Further information

Anticoagulation UK is committed to the prevention of thrombosis and to providing information and support to help people maintain their quality of life whilst on anticoagulant or antiplatelet therapy.

For more information or to receive a copy of our magazine Anticoagulation UK please email, send a request from our website or write to the address below.

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What is atrial fibrillation?

If you are healthy and your heart is working normally you are likely to have a regular resting heart rate of around 60 to 90 beats per minute.

If you are experiencing atrial fibrillation, however, you may notice your heartbeat becoming irregular and speeding up for no apparent reason. These feelings or “palpitations” may occur constantly or only from time to time. They are unpleasant and worrying and they should not be ignored as they may mean that something is seriously wrong with your heart.

Atrial fibrillation (AF) happens when the electrical control of your heartbeat becomes disrupted. Normally your heartbeat is controlled by electrical signals from its own natural pacemaker, called the sino-atrial node. These signals cause the upper chambers of your heart (the atria) to squeeze blood into the lower chambers (the ventricles) which then squeeze blood out into your blood vessels. The regular boom-boom of a healthy heart is the sound of the contracting atria quickly followed by the contracting ventricles.

In atrial fibrillation, however, the electrical signals become erratic causing the atria and ventricles to contract out of rhythm. Instead of beating normally the upper chambers, the atria, start making repetitive twitching movements known as ‘fibrillations’. This hampers the movement of blood from the atria into the ventricles. The ventricles respond by beating faster and more irregularly. It is this irregular ventricular beat you feel when you have a palpitation.
How common is atrial fibrillation?

Atrial fibrillation is the most common cause of irregular heartbeat, affecting around one in every 100 people. Although the condition is relatively rare in people under the age of 40, the risk of developing it increases significantly as you get older. By the age of 80 around 10 people in every 100 will have suffered the condition. Overall it is estimated that over a million people in the UK have atrial fibrillation.

People with AF experience a five-fold increased risk of stroke compared to those with a normal heartbeat.

What causes atrial fibrillation?

Atrial fibrillation can be caused by anything that damages the heart. This includes medical conditions such as:

- a heart attack
- high blood pressure
- heart failure
- rheumatic heart disease
- an overactive thyroid gland (hyperthyroidism)
- diabetes
- pneumonia
- heart surgery

Or lifestyles factors such as drinking too much alcohol on a regular basis.

However, in around 30 per cent of people with AF it is not possible to identify the precise cause. These cases are sometimes referred to as “lone atrial fibrillation”.

You may find that you become short of breath more often than usual, feel tired a lot of the time and that your ankles start to become swollen.

What are the symptoms?

Some people with atrial fibrillation have no symptoms at all. In these cases the condition is likely only to be discovered during a chance medical examination or when they develop another medical condition.

For most people, however, atrial fibrillation is all too obvious, causing an unpleasant feeling of an irregular or racing heartbeat. Some people describe this feeling as a “thumping” in their chest. It is also common to feel faint or light-headed when their heart is racing.
What will happen to me?

If you have been diagnosed with atrial fibrillation, or are concerned that you may have the condition, the good news is that there are a number of effective treatments that can both help bring your heartbeat back under control and reduce the risk of more serious medical consequences.

However, it is important to take the problem seriously. Atrial fibrillation can be the first sign of potentially life-threatening conditions such as heart failure, coronary artery disease, heart valve disease and high blood pressure. It is also a significant cause of illness in its own right. It has been estimated that untreated atrial fibrillation raises the risk of premature death.

One of the most serious consequences of atrial fibrillation is due to the development of blood clots. This can happen when blood that should be being pumped out of the heart, instead collects in the atria where it begins to form clots. These clots usually remain in the atria where they do little harm. However, occasionally a clot will break away and travel through the blood to other parts of the body.

If the blood clot travels to the brain then it can lodge in one of the smaller blood vessels and block the blood supply. This, in turn, may cause a stroke.

How is atrial fibrillation diagnosed?

If your GP suspects you have atrial fibrillation, he or she will probably refer you to a heart specialist for further tests. These are likely to include an electrocardiogram (ECG) in which electrodes are placed on your chest to test for any irregularity in the electrical activity of your heart. If your palpitations are occurring only occasionally the specialist may ask you to wear a portable ECG machine for a period of 24 hours.

The specialist will also want to perform some tests for possible causes of your irregular heartbeat. These will include a blood test to look for high levels of the thyroid hormone thyroxine. Images of your chest, taken with a chest X-ray and an ultrasound machine (an echocardiogram), may also be used to try to identify any abnormality in your heart that could be causing the problem.
How great is the risk of stroke?

If you have atrial fibrillation then, without treatment, you have a 5 per cent risk of having a stroke within a year. This risk will be even higher if you have other risk factors such as high blood pressure or other heart disease. It also rises as you get older. Overall, people with atrial fibrillation have five times the normal risk of suffering a stroke.

What is more, having a stroke appears to be more serious for people with atrial fibrillation than in those without. Your chances of having a second stroke, suffering severe disability or of dying are all significantly increased if you have an abnormal heart rhythm.

If all this sounds rather alarming then please be reassured there is plenty you can do to reduce these risks and protect yourself from the more serious consequences of atrial fibrillation.

What treatments will I be offered?

Treatment of atrial fibrillation has been shown to offer significant benefits in both reducing immediate symptoms and in offering protection against serious long-term consequences.

If you have been diagnosed with atrial fibrillation your doctor may recommend a number of different treatments. The aim of these therapies is:

- to restore the natural rhythm of your heart
- to relieve any symptoms you may have of heart failure, high blood pressure or angina that may be linked to your atrial fibrillation
- to improve the overall performance of your heart
- to reduce your breathlessness when you exercise
- to reduce your risk of suffering blood clots and stroke
Treatment of Atrial Fibrillation

WHAT TREATMENTS ARE AVAILABLE?

Treatments for atrial fibrillation can be loosely divided into three categories:

- those intended to restore the natural rhythm of the heart
- those intended to treat the underlying cause of the atrial fibrillation
- those intended to reduce the risk of blood clotting and thereby offer protection against stroke

How will my heart’s normal rhythm be restored?

Success in restoring the heart’s normal rhythm will depend on how seriously your heart’s rhythm is disrupted and on whether or not the doctor discovers any signs of an underlying medical condition.

If your heart appears to be healthy, then drugs may be used to bring your speeding heart rate back under control. This will then allow your heart to correct its own rhythm, a process known as spontaneous conversion.

In more serious cases or where the above approach does not work, the doctor may decide to restore the heart’s rhythm directly. This is known as cardioversion and can be achieved using either drugs or by applying an electrical current to your chest.

Electrical cardioversion is carried out under general anaesthetic and usually involves the patient being given a small electric shock to the chest to restores the normal heartbeat.

Some people may need to have a pacemaker fitted that will help to regulate your heart rhythm after the procedure.
How will the doctor treat my underlying disease?

This obviously depends on whatever underlying disease the doctor has identified.

Common conditions associated with atrial fibrillation that your doctor may treat with medication are listed below:

- **high blood pressure** – Lifestyle changes such as increased exercise, a low-salt diet, quitting smoking and reducing drinking can also help to reduce your blood pressure
- **heart failure**
- **an overactive thyroid gland (hyperthyroidism)**
- **diabetes**

How can I help to reduce my risk of a stroke?

Although everybody with atrial fibrillation has an above average risk of suffering a stroke, the danger is much higher in some than others. Your doctor will discuss your level of risk with you.

Regardless of your risk status there are a number of things you can do to reduce your risk of stroke. These include:

- **Stop smoking**
- **Lose any excess weight**
- **Take regular exercise**
- **Eat fewer fatty and processed food**
- **Eat more fruit and vegetables, fresh, frozen or canned**
- **Reduce the salt in your diet**
- **Don’t drink alcohol to excess**

For some people lifestyle changes alone are unlikely to be enough to significantly reduce your risk of stroke and you should be given anticoagulant therapy to reduce your risk.
What is anticoagulant therapy?

Anticoagulants are medicines that prevent the blood from clotting as quickly as normal. Some people call anticoagulants blood thinners. The blood is not actually made any thinner - it just takes longer to clot whilst you are taking anticoagulants. This reduces the chances of a blood clot forming in the heart and travelling to the brain, thereby cutting the risk of stroke.

If you have atrial fibrillation, then taking an anticoagulant will help to reduce your risk of suffering a stroke by around 60 per cent. Anticoagulants also protect those who have already suffered one stroke from having another. It appears to be particularly useful in preventing the more serious and debilitating strokes.

What anticoagulant therapy will I be prescribed?

Your doctor will discuss with you the benefits and risks of the different anticoagulants that are available.

Oral anticoagulants include Apixaban, Dabigatran, Edoxaban, Rivaroxaban and Warfarin. Dabigatran now has a reversal agent called Praxbind (idarucizumab). This can be used to reverse the effects of Dabigatran in cases of emergency surgery/urgent procedures or uncontrolled bleeding.

Apixaban, Dabigatran, Edoxaban and Rivaroxaban are Direct Oral Anticoagulants (DOACS). They work on a different part of your clotting system to warfarin and do not need to be monitored by regular blood tests. You will, however, need a blood test at least once a year to monitor how your kidneys are working. This may be referred to as monitoring your renal function.

Apixaban, Dabigatran, Edoxaban and Rivaroxaban have been approved for use in the prevention of stroke for people with non-valvular atrial fibrillation. (That is AF not caused by a heart valve problem) by The National Institute for Health and Care Excellence (NICE) and accepted by the Scottish Medicines Consortium (SMC). See page 20.
What are the side effects of anti-coagulant therapy?

The main risk with all anticoagulants is that they increase the risk of bleeding.

This bleeding can be minor – you may find you are more susceptible to bruising or nose bleeds or that it takes longer to stop the bleeding from a simple cut. However, more serious bleeds can include bleeding in the brain (haemorrhages) or in the stomach (an ulcer). The most serious bleeds can be fatal.

It is therefore important that in patients who are considered at high risk of bleeding the benefits of anticoagulation therapy are weighed against the potential dangers. Common risk factors for bleeding include:

- **Age over 75**
- **History of uncontrolled high blood pressure**
- **Excessive drinking of alcohol**
- **Liver disease**
- **Poor compliance with drug therapy**
- **Stomach ulcers**
- **Recent surgery**
- **Recent cerebral haemorrhage**

Warfarin is a drug that works by interfering with the chemical process that is involved in forming blood clots. You need to have your blood monitored regularly when you take warfarin to make sure your therapy is protecting you adequately. It will be monitored using a measurement called the “INR”, the International Normalised Ratio. This is a measurement of the time your blood takes to clot compared to normal. People not taking an anticoagulant have a INR of around 1.0. You will be given a target INR range and your dose of warfarin will be adjusted to help you achieve this target. Other drugs and over the counter medicines can interact with warfarin.

If you decide to take warfarin send for our booklet Living with Warfarin. See page 20.

When you first begin warfarin therapy your response to the drug may fluctuate a little. For this reason the blood tests will initially be taken every few days. With time, however, your response is likely to stabilise, and monitoring may be reduced to every few weeks depending on your response.

If you decide to take warfarin you may want to talk to your healthcare professional about self-monitoring your INR level at home.

The National Institute for Health and Care Excellence (NICE) has issued guidance for self-monitoring for people with atrial fibrillation, see page 20.
Aspirin

Aspirin is not an anticoagulant it is an anti-platelet. You should not be given aspirin to reduce your risk of a stroke as it is not as effective as taking anticoagulants, and can also cause serious bleeding.

In 2014 The National Institute for Health and Care Excellence (NICE) revised its guidance on atrial fibrillation. Part of that revision was to say that aspirin should not be given on its own to reduce the risk of stroke in people with atrial fibrillation. In July 2015 NICE published a Quality Standard on atrial fibrillation which repeated and reinforced that advice. See page 20.

Questions you may want to ask your doctor

- What is causing my atrial fibrillation – do I have an underlying disease?
- I have other symptoms (if you have other symptoms). Are these related to atrial fibrillation?
- Am I likely to have a stroke?
- What can I do to reduce my risk of stroke?
- Do I need anticoagulant therapy?
- What tests do I need?
- What do these tests involve?
- Am I likely to have a heart attack?
- What drugs can I take to restore my heart’s rhythm?
- What treatments can I have to restore my heart’s rhythm?
- Do they have side effects?
- What do I do if I experience side effects?
- Will I need to be on treatment for the rest of my life?
- Should I alter my lifestyle?
- Should I alter my diet?
- Can I still play sport?
- Can I still have sex?
- Is it safe for me to drive?
- Is it safe for me to fly?
- If my atrial fibrillation goes, how likely is it to come back?
If you need anticoagulant therapy

- Does my anticoagulant therapy need monitoring?
- How will you monitor my anticoagulant therapy?
- If I am taking Apixaban, Dabigatran, Edoxaban or Rivaroxaban will I need to have regular check ups or blood test during the year
- Can I monitor my own treatment? (This only applies to warfarin) See page 20
- Who can I ring for advice?

To help you discuss with your doctor the benefits and risks of the anticoagulants that are available you may want to send for our fact sheets on each anticoagulant.
Please send three second class stamps and your name and address to the address on the back page.

READ OR DOWNLOAD LIVING WITH WARFARIN AT:
www.anticoagulationuk.org/publications
For hard copy send name and address with three second class stamps to the address on the back page

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE
Guidance on self-monitoring
For Atrial fibrillation and heart valve disease:
www.nice.org.uk/guidance/dg14
MANAGEMENT OF ATRIAL FIBRILLATION (REVISED GUIDANCE)
www.nice.org.uk/guidance/CG180
QUALITY STANDARD FOR ATRIAL FIBRILLATION
www.nice.org.uk/guidance/qs93
Apixaban for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation:
www.nice.org.uk/guidance/TA275
Dabigatran etexilate for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation:
www.nice.org.uk/guidance/TA249
Edoxaban for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation:
www.nice.org.uk/guidance/TA355
Rivaroxaban for preventing stroke and systemic embolism in people with non-valvular atrial fibrillation:
www.nice.org.uk/guidance/TA256
Scottish Medicine Consortium advice relating to Apixaban, Dabigatran and Rivaroxaban and their indications can be found in the SMC Advice Directory:
www.scottishmedicines.org.uk/Home
Notes

Anticoagulation UK...

- Publishes Anticoagulation UK, a magazine with up-to-date information, helpful articles and advice, patient stories, the latest clinical evidence and much more.

- Has a comprehensive website www.anticoagulationuk.org

- Provides information booklets For a full list please write or email to the address on the back page of this booklet. Leaflets can also be read or downloaded online.

- Membership is £10.00 per year, you can join or renew online or by sending a cheque made payable to Anticoagulation UK to the address on the back page.

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- Shop on line and raise funds at no cost to you by going to www.giveasyoulive.co.uk and then follow instructions. You may need to type Anticoagulation UK as your charity to support.