

Atrial Fibrillation

Fact Sheet

Atrial Fibrillation¹

Atrial fibrillation is a disorder in which the normally regular and coordinated contraction pattern of the heart's two small upper chambers (the atria) becomes irregular and uncoordinated.

The chaotic contraction pattern associated with atrial fibrillation causes blood to pool up in the atria, predisposing the formation of clots, which may escape from the heart and become lodged in the arteries leading to the brain and other organs thereby blocking necessary blood flow. Many people with atrial fibrillation do not have any symptoms but some may feel heart palpitations, shortness of breath, dizziness or fatigue.

Complications of Atrial Fibrillation

The two most common complications of atrial fibrillation are:

Stroke

- People with non-valvular atrial fibrillation (AF) are at increased risk for forming blood clots and AF is associated with a five-fold increased risk of stroke.² AF is associated with up to 20 percent of strokes in the U.S.³
- Ischemic strokes associated with atrial fibrillation are:
 - Twice as likely to be fatal as non-AF strokes⁴
 - Twice as likely to be disabling as non-AF strokes⁵
- Approximately 60 percent of strokes associated with atrial fibrillation are potentially preventable⁶

Atrial Fibrillation Facts and Figures

- Approximately 2.3 million Americans have atrial fibrillation, making it the most common heart rhythm disorder in America¹⁷
- Stroke risk increases with age in patients with atrial fibrillation¹⁸
- Other risk factors that increase risk of stroke for patients with AF include congestive heart failure, hypertension, diabetes and stroke or transient ischemic attack (TIA)¹⁰

Heart Failure

- Some patients in whom the very rapid heart rate associated with atrial fibrillation is not controlled develop heart failure, a serious condition that occurs when the heart is unable to pump enough blood to meet the body's needs¹
- Up to 30 percent of heart failure patients have atrial fibrillation⁷
- The mortality rate from heart failure is higher for patients with atrial fibrillation than those without it⁷

Treatment of Atrial Fibrillation

- Management of atrial fibrillation involves:⁸
 - Stroke prevention
 - Control of heart rate and/or rhythm
- Most patients with atrial fibrillation should be anticoagulated for stroke prevention regardless of whether rate or rhythm is controlled⁹
- Medications to prevent stroke in AF include anticoagulant¹⁰ and antiplatelet treatments¹¹
 - **Antiplatelet therapy** may be used in low-risk patients or in those with contra-indications to anticoagulation¹¹
 - **Anticoagulant therapy** is the most effective stroke prevention treatment for high risk individuals with atrial fibrillation¹⁰
- Only 50- 64% of patients with AF who are eligible receive anticoagulation therapy^{12, 13, 14, 15, 16}

-
- ¹ NHLBI web site. "What is AFib?" Available at: http://www.nhlbi.nih.gov/health/dci/Diseases/af/af_what.html. Accessed on: January 27, 2009.
- ² American Heart Association. "2008 Heart Disease and Stroke Statistics." Available at: <http://www.americanheart.org/presenter.jhtml?identifier=3000090>. Accessed on: March 11, 2009.
- ³ Wolf PA et al. "Atrial Fibrillation as an Independent Risk Factor for Stroke: The Framingham Study." *Stroke*. 1991; 22:983-988.
- ⁴ Lin HJ, et al. "Stroke Prevention in Atrial Fibrillation: The Framingham Study." *Stroke*. 1996; 27:1760-1764.
- ⁵ Dulli D, et al. "Atrial Fibrillation is Associated with Severe Ischemic Stroke." *Neuroepidemiology*. 2003; 22: 118-123.
- ⁶ Hart, et al. "Meta-analysis: Antithrombotic Therapy to Prevent Stroke in Patients Who Have Nonvalvular Atrial Fibrillation." *Annals of Internal Medicine*. 146(2007); 857-867.
- ⁷ Dries D, et al. "Atrial fibrillation is associated with an increased risk for mortality and heart failure progression in patients with asymptomatic and symptomatic left ventricular systolic dysfunction: a retrospective analysis of the SOLVD trials." *Journal of the American College of Cardiology*. 1998; 32:695-703.
- ⁸ Fuster, V et al. "Atrial Fibrillation: Developed in Collaboration With the European Heart Committee to Revise the 2001 Guidelines for the Management of Patients With the European Society of Cardiology Committee for Practice Guidelines (Writing Cardiology/American Heart Association Task Force on Practice Guidelines and Fibrillation—Executive Summary: A Report of the American College of ACC/AHA/ESC 2006 Guidelines for the Management of Patients With Atrial Rhythm Association and the Heart Rhythm Society." *Circulation*. 2006;114;700-752.
- ⁹ The AFFIRM Investigators. "A Comparison of Rate Control and Rhythm Control in Patients with Atrial Fibrillation." *New England Journal of Medicine*. 2002; 347:1825-33.
- ¹⁰ Atrial Fibrillation Investigators. "Risk Factors for Stroke and Efficacy of Antithrombotic Therapy in Atrial Fibrillation." *Archives of Internal Medicine*. 1994. 154:1449-57.
- ¹¹ The ACTIVE W Investigators. "Clopidogrel plus aspirin versus oral anticoagulation for atrial fibrillation in the Atrial fibrillation Clopidogrel Trial with Irbesartan for prevention of Vascular Events (ACTIVE W): a randomised controlled trial." *The Lancet*. 2006; 367: 1903–12.
- ¹² Go AS, et al. "Warfarin Use among Ambulatory Patients with Nonvalvular Atrial Fibrillation: The Anticoagulation and Risk Factors in Atrial Fibrillation (ATRIA) Study." *Annals of Internal Medicine*. 131(1999): 927-934.
- ¹³ Tapson, et al. "Antithrombotic Therapy Practices in US Hospitals in an Era of Practice Guidelines." *Arch Intern Med*. 2005;165:1458-1464.
- ¹⁴ Nieuwlaat R, et al. "Antithrombotic treatment in real-life atrial fibrillation patients: a report from the Euro Heart Survey on Atrial Fibrillation." *European Heart Journal*. 27(2006): 3018–3026.

¹⁵ Hylek E, et al. “Translating the Results of Randomized Trials into Clinical Practice: The Challenge of Warfarin Candidacy Among Hospitalized Elderly Patients With Atrial Fibrillation.” *Stroke*. 2006;37;1075-1080.

¹⁶ Deych EB, et al. “Use and Effectiveness of Warfarin in Medicare Beneficiaries With Atrial Fibrillation.” *Stroke*. 2006;37;1070-1074.

¹⁷ Go AS, et al. “Prevalence of Diagnosed Atrial Fibrillation in Adults: National Implications for Rhythm Management and Stroke Prevention: the AnTicoagulation and Risk Factors In Atrial Fibrillation (ATRIA) Study.” *Journal of the American Medical Association*. 2001; 285(18):2370-2375.

¹⁸ Frost L, et al. “Age and Risk of Stroke in Atrial Fibrillation: Evidence for Guidelines?” *Neuroepidemiology*. 2007;28:109-115.