



Patient Information

Atrial Fibrillation

The most common *arrhythmia* (ah-rith-me-ah)—or problem with the heartbeat—is *atrial fibrillation* (a-tre-al fi-bri-lay-shun), or AF. The problem may be that the heart is beating too fast, too slow, or on an irregular rhythmic pattern.

AF occurs when the electrical signals in the heart cause the upper 2 chambers, called the *atria* (ay-tree-uh), to contract very fast and off their normal beat. This results in the upper and lower chambers of the heart working against each other rather than together. Blood can pool in the atria instead of being pumped completely into the lower chambers. This can result in the formation of a blood clot—which, if released from the heart and passed to the brain, can cause stroke or other serious injury.

AF is often a result of changes in your heart that occur due to heart disease or high blood pressure. Although not life-threatening, AF is in fact a medical emergency and requires treatment to prevent other complications that may be life threatening.

How do I know if I'm at risk?

Individuals who have heart diseases or conditions, including coronary artery disease, heart failure, or congenital heart defects, are more likely to develop AF. If you are overweight or obese, have high blood pressure, or drink large amounts or binge drink alcohol (consuming 4 to 5 drinks in 2 hours), your chances of developing AF also are increased. Even drinking modest amounts of alcohol over time, however,

can act as a trigger for AF in some individuals. Other triggers include stimulants, such as caffeine, and psychological stress.

If you have sleep apnea, a disorder in which your breathing is paused 1 or more times or you have shallow breaths throughout the night, you may have a greater risk of developing AF. Asthma and other inflammatory conditions can contribute to AF: Often, the treatment for these disorders involves high-dose steroid therapy, which has been connected to AF.

Age can play a factor in AF risk as well: People older than age 65 have a 3% to 5% greater risk of developing it.

What are the warning signs?

AF causes the atria of the heart to contract at a faster rate than normal, causing the ventricles to fill with blood and ultimately disabling them from pumping blood to the lungs and body. If the blood is pumping at an inefficient rate, you may experience chest pain; shortness of breath; confusion; weakness; palpitations; or feelings that your heart is skipping a beat, fluttering, or beating at an abnormal pace.

Sometimes, symptoms of AF may come and go, lasting anywhere from a few minutes to hours and then stopping. This type of AF is called *paroxysmal* (par-ahk-siz-mul) AF.

What tests do I need?

Electrocardiography (ee-lek-troh-car-dee-ahg-ruh-fee), referred to as EKG or ECG, is the most useful test to diagnose AF. An EKG records the heart's electrical activity



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and monitors its beating and rhythm. The test also examines the strength and timing of electrical signals as they pass through the various parts of the heart. However, an EKG only records the electrical activity for a few seconds, and is therefore unable to detect episodes that do not take place during the test. As such, you may be required to wear a Holter monitor (that monitors your heart's electrical activity for a full 24- or 48-hour period) or event monitor (that monitors your heart when you are experiencing symptoms).

Echocardiography, or echo for short, is another important test used to monitor AF. Using sound waves to produce a picture of your heart, the echo provides detailed information about your heart's size and shape as well as the workability of its chambers and valves. The echo can pinpoint the areas of your heart that have poor blood flow, as well as parts of the muscle that aren't contracting normally. For *transesophageal* (trans-i-sof-ah-ge-al) echocardiography, or TEE, a tube is placed in your mouth and down into your esophagus to take pictures of your heart chambers. Blood clots can be detected through TEE—which can allow for early treatment before a complication of AF occurs.

How can I avoid the problem?

A healthy lifestyle has proven successful in AF prevention. Following a diet that is low in saturated fat, trans fat, and cholesterol helps maintain a healthy heart. Eliminating the use of tobacco in your everyday life and getting regular physical activity to increase your metabolism and maintain a healthy weight are 2 important factors in maintaining a healthy lifestyle as well. Drinking alcohol, another stimulant and cause of weight gain, should be limited.

How is it treated?

The severity and frequency of your AF and its symptoms, as well as any previously diagnosed heart disorders, will determine the treatment you need. Generally, treatment involves medication, certain medical procedures, and lifestyle changes.

Preventing the formation of a blood clot is the most important aspect of AF treatment. Therefore, your doctor may prescribe blood-thinning medications, such as warfarin, heparin, or aspirin. Your doctor also may prescribe certain medications that can restore and maintain a normal rhythm for your heart. Generally, your medication dosage will start out low and increase as necessary to control your symptoms. If medication alone is not completely treating your AF, certain procedures, such as electrical cardioversion, may be necessary. You will be asleep for this procedure, in which an arrangement of low-energy shocks are delivered to the heart to trigger a normal rhythm.

Your doctor also will treat any underlying disorders that may be contributing to your AF, such as high blood pressure, thyroid medication, or stress levels.

For more information about AF, visit the AF page of the National Heart, Lung, and Blood Institute's Web site (http://www.nhlbi.nih.gov/health/dci/Diseases/af/af_what.html).

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