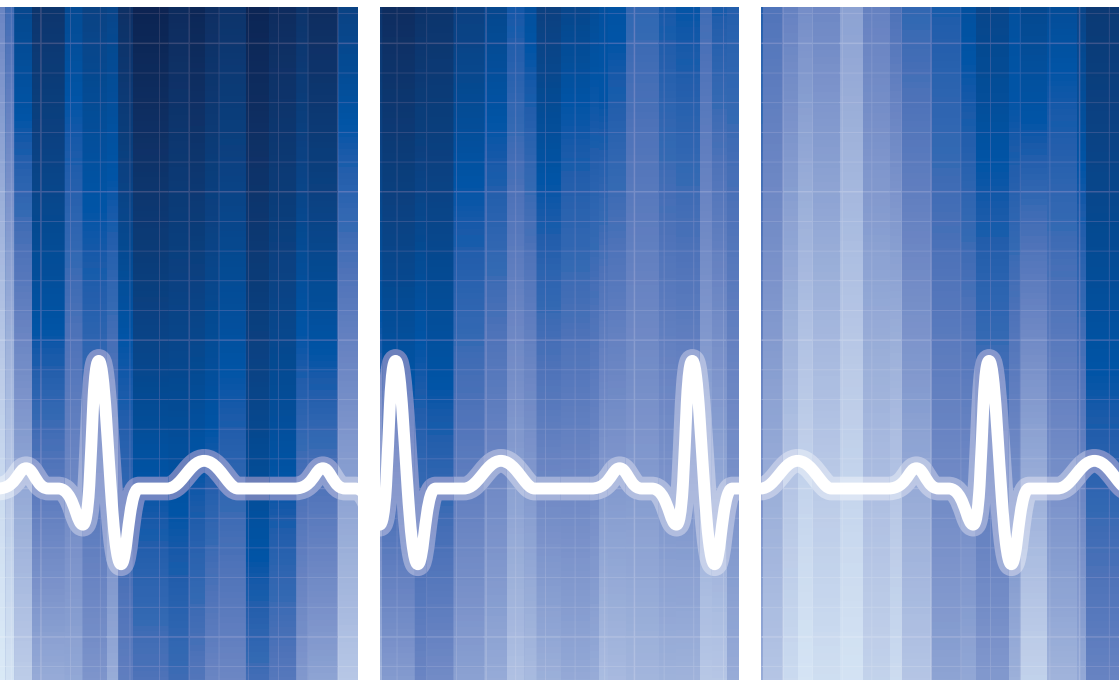




Living with AF and atrial flutter



Providing information, support and access to established,
new or innovative treatments for atrial fibrillation

www.afa-international.org

Glossary

Antiarrhythmic drugs Medications used to restore or maintain the normal heart rhythm

Anticoagulants drugs Medications which help to slow down the clotting process in blood, and reduce the risk of clots in the circulation

Arrhythmia Heart rhythm disorder

Arrhythmia nurse A nurse who is trained in heart rhythm disorders

Atrial fibrillation (AF) A heart condition that causes an irregular and often abnormally fast heart rate

Atrial flutter A rhythm disorder characterized by a rapid but regular heart rate although not as high as atrial fibrillation

Cardiologist A doctor who specializes in the diagnosis and treatment of patients with a heart condition

Echocardiogram An image of the heart using echocardiography or soundwave-based technology. An echocardiogram (nicknamed 'echo') shows a three-dimensional shot of the heart

Electrocardiogram (EKG) A representation of the heart's electrical activity in the form of wavy lines. An EKG is taken from electrodes on the skin surface.

Contents

Atrial fibrillation (AF)

What is atrial fibrillation?

Are there different types of AF?

What causes AF?

What are the symptoms of AF?

What are the risks of AF?

Tests and investigations

I have been diagnosed with AF – what now?

Living with AF

Psychological impact and coping

Alternative therapies

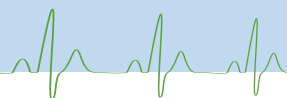
Healthy eating

Exercise

Intimacy

Driving

Traveling abroad



Electrophysiologist (EP) A cardiologist who specializes in heart rhythm disorders

Heart failure The inability (failure) of the heart to pump sufficient oxygenated blood around the body to meet physiological requirements

High blood pressure Also known as hypertension, this is a problem where the pressure in your circulation is higher than it should be.

Sinus rhythm Normal rhythm of the heart

Stroke This is also known as cerebrovascular accident (CVA). This is where the brain is damaged permanently by an interruption in its circulation. This can occur due to a blockage or a bleed into the brain.

Transient ischaemic attack (TIA) is also called a mini stroke. This is where the circulation to the brain is interrupted very briefly so although you develop the symptoms of a stroke, there is no permanent damage to the brain and a complete recovery is always achieved. The occurrence of a TIA requires a rapid review.

Atrial Flutter

What is atrial flutter?

What causes atrial flutter?

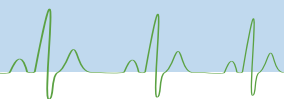
What are the symptoms of atrial flutter?

What are the risks of atrial flutter?

Diagnosis

Treatment

Stroke prevention



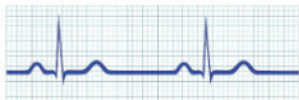
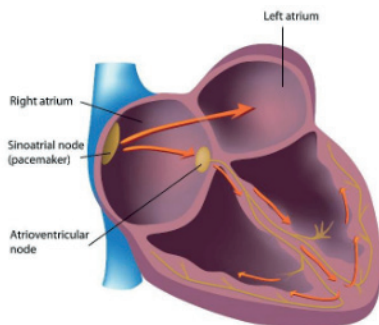
What is atrial fibrillation?

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

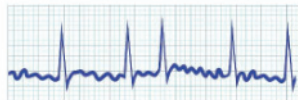
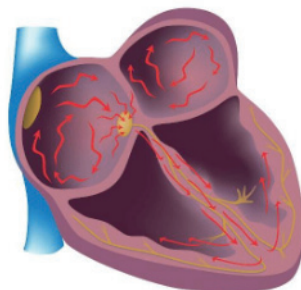
AF occurs when chaotic electrical activity develops in the atria, and completely takes over from the sinus node. As a result, the atria no longer beat in an organized way, and pump less efficiently. The AV node (a specialized cluster of heart cells) will stop some of these very rapid impulses from traveling to the ventricles, but the ventricles will still beat irregularly and possibly rapidly. This may contribute to symptoms of palpitations, shortness of breath, chest discomfort, light headedness, fainting or fatigue. The goal of treatment in AF is to restore the heart's normal rhythm and if this is not possible, then to slow the irregular heart rate, to alleviate symptoms and prevent complications of AF-Related stroke and heart failure.

**AF is the most common arrhythmia,
affecting four out of every 100 people over the age of 65.**

Normal



Atrial Fibrillation



Are there different types of AF?

Yes, early in the disease, AF is often intermittent, meaning that it can come and go without warning, and you may go long periods of time between 'spells'. When AF first occurs, the early episodes may be brief and cause very mild symptoms. In fact, some people with this early-stage AF may not even know they have it. AF falls into one of three categories that describe the progression of the disease, ranging from occasional episodes to the complete absence of a normal heart rhythm:

1. **Paroxysmal AF** – multiple episodes that cease within seven days without treatment
2. **Persistent AF** – episodes lasting longer than seven days, or less than seven days when treated
3. **Permanent AF** – when the presence of AF is accepted by the patient and the physician and strategies to restore sinus rhythm are not being pursued

What causes AF?

AF is related to age, the older you get, the more likely you are to develop it. AF is frequently noted after an 'open heart' operation. Other conditions or diseases can also increase your risk of getting AF. This does not mean that AF always develops but the risk does increase. Below are several conditions associated with AF:

- High blood pressure
- Coronary heart disease
- Mitral valve disease (caused by rheumatic heart disease, valve problems at birth, or infection)
- Congenital heart disease (abnormality of the heart present since birth)
- Pneumonia
- Lung cancer
- Pulmonary embolism
- Overactive thyroid
- Obesity

In addition, alcohol and drug abuse or misuse may predispose you to AF. While your risk of AF goes up with the problems mentioned above, many people develop AF for no explainable reason.

There is no 'typical' AF patient. AF occurs in men and women, in all races, and can occur at any age. While it can 'run in the family', most people diagnosed with AF will not have a family history of the condition. Some events and diseases may make AF more likely, but it can also occur without warning.

What are the symptoms of AF?

Symptoms of AF include:

- Palpitations which may be rapid
- Tiredness
- Shortness of breath
- Dizziness
- Chest pains

Some people with AF do not have any symptoms, and it may only be discovered at a routine medical examination or following an admission to the ER with another condition. However, some patients may present with palpitations (being able to feel the increased and irregular heart rate), shortness of breath or chest pains. The easiest way to detect AF is to feel your pulse. This should then be confirmed using an EKG.

What are the risks of AF?

The main risk associated with AF is stroke. This occurs because the atria are fibrillating and not beating in a co-ordinated way. As a result, the blood in the atria can become stagnant and then does not flow through the heart smoothly. This causes blood cells to stick together and form a clot which can travel (embolize) to the brain and result in a stroke.

Having an uncontrolled fast heart rate for long periods of time (weeks or months) can damage the heart and you should check with your doctor that your heart rate is controlled adequately. In extreme cases, often when the rate is very fast or when it happens in a damaged heart, AF can cause heart failure, which means that the heart becomes weak as a result of the rapid rhythm. As the heart weakens, there can be a build-up of pressure back into the lungs and this affects the normal breathing pattern.

In general, AF is not considered a life-threatening condition as long as it is treated appropriately.

Tests and investigations

The simplest way to detect heart rhythm disorders like AF is through a simple pulse check. If the rhythm of the beat seems irregular, this may indicate AF. However, it is very important to check this with a doctor and to find out whether you actually do have AF.

If a clinician suspects you have atrial fibrillation, they will arrange for you to have an EKG (electrocardiogram). An EKG is quick, painless, non-invasive and records the electrical activity of your heart. Usually this is carried out in a GP surgery or at a local hospital, however, if your episodes 'come and go', you may be given a monitor – this is worn (simply taped to your chest) for 24 hours or more, and continuously records the electrical activities of your heart. When the monitor is returned the clinician can download the information and assess it. The heart rhythm can be diagnosed with certainty and possible underlying heart problems may often be detected.

Following the EKG, if you are diagnosed as having AF, you may need to have an echocardiogram (a scan) which can assess the structure and overall function of the heart. This test is painless and without any risk to a patient. The results from this test will tell the physician about heart muscle disease (thickening or thinning), the size of the main pumping chambers, and the state of the heart valves, any of which might have aggravated the heart rhythm abnormality.

I have been diagnosed with AF

– what now?

Initially your general practitioner (GP) may arrange for some tests if you consult with them about your symptoms. Depending on the results of these investigations you may be referred to a cardiologist (heart specialist) – who may or may not have a special interest in heart rhythm disorders. After appropriate diagnosis, some patients will respond to medication and in this case, it may be that no additional treatment will be required.

You may be referred to a cardiologist who specializes in heart rhythm disorders, usually called an electrophysiologist (EP) – this type of doctor may offer ablation treatments. If you are seen by a general cardiologist you may be referred on to see an electrophysiologist. If this is not offered, you may request a referral from your GP or cardiologist.

To summarize, these are the services typically offered by each type of doctor:

- (1) General Practitioner** - overall responsibility for patient care and prescription of medication. May offer simple investigations and monitoring of anticoagulation therapy.
- (2) General Physician / Cardiologist** - investigation of heart disease, initiation and monitoring of drug treatment, cardioversion.
- (3) Electrophysiologist** - all aspects of heart rhythm diagnosis and treatment, including ablation procedures.

Living with AF

A diagnosis of AF can be a dramatic event and often comes as a surprise. It can be hard to come to terms with. A common response is “why me?” especially if you have been conscious of your diet and tried to be fit and active. Whatever the cause of AF, there will be a period of psychological adjustment following diagnosis as well as changes in how we think and behave.

There have been many medical advances and innovations in the treatment of AF. The outlook for people with AF is excellent and there is every reason to believe that quality of life will be as good as anyone else's.

Whatever your situation, a diagnosis of AF is an ideal time to take stock of your health and lifestyle. There may be things that you can do to reduce the impact of your condition and to look after your health and heart. There is not only life after diagnosis, but also a healthy and fit lifestyle with the right treatment.

Psychological impact and coping

The experience of a fast or irregular heart rhythm can trigger a cycle of anxiety, increased adrenaline, a further raised heartbeat, and more anxiety. This can be distressing and disabling for some people.

Depression is a natural and common reaction to a diagnosis of AF and can have far reaching effects for everyone concerned. It is always helpful to talk about your AF with a healthcare professional such as a GP. This can help them to understand what helps you, and adjust your medication if appropriate. If your GP suggests counseling or another form of psychological help, do consider this option.

Cognitive Behavior Therapy (CBT) can be very effective in helping to address anxiety and depression related to conditions like AF. This talking approach can help you to understand the things that trigger and contribute to your experience of AF related emotional reactions, and to develop more adaptive ways of responding to your condition. There are free online resources devoted to CBT and meditation.

Alternative therapies

Steps to promote emotional wellbeing can complement the more 'visible' forms of treatments prescribed by clinicians in the form of drugs. It can have a significant role to play in finding a holistic answer.

Meditation and relaxation can help you cope with stress-related symptoms, and evidence supports its benefits. Most towns have meditation centers where you can go and learn to calm the mind. Meditation may help to reduce the severity or frequency of AF episodes if stress seems to be a trigger.

Mindfulness is a branch of meditation which has grown in popularity over the last few years. It involves concentration on the senses and the present moment. Good bookshops have sections dedicated to mindfulness and wellbeing.

Studies have found that gentle forms of yoga and breathing exercises can help patients with AF. Practicing yoga can lead to a slight drop in systolic and diastolic blood pressure, and can have a beneficial effect on the heart rate. Yoga is easy to learn, and it can be practiced whilst sitting in a chair.

Some people claim that acupuncture can alleviate headaches, decrease pulse rates, and is associated with a lower incidence of paroxysmal AF.

Many health food products (e.g. ginger, ginkgo biloba, ginseng and St John's Wort) can affect the blood clotting process, prolong bleeding and affect INR levels in patients on warfarin, so it is best that patients seek advice from their doctors if they use these products or are considering them.

Healthy eating

If you are on warfarin, you need to be mindful of the vitamin K content in food, because this has a knock-on effect on INR levels, and this in turn affects your dose of warfarin. However, If the diet is reasonably consistent, then the amount of vitamin K in your diet will be matched by the warfarin dose.

For those who are not on warfarin, there are no hard and fast rules when it comes to diet because everyone's metabolism is different, but some people have reported that the following steps can reduce symptoms if they have paroxysmal AF (episodes that stop within 7 days without treatment):

- Some people say that a large meal can trigger AF, so it may be wise to eat smaller evening meals, no later than 7pm, if symptoms regularly come on at night.
- Drink less alcohol, and if you haven't done so already, try to cut out smoking. Nicotine is a cardiac stimulant and it is also known to cause coronary heart disease. Your local GP surgery will be able to refer you to a smoking cessation clinic.
- Keep tea and coffee consumption to a maximum total of 3 cups a day.
- Chocolate contains naturally occurring stimulants which can trigger an episode of AF in some people.
- Cut down on salt, especially if you suffer from high blood pressure.
- Follow a low fat diet and watch your cholesterol intake so you safeguard yourself against clogged arteries which might restrict blood flow.
- Grapefruit is an arrhythmic at high dose and affects the heart's 'QT' wave (electrical timing pattern) so it might be wise to avoid it.
- Some studies have suggested that foods including cheeses, some beans, processed meats and pickled foods may trigger an episode of paroxysmal AF in some people.



If you have paroxysmal AF, it is a good idea to keep a diary of triggers, recording things like whether the symptoms appeared after taking medication, if you had been feeling relaxed or panicky, perhaps you had been in a certain position, and the duration of the episode. Keeping such a diary can reveal a previously unnoticed pattern and highlight something you can avoid in future.

Always consult a doctor, dietician or arrhythmia nurse specialist before making significant changes to your diet.

Exercise

Although AF is more common amongst older people, it can also occur in people who have led a physically active lifestyle, including endurance athletes. Exercise is an important component of a healthy lifestyle and exercising according to a paced approach, at a level with which you are individually comfortable is sensible from a cardiovascular and emotional perspective. Your GP will have advice about the excellent benefits of being physically active.

'Use it or lose it' is more than just a catchy phrase. Prolonged periods of inactivity can be as harmful as overly strenuous exercise: moderation is the key. Walking regularly is an excellent way of keeping fit. Scan the local paper, leisure centers or library and you will discover a wealth of activities like tai-chi, yoga sessions or Zumba classes. If you would like to try more strenuous exercise such as sports or going to the gym, please discuss this with your clinician before participating.

Swimming is a great aerobic exercise. If you have been enjoying it for some time with no ill effects, it is probably fine for you. Humans are adapted for life on dry land and immersing the body in water squeezes blood from the extremities towards the chest. Cold water can have the same effect, as it causes surface blood vessels to narrow as a natural response in order to conserve heat. This may have implications for blood pressure and AF.

Be mindful of your condition if you notice signs and symptoms of slow heart rate, AF, or feeling faint.

Intimacy

Anxiety about the impact of physical activity on triggering and worsening AF is common. This can lead some people to feel worried about the safety of sexual activity. Losing interest or confidence in sex can affect you and your partner if you are in an intimate relationship. It can also affect how you feel about yourself and life in general.

Having a loving and satisfying sexual relationship is safe and indeed recommended by doctors. Sexual activity is a form of exercise, and it has cardiovascular benefits including increased blood flow, heart rate and deep breathing. All of these improve circulation of oxygen and hormones to organs and muscles, as well as the removal of waste products from the body. It improves the cholesterol balance and burns calories.

Having intimate contact promotes overall stress reduction. It boosts the immune system and has been linked with higher levels of an antibody (immunoglobulin A), which can protect us from getting colds and other infections. It reduces risk of prostate cancer in men and helps to minimize a woman's risk of incontinence later in life. It releases a hormone called oxytocin, the so-called 'love hormone', and this promotes sleep which is linked with other benefits such as maintaining a healthy weight and blood pressure. The deep relaxation that typically follows sex may be one of the few times people actually allow themselves to completely let go, surrender and relax.

If you have concerns about having sex following a diagnosis of AF, you can always discuss this with your doctor. The topic of sex can be difficult for patients to talk about, but remember that your doctor and nurses are used to talking about these things, and they are there to offer you the information and advice you need.



AF can contribute to erectile dysfunction – in fact this symptom sometimes leads to diagnosis in the first place. If you are thinking about using a drug to treat this, talk to your doctor, because they are aware both of your medical history and any possible drug interactions which might require monitoring. Having said this, it is not uncommon for AF patients to be safely prescribed erectile dysfunction medications.

Driving

Doctors should advise a patient with AF to contact the DMV but it is a patient's responsibility to do so. In general, reporting your AF is seldom an issue unless you are prone to experiencing unmanageable blackouts or severe symptoms which could impede driving ability. If you are an truck driver, you will need to check with the DMV and your cardiologist whether you are able to drive and if any further tests need to be carried out.

Please check the DMV website for current guidance in our area.

Traveling abroad

Before you go, make an appointment with your doctor. They know your medical history, so they are always the best person to advise you.

- Tell them how long you are going away for and which country you are visiting.
- Ask if you need to take any precautions, and ensure that any necessary immunizations will not interact with your AF medication, including anticoagulants.
- If you are on warfarin, discuss your INR levels while you are away – locate a clinic near to where you are staying.
- Ask if significant local time changes will make a difference as to how you take your medication.

Find out about local medical facilities and make a list of hospital telephone numbers and addresses, and if applicable, pacemaker and device specialist

It is a good idea to carry a medication alert card or wear a medical ID bracelet or necklace during your trip. This can state your condition, any implanted devices you may have, medication you take, and your doctor's contact details. Digital ID can carry a lot of information on your condition.

Wearing flight socks (also known as compression stockings) during journeys of four hours or more helps improve blood flow and studies show that they can reduce swollen ankles and the risk of deep vein thrombosis (DVT) significantly. They come in a variety of sizes, and there are also different levels of compression. Flight socks are available from pharmacies, airports and many retail outlets. It is important that they are measured and worn correctly and you should take advice on proper fitting from a pharmacist or healthcare professional. With anticoagulation, your risk of developing a clot of DVT is low and there is no reason why you cannot travel, including long-haul journeys.

During the journey:

- Take more medication than is required with you in your hand luggage in case of travel delays or loss.
- Carry a list of medications and doses.
- Carry a medication alert card or bracelet.
- If you have a device fitted, ask airport security if it is safe to walk through the security scanners or whether you need to be manually searched (present your device alert card).
- Get up and stretch your legs while traveling to reduce the risk of blood clots forming.
- Do anti-DVT exercises at least every half an hour. Raise your heels, keeping your toes on the floor, then bring them down again, do this 10 times, then raise and lower your toes 10 times.
- Drink plenty of water to counter the effects of dehydration.
- Wear loose comfortable clothes.
- Wear your flight socks throughout the flight.
- Drink alcohol in moderation or cut it out altogether, and avoid sleeping pills.
- Follow advice on how to take medication if on long-haul flights with significant time changes.

At your destination:

- Keep as much as you can to your normal sleep pattern to avoid becoming over-tired.
- Try not to exert yourself more than you usually do. Pushing yourself too hard could trigger AF symptoms.
- Stick to your normal diet as much as possible, particularly if you use warfarin.
- Be aware that alcohol and over eating can trigger AF.
- Get immediate medical help if you have unusual AF symptoms.



What is atrial flutter?

Atrial flutter is a relatively common heart rhythm disturbance encountered by doctors, although not as common as AF. It can affect adults of any age, but is more common in older patients and is also seen more often in men.

Atrial flutter has many clinical aspects that are similar to AF, and the two arrhythmias often occur in the same patient. However, there are important differences with respect to the electrical origins of these rhythm disturbances, and this can have a bearing on the treatment.

In atrial flutter, the atria beats very rapidly. Unlike AF, atrial flutter is a more organized electrical disturbance which originates in the right atrium in the majority of patients. The atria beats very quickly and regularly, at around 300 beats per minute. The AV node will not conduct all of these atrial beats to the ventricles but tends, instead, to only allow every second, third or fourth beat through, creating an often-regular heart rate of around 150, 100 or 75 beats per minute. Other ratios can occur, and often the ratio changes.

This increased heart rate may contribute to symptoms of palpitations, shortness of breath, chest discomfort, light headedness, or fatigue when atrial flutter occurs.

What causes atrial flutter?

As atrial flutter and AF share many similarities and can occur in the same patient, the two arrhythmias share many causes. Atrial flutter is more likely to occur as one gets older, and is more common in patients who have a history of previous heart disease. Men are more than twice as likely to get atrial flutter than women. Often there is no single factor that causes atrial flutter; rather there are a number of factors and conditions that increase the likelihood of atrial flutter.

Some of the risk factors for developing atrial flutter are:

- High blood pressure
- Ischemic heart disease
- Disease of the heart valves
- Cardiomyopathy
- Pneumonia
- Cardiac surgery
- Congenital heart disease (abnormality of the heart present since birth)
- Pericarditis (inflammation of the outer lining of the heart)
- Over-active thyroid (hyperthyroidism)
- Chronic airways disease/ Chronic Obstructive Pulmonary Disease (COPD)
- Excess alcohol
- Pulmonary embolism (blood clot in the lung)

However, these are not the only causes for developing atrial flutter, and for some there may appear to be no obvious reason.

What are the symptoms of atrial flutter?

Some people with atrial flutter experience no symptoms and the arrhythmia can be a chance finding on a routine EKG. Common symptoms are:

- Palpitations (awareness of rapid or irregular heart rate)
- Fatigue or poor exercise tolerance
- Mild shortness of breath
- Dizziness
- Less common symptoms include chest pain and fainting

What are the risks of atrial flutter?

The main risk associated with atrial flutter, like AF, is the increased risk of stroke. The atria are beating rapidly but ineffectively and this can result in the blood in the atria becoming stagnant. Stagnant blood is at increased risk of forming clots, which might then leave the heart and travel to the blood vessels in the head, blocking them and causing a stroke. A much less common risk of atrial flutter can occur if the heart rate remains uncontrolled (high) for extended periods of time, normally weeks or months. In extreme cases this constant rapid heart rate can damage the heart muscle, weakening it such that it no longer pumps effectively, causing heart failure.

Diagnosis

The diagnosis of atrial flutter can usually be made from a standard heart rhythm recording (electrocardiogram or EKG) made during the arrhythmia. If the arrhythmia is intermittent, then a heart rhythm monitor may be needed. These are simple monitors which can be worn continuously for up to two weeks at a time. Doctors often also request echocardiograms as well, which are simple ultrasound scans of the heart, used to look for any structural abnormalities as well as to assess the function of the heart and its valves. Very few additional tests are required, but 'routine' blood tests are also performed including tests for an overactive thyroid gland.

Treatment

The treatment of atrial flutter follows similar lines to the treatment of AF. Treatment is centered around reducing symptoms and reducing the risk of stroke, so the treatment for individuals may vary depending upon their symptoms and their stroke risk.

There are a variety of drugs that can be used in the treatment of atrial flutter. Different drugs are used to achieve different treatment goals, and often two or more drugs are used in combination.

Drugs such as flecainide, amiodarone, sotalol or propafenone may be prescribed to restore and maintain a normal heart rhythm and are referred to as antiarrhythmic drugs. They work by altering the electrical properties of the heart cells in order to reduce the likelihood of the arrhythmia occurring.

Drugs such as beta blockers, calcium channel blockers or digoxin are used in atrial flutter in order to slow the heart rate by reducing the number of atrial beats that are conducted via the AV node from the atria to the ventricles. As the majority of symptoms experienced by people with atrial flutter are due to the fast heart rate, these drugs can be very effective at controlling symptoms.

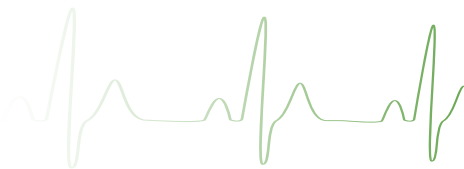
Stroke prevention

The final types of drugs that are used in the treatment of atrial flutter are ones that 'thin' the blood and reduce the risk of stroke.

The risk of stroke in atrial flutter is thought to be similar to that for AF and is five times greater than in the normal sinus rhythm (regular heart rhythm).

However, the stroke risk varies significantly from person to person and this is why people with atrial flutter need to have their risk of stroke assessed by their doctor who uses scoring charts to estimate the stroke risk. This determines if anticoagulation is required. Anticoagulation is always required for a period before and after a cardioversion.

You can read more about anticoagulation in our booklet "A guide for patients prescribed oral anticoagulant therapy".



Providing information,
support and access to
established, new or
innovative treatments
for atrial fibrillation



AF Association

PO Box 5507
Hilton Head Island, SC 29938

☎ 843-415-1886

✉ info@afa-us.org

🌐 www.afa-us.org



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Finger on your Pulse: is our new library of educational video resources. Medical Experts share their knowledge and address specific concerns and patients share their experience living with the various conditions and treatments.

🌐 www.fingeronyourpulse.org

Please remember that this publication provides general information. You should always discuss and seek advice from your healthcare professional what is most appropriate for you.

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Founder and CEO:

Trudie Lobban MBE, FRCP (Edin)

Executive Director:

Francesca Lobban

If you would like further information or feedback please contact AF Association.