

What is AF?

Atrial fibrillation (also referred to as AF) is an abnormality in the rhythm of the heart (arrhythmia). It involves the upper chambers of the heart, the atria, beating irregularly. As the atria control the normal (sinus) rhythm of the heart, this means that your pulse becomes irregular.

Atrial fibrillation is the most common form of arrhythmia, affecting four out of every 100 people over the age of 65. A patient may not feel any symptoms when the heart rate changes from normal sinus rhythm to atrial fibrillation, and so it is often only detected by your doctor when you attend for other reasons. However, some patients may present with palpitations (being able to feel the increased and irregular heart rate), shortness of breath or chest pains.

Some patients with AF may spontaneously return to normal (sinus) rhythm after a short period of time. However, others may find they alternate between these two rhythms. This is called paroxysmal atrial fibrillation. Others may remain in AF, called permanent AF.

There are many different causes of atrial fibrillation. These include lung disease such as chronic bronchitis and pneumonia, disease of the heart valves, hypertension, heart failure, valvular disease, atherosclerosis, high blood pressure, an overactive thyroid gland or too much alcohol. However, these are not the only causes, and for some there may appear to be no obvious reason.

Atrial fibrillation can increase the risk of an AF-related stroke. The arrhythmia causes the blood to pool and this may cause a blood clot to form in the heart chambers which can then be carried to the small blood vessels in the brain where it blocks the blood flow and causes an AF-related stroke. To reduce the risk of an AF-related stroke, your doctor will assess your risk factors and decide whether to start you on an anticoagulant.

Antiplatelet drugs (Aspirin and Plavix) are no longer prescribed for AF unless you have had other conditions in the past such as a heart attack.

There are two main goals in managing AF. The first is to reduce a person's risk of an AF-related stroke. The second is to stop or reduce symptoms caused by the arrhythmia.

AF-related strokes

In AF, the contractions of the upper chamber becomes disorganized and does not contract smoothly. The atria appear to shake like jelly. In this situation, the blood flow reduces in some areas, especially in a side chamber of the left atrium called the 'left atrial appendage'. When the blood stops moving, it will tend to form clots.

When clots have formed in the atrium there is a chance that they will move into the blood flow and be carried in the circulation to smaller blood vessels of the brain. When an area of the brain has its blood supply blocked by a clot, this causes an ischemic (clot caused) stroke. Most AF clot related illness occurs in the brain as stroke but can cause issues in other areas of circulation.

Preventing an AF-related stroke

Several therapies are available which reduce the risk of an AF-related stroke significantly. Mostly this is in the form of anticoagulation, sometimes called blood thinning. There are now five commonly prescribed anticoagulants: the Vitamin K antagonist Warfarin and the Non-Vitamin K antagonists Apixaban, Dabigatran, Edoxaban and Rivaroxaban. It is very important that you discuss with your clinician which option is most suitable for you.

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Assess your personal risk score (CHA₂DS₂-VASc)

Question	Points	Your Score
Are you over 75?	2	
Are you over 65-74?	1	
Are you over 65 and female?	1	
Do you have high blood pressure?	1	
Do you have diabetes?	1	
Do you have heart failure?	1	
Do you have angina, suffered a heart attack or have circulation problems including problems with the aorta*?	1	
Have you suffered a stroke (even a mild stroke)?	2	
Total	—	

*The aorta is the large blood vessel in the abdomen that can become 'dilated' or swollen forming what is called an aneurysm.

Reduce platelet stickiness: Medication can reduce the tendency for platelets to stick together and thereby prevent platelet clots. The main medications in this area are Aspirin and Clopidogrel.

Left atrial appendage: The side chamber of the left atrium is a common area for the blood flow to be reduced with a risk of clots forming. This area can be blocked off or in extreme cases removed to reduce the risk of clots forming here.

This option is usually recommended to people who are unable to tolerate or are contraindicated for an anticoagulant.

AF-related stroke and aspirin

Medical professionals recommend Aspirin should not be used alone to reduce the risk of AF-related stroke.

The most effective option is an anticoagulant, but if there are reasons why this therapy cannot be used, then in a few cases, 'dual antiplatelet therapy' (Aspirin and Clopidogrel together) may be an option. Although, this will not reduce the risk of suffering an AF-related stroke as effectively as an anticoagulant and the risk of suffering a bleed, because of these therapies, will be as great as when taking an anticoagulant.

AF Association Factsheets

AF Association factsheets which may be of help: Apixaban, Dabigtran, Edoxaban, Rivaroxaban, Warfarin Therapy, Warfarin and Diet, Warfarin and other Medication, Aspirin and AF: FAQs.

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