may want you to make some lifestyle changes to improve the health of your heart. For example you may be advised to eat low fat foods, reduce your salt intake, limit alcohol, increase your physical activity and quit smoking. Making these changes will help reduce you risk of future heart problems.

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