

Atrial Fibrillation and Stroke Information Page

What is Atrial Fibrillation and Stroke?

Atrial fibrillation (AF) describes the rapid, irregular beating of the left *atrium* (upper chamber) of the heart. These rapid contractions of the heart are weaker than normal contractions, resulting in slow flow of blood in the atrium. The blood pools and becomes sluggish and can result in the formation of blood clots. If a clot leaves the heart and travels to the brain, it can cause a stroke by blocking the flow of blood through cerebral arteries. Some people with AF have no symptoms, but others will experience a fluttering feeling in the area of the chest above the heart, chest pain, lightheadedness or fainting, shortness of breath, and fatigue. AF is diagnosed via an electrocardiogram (ECG), a device that records the heart's electrical activity. Other tests are often performed to rule out contributing causes, such as high blood pressure, an overactive thyroid gland, heart failure, faulty heart valves, lung disease, and stimulant or alcohol abuse. Some people will have no identifiable cause for their AF.

Is there any treatment?

To prevent the possibility of clotting and stroke, doctors often prescribe the drug warfarin to thin the blood in AF patients determined to have a high risk of stroke. Individuals on warfarin therapy must be monitored with periodic blood tests to make sure their blood is thin enough to prevent clots, but not so thin as to promote bleeding. Some AF patients have a lower risk of stroke and are treated with aspirin, which reduces clotting but is not as strong as warfarin. Other treatments for AF include medications such as beta blockers or calcium channel blockers to slow the heartbeat, and anti-arrhythmic drugs or electrical cardioversion (which delivers an electrical shock to the heart) to normalize the heartbeat.

What is the prognosis?

AF, which affects as many as 2.2 million Americans, increases an individual's risk of stroke by 4 to 6 times on average. The risk increases with age. In people over 80 years old, AF is the direct cause of 1 in 4 strokes. Treating individuals with warfarin reduces the rate of stroke for those who have AF by approximately one-half to two-thirds.

What research is being done?

The National Institute of Neurological Disorders and Stroke (NINDS) is the leading Federal agency directing and funding research relevant to AF and stroke prevention. The NINDS conducts basic and clinical research in its laboratories and clinics at the National Institutes of Health (NIH), and also supports additional research through grants to major medical institutions across the country. Much of this research focuses on finding better ways to prevent, treat, and ultimately cure disorders such as AF that can increase the risk of stroke.

Information provided by the National Institute of Neurological Disorders and Stroke