

About Atrial Fibrillation

What is Atrial Fibrillation?

- Atrial Fibrillation, or AF, is a condition in which the heartbeat is rapid and irregular.¹
- AF is usually caused by other heart conditions, such as hypertension/high blood pressure, ischaemic heart disease and heart valve problems¹
- Risk factors for AF include increasing age,² obesity,¹ alcohol¹ and smoking.³
- The main complication of AF is an increased risk of stroke.¹

The burden of AF

- AF is the most common type of sustained arrhythmia in the general population,⁴ affecting approximately 1.5–2 per cent of the population in the developed world.⁵
- AF is associated with a five times higher risk of stroke, three times higher risk of heart failure and increased mortality.⁵
- The risk of death from stroke among patients with AF is nearly double the risk of death from stroke among patients who do not have AF.²
- Strokes that result from AF are more severe, compared to non-AF patients and are associated with a high risk of mortality (32.8%) and with a 50% probability of remaining disabled or handicapped within 3 months of having a stroke.⁶

The growing economic impact of AF

- In 2010, the total cost burden of AF in the EU was approximately €26-30bn.⁷
- By 2050 it is expected that in some European countries, nearly 40% of the population will be over 60.⁷
- AF prevalence among adults over 55 in the EU is expected to double from 8.8 to 17.9 million, between 2010 and 2060.⁴

Diagnosis of AF

- The most common symptom of AF is a quivering or fluttering heartbeat.⁸ The abnormal firing of electrical impulses causes the atria (the top chambers in the heart) to quiver (or fibrillate).⁸
- Some patients may experience one or more of the following additional symptoms:⁸
 - General fatigue
 - Rapid and irregular heartbeat

- Fluttering or “thumping” in the chest
 - Dizziness
 - Shortness of breath and anxiety
 - Weakness
 - Faintness or confusion
 - Fatigue when exercising
 - Sweating
 - Chest pain or pressure
- The problem of early recognition of AF is greatly aggravated by the often ‘silent’ nature of the rhythm disturbance. In about one-third of patients with this arrhythmia, the patient is not aware of so-called ‘asymptomatic AF’.²
 - Detecting an irregular heart rhythm can be as simple as a manual pulse check, with any unusual rhythm verified with an electrocardiogram (ECG). AF is usually suspected on the basis of the patient’s symptoms or discovered on physical examination by feeling the pulse.⁹
 - All patients with suspected AF, whether symptomatic or not, should have an electrocardiogram (ECG) to confirm the diagnosis.²
 - Many patients are not diagnosed early enough and an acute stroke is a common first presentation of AF.²

Management of AF

- Management of AF aims to reduce symptoms and prevent severe complications.² There are several options available, including:¹
 - Rate control: bringing the heart rate back to a normal range
 - Rhythm control: converting the irregular rhythm back to a normal regular rhythm
 - Anticoagulation: preventing blood clots from forming to decrease the risk of stroke
- To reduce the risk of AF-related stroke, drugs that prevent blood clot formation, called oral anticoagulants (OACs), are often used.² There are two classes of OACs now available:²
 - **Vitamin K antagonists (VKAs)** such as warfarin have been the mainstay of oral anticoagulation therapy for many years.² Warfarin is effective for long-term treatment and prevention of clots in AF, however it has several disadvantages, including the need for regular blood tests to monitor levels, the need for frequent dose adjustments, and interactions with a variety of foods and other medications.^{10,11}
 - **Newer non-VKA oral anticoagulants (NOACs)**, which include dabigatran, rivaroxaban, apixaban and edoxaban. They can offer potential advantages over VKAs; including rapid onset and offset of the effect, absence of dietary interactions and fewer drug interactions,¹² which can offer physicians and patients greater treatment assurance.

References

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- ¹ Patient.co.uk. Atrial Fibrillation. <http://www.patient.co.uk/pdf/4198.pdf> (2012). Last accessed June 2014.
- ² Camm, A. et al. Guidelines for the management of atrial fibrillation: the Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). European Heart Journal. 2010;31:2369–429.

³ NHS Choices. Atrial fibrillation - information prescription. <http://www.nhs.uk/conditions/Atrial-fibrillation> (2011). Last accessed June 2014.

⁴ Krijthe, B.P., et al. 2013. 'Projections on the number of individuals with atrial fibrillation in the European Union from 2000 to 2060.' *European Heart Journal* 34(35): 2746–51.

⁵ Camm, A. et al. 2012. 2012 focused update of the ESC Guidelines for the management of atrial fibrillation: An update of the 2010 ESC Guidelines for the management of atrial fibrillation. *European Heart Journal* 33: 2719–47.

⁶ Lamassa M, et al. Characteristics, Outcome, and Care of Stroke Associated With Atrial Fibrillation in Europe Data From a Multicenter Multinational Hospital-Based Registry (The European Community Stroke Project). *Stroke* 2001;32:392–8.

⁷ Lichten, C., Castle-Clarke, S., Manville, C., Horvath, V., Robin, E., Krapels, J., Parks, S., Sim, M., van Zijverden, O., Chataway, J. (2015). The future of anticoagulation management in atrial fibrillation in Europe: An assessment of today's challenges with recommendations for the future. Rand Corporation.

⁸ American Heart Association. What are the Symptoms of Atrial Fibrillation (AFib or AF)? Available at: http://www.heart.org/HEARTORG/Conditions/Arrhythmia/AboutArrhythmia/What-are-the-Symptoms-of-Atrial-Fibrillation-AFib-or-AF_UCM_423777_Article.jsp. Accessed: May 2015.

⁹ Fuster, V. et al. ACC/AHA/ESC 2006 Guidelines for the Management of Patients With Atrial Fibrillation--Executive Summary. *Circulation*. 2006;114:700–752.

¹⁰ Furugohri, T. et al. DU-176b, a potent and orally active factor Xa inhibitor: in vitro and in vivo pharmacological profiles. *Journal of Thrombosis and Haemostasis*. 2008;6:1542–9.

¹¹ Mavrakanas, T., Bounnameaux, H. The potential role of new oral anticoagulants in the prevention and treatment of thromboembolism. *Pharmacology & Therapeutics*. 2011;130:46–58.

¹² Ruff, C. et al. Comparison of the efficacy and safety of new oral anticoagulants with warfarin in patients with atrial fibrillation: a metaanalysis of randomised trials. *Lancet*, 2013; doi: 10.1016/S0140-6736(13)62343–0.