Atrial fibrillation

BEATING HEART DISEASE TOGETHER

British Heart Foundation

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Contents

About this booklet

Atrial fibrillation is the most common type of irregular heart rhythm. Most people who have atrial fibrillation are over 65, but some younger people also have it.

This booklet is for people with atrial fibrillation, and for their families and friends. It explains:

- the heart's normal rhythm
- what atrial fibrillation is
- how it is diagnosed
- the complications that can happen, and why atrial fibrillation needs to be controlled or treated, and
- the medicines and treatments you may be given to help control or treat atrial fibrillation.

This booklet does not replace the advice that your doctor or cardiologist (heart specialist) may give you, but it should help you to understand what they tell you.

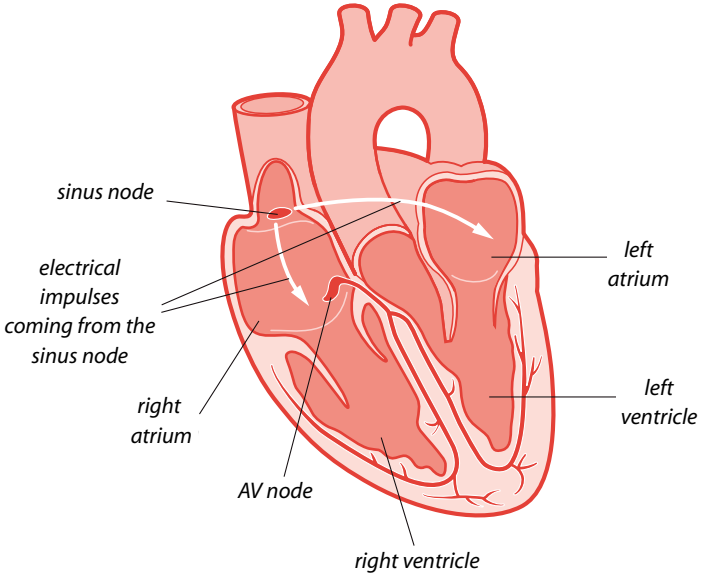
The heart's normal rhythm

Your heart is a muscular pump which pumps blood through the body and lungs. It has four chambers – two upper ones called the right and left **atria**, and two lower ones called the right and left **ventricles**. See the diagram on the next page.

Your heart's pumping action is controlled by tiny electrical impulses produced by a part of the right atrium called the **sinus node**. The sinus node is sometimes called your heart's natural 'pacemaker'.

These impulses make the atria contract and push blood into the ventricles. The impulses travel to the ventricles through the **AV node** (atrio-ventricular node). This acts like a junction box and is sometimes called the AV junction. When the impulse reaches the ventricles, the ventricles both contract, pushing the blood out of your heart to your lungs and the rest of your body. In a normal heart rhythm, each impulse from your heart's natural pacemaker makes the atria and the ventricles contract regularly and in the correct order.

Normal electrical signals in the heart



While you are resting, your heart's natural pacemaker produces between 60 and 100 impulses a minute. It is your heart pumping the blood that produces your **pulse**, which you can feel, for example, at the artery in your wrist. Doctors and nurses can measure the rate and rhythm of your heart by taking your pulse. The **rate** is how quickly your heart beats, and the **rhythm** is how

regular the beats are. The heart's normal rhythm is called **sinus rhythm**.

Sometimes, your heart will beat faster or more slowly, depending on your general health and whether you have been active or resting. When your heart is beating fast but with a regular rhythm, the rhythm is called **sinus tachycardia**. When it is beating slowly but with a regular rhythm, it is called **sinus bradycardia**. These are normal rhythms. They do not necessarily mean there is anything wrong with your heart but, if your heart rate is constantly fast or always feels very slow, particularly if you also feel unwell, you should see your doctor.

What is atrial fibrillation?

Atrial fibrillation is the most common type of irregular heart rhythm. An irregular heart rhythm is also known as an **arrhythmia**, so atrial fibrillation is a type of arrhythmia. About 4 in every 100 people aged over 65 have atrial fibrillation.

People with atrial fibrillation have an irregular and sometimes fast pulse, although it is possible to have a slow pulse rate and still have atrial fibrillation. Atrial fibrillation happens because, as well as the heart's natural pacemaker sending out regular electrical impulses, different places in and around the atria (the upper chambers of the heart) also produce electrical impulses, in an unco-ordinated way. These multiple impulses make the atria quiver or twitch, which is known as **fibrillation**.

What are the symptoms of atrial fibrillation?

Your symptoms depend partly on the type of atrial fibrillation you have. They can include the following.

- **Palpitations** (being aware of your heartbeat). This is a common symptom of atrial fibrillation.
- **Feeling faint** at times.
- **Being breathless**.
- **Being tired** or less able to exercise.

Some people with atrial fibrillation – especially older people – don't have any symptoms at all. Also, over time, some people get used to being in atrial fibrillation, so their symptoms become less troublesome.

A doctor or nurse may discover the condition during a routine medical check while they are checking your pulse. Sometimes atrial fibrillation is diagnosed after a person goes to see their doctor because they can feel their heart beating fast or with an irregular rhythm. Your doctor will only be able to confirm that you have atrial fibrillation once you have had an electrocardiogram (ECG) (see page 16).

It is important to remember that not all palpitations or irregular heartbeats are caused by atrial fibrillation. You

may have a different type of arrhythmia. Or, your heart rhythm may be normal but you may be experiencing ectopic beats – early or extra heartbeats – which can happen because of stress or anxiety. Most people who get ectopic beats have nothing to worry about. People of all ages can get ectopic beats, and in most cases the ectopic beats are not caused by an underlying heart condition, are not dangerous and do not need treatment.

Types of atrial fibrillation

There are three types of atrial fibrillation.

- **Paroxysmal atrial fibrillation** is atrial fibrillation that comes and goes. It usually lasts for less than two days and can last for up to seven days, but it is not there all the time. Your heart goes back to a normal rhythm on its own in between episodes, without any medical treatment.
- **Persistent atrial fibrillation** lasts longer than seven days at a time and usually needs treatment with medicines or with a procedure called cardioversion. (We explain what cardioversion is on page 23.)
- **Permanent atrial fibrillation** is there all the time, and your heart never returns to a normal sinus rhythm.

What causes atrial fibrillation?

A **risk factor** is something that increases your risk of developing a disease or condition. The risk factors for getting atrial fibrillation include:

- getting older, particularly being 65 or older
- coronary heart disease
- high blood pressure
- disease of the valves in your heart
- previous heart or lung surgery
- myocarditis (inflammation of the heart muscle)
- cardiomyopathies (diseases of the heart muscle)
- an overactive thyroid gland
- heart failure
- lung infections, such as pneumonia
- obesity, especially if the person also has sleep apnoea (interrupted breathing while sleeping)
- substance or alcohol abuse.

What are the risks of having atrial fibrillation?

Having atrial fibrillation increases the risk of developing a blood clot inside the chambers of the heart. This is because the atrial fibrillation disturbs the normal flow of blood through the heart, causing turbulence. The turbulence causes the blood to form small clots. If a clot forms in your heart, it can travel through your bloodstream and cause a **stroke**.

Sometimes atrial fibrillation can make the heart muscle less efficient at pumping blood around your body. This is what makes some people with atrial fibrillation feel unwell or tired.

Because of these possible complications, you may need treatment to control either your **heart rhythm** or your **heart rate**, or both. We explain more about these treatments on pages 22 to 33.

Your doctor will assess your risk of having a stroke or another major complication and will decide on your treatment based on the assessment and your symptoms. The assessment – known as the CHA_2DS_2-VAS points system – takes into account:

- your age (the older you are, the greater your risk of

having a stroke)
- how well your heart is working
- if you already have heart disease
- if you have diabetes
- your gender
- if you have already had a stroke or symptoms of a stroke, and
- your blood pressure.

Your doctor may decide to give you a medicine called an anticoagulant, to reduce the risk of blood clots forming and causing a stroke. If your score is 2 or more on the points system, you will probably benefit from taking an anticoagulant – usually either warfarin or dabigatran – to help to reduce this risk. We explain more about the medicines used on page 19.

Not everyone will be prescribed an anticoagulant to reduce their risk. For a small number of people, the risk of having a stroke caused by bleeding in the brain may be greater than the risk of having a stroke caused by a clot. If this applies to you, you can discuss it with your doctor.

How is atrial fibrillation diagnosed?

If you visit your doctor because you have some of the symptoms described on page 10, or if you visit your doctor or nurse for another reason, they may check your pulse. If they notice that you have an irregular pulse, your doctor will ask you to have an **electrocardiogram** (ECG) to find out if the cause is atrial fibrillation.

If your irregular rhythm is not there all the time – that is, it comes and goes – you may need to have **24-hour ECG monitoring**, to make sure that the ECG records some episodes of the irregular rhythm.

Your doctor may use other devices to diagnose your irregular heart rhythm, including a **cardiac event recorder** or an **implantable loop recorder**.

We describe all these tests and devices below. For more information on them, see our booklet *Tests for your heart*.

Electrocardiogram (ECG)

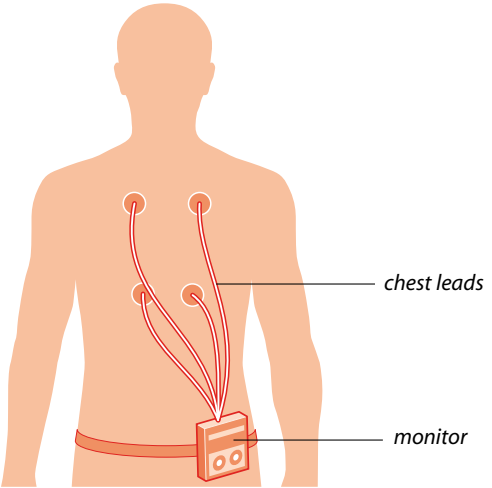
This is a test that gives information about the electrical activity of your heart. The ECG helps to identify the source of the abnormal rhythm.

24-hour ECG monitoring

Also known as ***Holter monitoring*** *or* ***ambulatory ECG monitoring***.

This technique involves continuously recording an electrocardiogram (ECG) over 24 hours, or for longer in some cases. It is usually done as an outpatient. The test is safe and painless.

24-hour ECG monitoring



Cardiac event recorders

If you have symptoms that don't happen frequently, you may be given a small electrical recording device to keep with you, so you can record your heart's rate and rhythm at particular times. The hospital staff will tell you how to record any irregular rhythm that you feel and how to send the recording to them.

Cardiac memory device

A cardiac memory device is a type of cardiac event recorder. When you feel an irregular heart rhythm, you hold the device to your chest to make a recording. You then transmit the recording to your hospital by placing the device next to the mouthpiece of your phone.

Implantable loop recorder

An implantable loop recorder is a small, slim device – about the size of a packet of chewing gum or a computer memory stick – which is implanted under the skin. You turn on the device when you feel the abnormal rhythm. The hospital staff will show you how to do this.

Reducing your risk of developing a blood clot

Atrial fibrillation increases the risk of clots developing in the heart, which may lead to a stroke (see page 14).

Some people with atrial fibrillation are given an anticoagulant medicine to reduce their risk of a blood clot developing. Your doctor might prescribe either **warfarin**, which has been used for a long time to reduce the risk of clots, or a newer medicine called **dabigatran**. If you are in hospital with a new diagnosis of atrial fibrillation, you may be given heparin (another type of anticoagulant) first as an injection, and then warfarin or dabigatran tablets before you go home. These anticoagulant medicines are sometimes called 'blood-thinning medicines'. All of these medicines help to thin the blood and reduce the risk of blood clots forming.

Your cardiologist will explain the benefits and the risks of taking warfarin or dabigatran. The benefits and risks depend on your medical history and your age.

It is important that you take your medicine as prescribed, as it will greatly reduce the risk of the atrial fibrillation causing you to have a stroke.

If you have been prescribed warfarin, you will need to have regular blood tests to make sure you are getting the right dose. The blood test is a way of measuring your INR – the time it takes for your blood to clot or, in other words, how thin your blood is. Your doctor will be able to adjust your warfarin to keep your INR at the right level.

Dabigatran is a newer type of anticoagulant that has been licensed for use in treating atrial fibrillation. It has already been used for some time to reduce the risk of deep vein thrombosis (a clot in the leg) in people who have had operations such as hip replacements. Dabigatran controls your clotting levels but you do not need the same rigorous INR monitoring as you do with warfarin. It cannot be prescribed for people whose atrial fibrillation is caused by a heart valve problem.

If you can't take either warfarin or dabigatran your doctor may prescribe another medicine called **clopidogrel** or **aspirin** for you instead, but these may not be as effective as warfarin or dabigatran.

The National Institute for Health and Clinical Excellence (NICE) has approved the use of dabigatran and there are other similar products going through trials that may come into use in the future. (NICE is an independent organisation that provides national guidance on preventing and treating ill health.) As with all new

medicines, it takes some time before their effectiveness and safety record are well established.

Your cardiologist or GP should discuss with you which anticoagulant is best for you. They will take into account your condition and your CHA_2DS_2-VAS score (see page 14), and explain the risks and benefits of the different types of anticoagulants.

How is atrial fibrillation treated?

Atrial fibrillation can be treated in a number of ways, but the different types of treatment are not suitable for everyone. Your doctor or cardiologist will tell you which treatment is best for you. The following things will influence which type of treatment you have:

- which type of atrial fibrillation you have
- how long you have had atrial fibrillation for
- how your symptoms affect your quality of life
- which treatments you have already tried
- any other heart conditions you may have, and
- your age.

There are two main aims in treating your atrial fibrillation:

- **reducing your risk of developing a blood clot** (as we have described on page 19), and
- **controlling your heart rhythm**.

Controlling your heart rhythm

There are two ways of doing this: rhythm control and rate control.

- **Rhythm control** means giving you treatment – such as cardioversion – to try to get your heart back to a normal rhythm.

- **Rate control** means giving you treatment to control the rate of your heartbeat, so that your heart beats more slowly, even if the heartbeat remains irregular.

We explain more about these treatments on the next pages.

Rhythm control

The type of rhythm control treatment you have depends on the type of atrial fibrillation you have and how long you have had it. We describe some of the treatments you may be given below.

Electrical cardioversion

*Also called **direct current cardioversion, mechanical cardioversion** or **cardioversion with a defibrillator**.*

If you have been newly diagnosed with persistent atrial fibrillation and your cardiologist thinks you are suitable for rhythm control treatment, you may be offered electrical cardioversion as the first form of treatment. This involves using a defibrillator to give you a controlled electric shock to get your heart rhythm back to normal.

If you have had atrial fibrillation for less than two days, see the box on page 26 for more information about electrical cardioversion.

If you have had persistent atrial fibrillation for a very long time, electrical cardioversion may not be suitable for you. This is because, the longer you have had atrial fibrillation, the less likely it is that the treatment will be successful.

If your atrial fibrillation is caused by an overactive thyroid or by disease of your heart valves, these conditions may need to be corrected before you can have the cardioversion.

What happens?

Your cardiologist will ask you to take warfarin for several weeks before you have the treatment. This is to reduce the risk of a blood clot forming and then breaking off during the cardioversion. You will need regular blood tests while you are taking warfarin, to make sure that your blood is thin enough. You may also be given a medicine to slow down your heart rate.

You will be given a light general anaesthetic, which will make you sleep through the whole procedure. The doctor or specialist nurse will then use a defibrillator to apply a controlled electrical current across your chest. This aims to shock your heart back into a normal rhythm. The treatment takes only a few minutes.

The procedure does not usually cause any serious side effects, although you may experience some soreness on

your chest where the shock was applied. The discomfort will not last more than a couple of days and painkillers usually help relieve any pain.

You will probably need to continue taking warfarin for at least four weeks after the cardioversion, to prevent blood clots from forming. You will have a follow-up appointment after the treatment, and the doctor will then decide if you can stop taking the warfarin.

How successful is electrical cardioversion?

This is a successful treatment for some people with atrial fibrillation. However, you may find that, even after a successful cardioversion, your atrial fibrillation returns. If this happens, your doctor or specialist nurse may repeat the treatment. If it keeps coming back, your doctor will discuss some of the other treatments available.

Cardioversion with medicines

*Also called **chemical cardioversion**.*

Medicines which aim to get your heart rhythm back to normal are called **anti-arrhythmics** or **anti-arrhythmic medicines**. Although these medicines are suitable and effective for many people, some people find it takes a while to get used to them.

Examples of medicines that may be used to control the

rhythm of your heart include amiodarone, dronedarone, flecainide and sotalol. See our booklet *Medicines for your heart* for more information on these medicines.

If you have had atrial fibrillation for less than two days

If you are admitted to hospital with atrial fibrillation, and it is clear that you have had it for less than two days, your doctors may give you **cardioversion** treatment straight away, to get your heart rhythm back to normal. Before they do this, they will give you a medicine called **heparin** to reduce the risk of blood clots developing. Before you have the cardioversion, you may need to have an **echocardiogram** (an ultrasound scan of your heart) to make sure you don't already have a blood clot.

The treatment can either be **electrical cardioversion** or **cardioversion with medicines**. We describe these two treatments on pages 23 and 25. Which treatment you have will depend on whether you have any other heart or medical problems. Once your heart rhythm is back to normal, your doctor may prescribe a medicine to try to keep the rhythm normal.

Pulmonary vein isolation

Atrial fibrillation is often triggered from cells within the pulmonary veins – the veins that take blood from the lungs to the left atrium of the heart. Pulmonary vein isolation aims to stop these triggers from entering the heart and causing the atrial fibrillation.

Most people who are offered pulmonary vein isolation treatment have tried several types of medicines first. You are more likely to be offered this treatment if you are getting symptoms with your atrial fibrillation even after being treated with medicines.

What happens?

A few days before the procedure, you will receive information explaining what to do about the medicines you are taking for your atrial fibrillation, and about warfarin if you are taking it. It is essential that you follow these instructions carefully. If you don't receive this information a few days before the procedure, contact the hospital for advice.

The procedure is often carried out using a local anaesthetic in your groin, and you will be given a sedative to help you relax. A very small number of people have a general anaesthetic instead of a local one.

The procedure takes place in a specialised X-ray room

called a catheter laboratory (or 'cath lab' for short). You will be lying down on a bed while the procedure is carried out. Very thin wires called 'electrode catheters' are passed into a vein at the top of your leg. They are then gently moved into position in your heart. Using radiofrequency waves, the treatment produces a small circular scar around the pulmonary vein. The scar blocks the abnormal electrical impulses in this part of your heart.

The procedure can take several hours. It can be uncomfortable, but the sedative or anaesthetic should help ease the discomfort. After the procedure, you will need to stay lying down to rest for a few hours.

Your cardiologist may prescribe a different medicine for your atrial fibrillation depending on the result of the procedure, or they may ask you to take your usual medication. You will also need to carry on taking your anticoagulant for a few weeks. The atrial fibrillation may continue for several weeks after the treatment before it settles down.

How successful is pulmonary vein isolation?

Many people who have pulmonary vein isolation are eventually able to stop taking all medicines for atrial fibrillation, although they may need to continue taking

an anticoagulant for longer.

Other people find that, even though the procedure did not get rid of the atrial fibrillation completely, their symptoms improve a lot in the long term. For many people, this significantly improves their quality of life.

What are the risks?

The most common risk is that there may be bleeding from the top of the leg from the vein through which the catheters were inserted. This happens in 2 in every 100 cases.

The most serious risk of a pulmonary vein isolation procedure is the risk of having a stroke either during the procedure or soon afterwards. This happens in about 1 in every 200 cases.

Ablate and pace

If your medicines are not controlling your symptoms well but your cardiologist does not think you are suitable for a pulmonary vein isolation procedure, you may be offered a treatment called **ablate and pace**. You are more likely to be offered this type of treatment if you are in your late 70s or in your 80s, as it provides the most benefits for people in this age group. In some cases, a younger person may be offered this treatment if he or she has

long-standing persistent atrial fibrillation that is very poorly controlled and that causes lots of symptoms.

What happens?

Ablate and pace involves 'ablating' (destroying) the AV node (see the diagram on page 7) and implanting an artificial pacemaker. You will need to go into hospital for the treatment and will probably have to stay in hospital for one night after the procedure.

You will be given a local anaesthetic in your groin. Very thin wires called electrode catheters are then passed into your body through a vein at the top of the leg. They are then gently moved into position in your heart. The ablation technique involves using radiofrequency waves to destroy the AV node. An artificial pacemaker is then implanted immediately afterwards. Or, sometimes the pacemaker is implanted first, and the AV node ablation is performed a few days or weeks later.

This treatment means that you will still have atrial fibrillation, but your heart rate and rhythm will be controlled by the artificial pacemaker. You will still need to take an anticoagulant medicine because you will still have atrial fibrillation.

For more information about having a pacemaker implanted, see our booklet *Pacemakers*.

Surgical maze procedure

If you have atrial fibrillation and have not responded to any other treatment, you may be offered a **surgical maze procedure**. In this, the surgeon 'cauterises' (burns) the parts of the left atrium that are responsible for the atrial fibrillation. This procedure is done either with open-heart surgery or using 'keyhole surgery' (surgery carried out through a much smaller cut than with traditional surgery). The surgical maze procedure may be suitable for people who are about to have open-heart surgery anyway – for example, to replace or repair a faulty heart valve.

More recently, the maze procedure has been carried out using a catheter approach (similar to the approach described for pulmonary vein isolation on page 27) rather than traditional surgery. However, this procedure can take much longer than pulmonary vein isolation, and often needs to be repeated.

The 'pill in the pocket' approach

If you have paroxysmal atrial fibrillation (the type that comes and goes), your cardiologist may give you medicine to take only when the paroxysms (attacks or episodes) happen. This is known as the 'pill in the pocket' approach. Examples of medicines that are used for this

approach include flecainide, sotalol and propafenone.

Your doctor is more likely to use this approach if:

- your heart is otherwise normal and if the episodes of atrial fibrillation don't happen very often, and
- when the episodes do happen, they respond quickly to medication.

You should only take this medicine when your atrial fibrillation happens, and it is important that you take only the dose your cardiologist has prescribed.

If you feel very unwell even after taking the medicine, call your GP for advice.

Rate control

On pages 23 to 32 we explained the different treatments used to control the **rhythm** of your heart. Here we explain the treatments for controlling the **rate** of your heartbeat. These will help your heart to beat more slowly, even if the heartbeat remains irregular. It does not get rid of your atrial fibrillation.

Using medicines for rate control

If your doctor cannot get your heart back to a normal rhythm using either electrical cardioversion or cardioversion with medicines (or both), or if your doctor

did not think these treatments were suitable for you in the first place, they will give you medicines to try to control how quickly your heart beats during atrial fibrillation. This means that you will still have atrial fibrillation, but the rate of your heartbeat will be slower – that is, your heart will still beat irregularly but it will beat more slowly and efficiently. Your cardiologist may prescribe medicines to control both your rate and rhythm. The medicines will lower your heart rate but, because you still have atrial fibrillation, you will need to keep taking an anticoagulant medicine such as warfarin or dabigatran.

Examples of medicines used for rate control include digoxin, beta-blockers and calcium-channel blockers.

People who have paroxysmal atrial fibrillation have the same risk of having a major complication such as a stroke as people who have permanent atrial fibrillation. This is why it is important that you continue to take an anticoagulant if your doctor has prescribed it for you.

For more information on the medicines mentioned above, see our booklet *Medicines for your heart*.

Everyday life with atrial fibrillation

Work

Most people with atrial fibrillation can carry on working in their usual job. Some people may find that it is difficult to work if their symptoms are not controlled well. Talk to your cardiologist for advice if your symptoms are stopping you from working or if you have had a pacemaker inserted. For more information, see our booklet *Returning to work with a heart condition.*

Driving

If you have an ordinary licence

If you have an ordinary licence to drive a car or motorcycle, you are likely to be able to continue to drive, as long as your atrial fibrillation has been well controlled for at least four weeks. You must not drive if you have symptoms at the wheel. There are different requirements if you have had an ablation or have had a pacemaker inserted. Talk to your GP about whether or not it is OK for you to drive.

To find out if you need to tell the DVLA about your heart condition or about a treatment you have had for it, visit www.direct.gov.uk/drivingandmedicalconditions. Or call

the DVLA on 0300 790 6806, or write to them at DVLA, Swansea SA99 1TU.

If you have an LGV or a PCV licence

If you have an LGV (large goods vehicle) or a PCV (passenger-carrying vehicle) licence, special regulations apply. You will need to tell the DVLA about your condition and check with them whether you can continue to drive. Visit www.direct.gov.uk/driverhealth. Or call the DVLA on 0300 790 6807, or write to them at DVLA, Swansea SA99 1TU.

Telling your motor insurance company about your atrial fibrillation

Whatever sort of driving licence you have, you need to tell your motor insurance company that you have a heart condition and about any treatment that you have had for it. If you don't, your insurance may not be valid.

Sex

Sex is similar to any other physical activity so, as long as your symptoms are well controlled, having atrial fibrillation should not stop you from having sex.

Travel

You should be able to travel by air as long as you take

your anticoagulant medicine in the way your doctor has prescribed and your symptoms are well controlled. It is best to check with your doctor before you travel.

You should find out where your nearest anticoagulation clinic or hospital is at your destination.

If you are travelling long distances that involve a change in time, you will need to ask your anticoagulation specialist nurse or doctor for advice about adjusting the timings of your anticoagulation.

What to do if you think you or someone else is having a stroke

Symptoms of a stroke

If you suspect that you or someone else is having a stroke, you need to act **FAST**. To remember the signs of a stroke and what to do, think '**FAST**':

- **F**acial weakness – Can you smile? Has your mouth or eye drooped?
- **A**rm weakness – Can you raise both arms?
- **S**peech problems – Can you speak clearly and can you understand what others are saying?
- **T**ime to call 999.

If these symptoms have gone away after a few minutes or hours and disappear within 24 hours, it may have been a transient ischaemic attack or TIA (sometimes called a mini stroke). A TIA is a warning sign that you are at a very high risk of having a stroke – so it is vital that you don't ignore these symptoms. **If you experience these symptoms or see them in someone else, call 999 immediately.**

For more information, contact The Stroke Association on **0303 3033 100** or visit **www.stroke.org.uk**

How your support can help

Over recent decades, research funded by the BHF has contributed to a substantial reduction in the number of people dying from heart attacks and strokes. Also, with the help of donations from people like you, doctors have developed the ablation techniques used to treat atrial fibrillation. They have also refined and developed the medicines needed to help control abnormal heart rhythms more effectively.

But this means that more and more people are surviving to live with the often debilitating consequences of heart disease, in particular heart failure. Fortunately, we can treat the symptoms of heart failure, but we can't cure it because the heart can't repair itself. The next big challenge is to discover how to help the heart repair itself, so that heart failure can be cured rather than treated. Visit the *Research* pages on our website **bhf.org.uk** to see how your support can make a difference.

For more information

British Heart Foundation website

bhf.org.uk

For up-to-date information on heart disease, the BHF and its services.

Heart Helpline

0300 330 3311 (a similar cost to 01 and 02 numbers)

For information and support on anything heart-related.

Genetic Information Service

0300 456 8383 (a similar cost to 01 and 02 numbers)

For information and support on inherited heart conditions.

Booklets and DVDs

To order our booklets or DVDs:

- call the BHF Orderline on **0870 600 6566**, or
- email **orderline@bhf.org.uk** or
- visit **bhf.org.uk/publications**

You can also download many of our publications from our website. For a list of resources available from the BHF, ask for a copy of *Our heart health catalogue*. Our booklets are free of charge, but we would welcome a donation. (See page 2 for how to make a donation.)

Heart Information Series

This booklet is one of the booklets in the *Heart Information Series*. The other titles in the series are as follows.

Angina
Atrial fibrillation
Blood pressure
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Coronary angioplasty
Diabetes and your heart
Having heart surgery
Heart attack
Heart rhythms
Heart transplantation
Heart valve disease
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Keep your heart healthy
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Medicines for your heart
Pacemakers
Peripheral arterial disease
Physical activity and your heart
Primary angioplasty for a heart attack
Reducing your blood cholesterol
Returning to work with a heart condition
Tests for heart conditions

Heart Matters

Heart Matters is the BHF's **free**, personalised service to help you live with a healthy heart. Join today and enjoy the benefits, including *heart matters* magazine, a Heart Helpline and an online members' area with articles, recipes and lifestyle tips. You can join online at **bhf.org.uk/heartmatters** or call **0300 330 3300** (a similar cost to 01 and 02 numbers).

Emergency life-support skills

Heartstart

For information about a free, two-hour course in emergency life-support skills, contact **Heartstart** at the British Heart Foundation. The course teaches you to:

- recognise the warning signs and symptoms of a heart attack
- help someone who is choking or seriously bleeding
- deal with someone who is unconscious
- know what to do if someone collapses, and
- perform cardiopulmonary resuscitation (CPR) if someone has stopped breathing and his or her heart has stopped pumping.

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Have your say

We would welcome your comments to help us produce the best information for you. Why not let us know what you think? Contact us through our website **bhf.org.uk/contact**. Or, write to us at the address on the back cover.

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The British Heart Foundation would like to thank all the GPs, cardiologists, nurses and other health professionals who helped to develop the booklets in the *Heart Information Series,* and all the patients who commented on the text and design.

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- Ann O'Sullivan, BHF Arrhythmia Care Co-ordinator, Cardiology Department, University Hospital Lewisham, and
- Cathy Trodden, BHF Arrhythmia Specialist Nurse, Greater Manchester and Cheshire Cardiac and Stroke Network.

We are the nation's heart charity, dedicated to saving lives through pioneering research, patient care, campaigning for change and by providing vital information. But we urgently need your help. We rely on your donations of time and money to continue our life-saving work. Because together we can beat heart disease.

bhf.org.uk

Heart Helpline
0300 330 3311
bhf.org.uk

Information & support on anything heart-related. Phone lines open 9am to 5pm Monday to Friday.
Similar cost to 01 or 02 numbers.

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