Foreword

Atrial fibrillation is the most common abnormal heart rhythm and gets more common as we get older. As such it is likely to affect all of us either directly or indirectly (through friends or family) over the course of our life. While atrial fibrillation can cause distressing symptoms it is considered one of the more benign heart rhythm problems. Nevertheless there are two reasons why atrial fibrillation or symptoms that suggest atrial fibrillation should not be ignored. Firstly, left untreated over the course of months or years the heart begins to adapt to atrial fibrillation which means it is increasingly difficult to restore and maintain normal heart rhythm. The second important reason for identifying atrial fibrillation is that in some patients it is associated with a risk of stroke that can be significantly reduced with appropriate treatment. There have been huge advances in the treatment of atrial fibrillation over the last decade and so having a diagnosis of atrial fibrillation does not mean that one's life needs to be significantly affected by it. This Bupa patient guide will give you the information you might need to determine whether you may have atrial fibrillation, how it should be investigated and the likely treatments you may be offered and by whom.

Richard Schilling
Professor of cardiology and director of clinical cardiovascular research
Barts Health NHS trust

Who is this booklet for?
Atrial fibrillation is a heart condition that causes an irregular and often abnormally fast heart rate. If you or someone in your family has, or has ever experienced it, this booklet is for you. At Bupa, we know that making informed decisions – for both doctors and patients – starts with good information. That's why we've produced this Bupa patient guide to help you better understand atrial fibrillation and what it means for you.

This guide will provide you with the information you need to make informed choices and guide you through each step of your journey.

If you are a Bupa member, you can call Bupa’s Cardiac Support Team on 0845 600 7264* for further information.

*Lines are open 8am – 6pm Monday to Friday, 8am – 1pm Saturday. Calls may be recorded and may be monitored.
Atrial fibrillation is a heart condition in which the electrical impulses that control your heartbeat become disrupted, causing the heart to beat irregularly and often too fast.

Atrial fibrillation is a very treatable and manageable condition.

Atrial fibrillation is a common condition and NHS figures for 2011 suggest it affects around one million people in the UK.

You are more likely to develop atrial fibrillation as you get older but it can affect people of all ages.

Getting treatment as early as possible for atrial fibrillation is important. You are up to five times more at risk of having a stroke if it is left untreated, particularly if you are older.

If the heart is left beating at a fast rate, this may also cause the heart to pump less efficiently (known as tachycardiomyopathy).

Atrial fibrillation is commonly caused by:
- high blood pressure
- heart valve disease

There are other conditions and treatments that are associated with atrial fibrillation and may increase your chance of developing it.

These include:
- an overactive thyroid gland (hyperthyroidism)
- type 2 diabetes
- coronary heart disease (blockage with one or more vessels of your heart)
- pneumonia
- recent surgery on your heart
- obstructive sleep apnoea

Several lifestyle factors may also increase your risk of getting atrial fibrillation and potentially trigger an episode of it.

These include:
- having a high alcohol intake
- being obese
- having high caffeine intake

Genetic predisposition may also increase your chance of getting atrial fibrillation. However, there is not always a clear underlying condition or risk factor. It can affect people who are otherwise healthy, including extremely athletic people.

What happens in atrial fibrillation?

Your heartbeat is controlled by electrical signals (impulses), which travel through the heart making it contract. The signals travel from the atria (the upper chambers of the heart) to the ventricles (the lower chambers) through an area called the atrioventricular (AV) node. The AV node helps to synchronise the pumping action of the atria and ventricles.

Atrial fibrillation occurs when the electrical signals in the atria become disorganised, overriding the heart’s normal rate and rhythm. This causes the atria to contract irregularly or ‘fibrillate’.
YOUR ATRIAL FIBRILLATION JOURNEY

From symptoms to diagnosis and treatment, this guide will help you understand what to expect, what your options are and what questions to ask your doctor at each stage.

Symptoms
What to expect
Different people experience different symptoms of atrial fibrillation. You may experience one or more symptom, and they may occur for short or longer periods of time.

Symptoms include:
- palpitations (an abnormal or irregular heartbeat that may also be too fast or too slow)
- shortness of breath (known as dyspnoea)
- dizziness, fainting or blackouts (known as syncope)
- discomfort in the chest area

What can I do?
If you haven’t already, arrange to see your GP to discuss your symptoms. It is also useful at this stage to make a note of your symptoms, for example, what symptoms are you experiencing, what brings them on, what relieves them, how long do they last and how often do you have them? It may be useful for you to keep a record of your symptoms and make a regular note of your pulse (when you are experiencing your symptoms). Your heart rate will vary if you have been exercising so wait 10 minutes before taking your pulse.

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How to take your Pulse Rate (Heart beats that you can feel in one minute)
- Hold out one of your hands with your palm facing upwards and your elbow slightly bent
- Put the first (index) and middle finger of your other hand on the inside of your wrist, at the base of your thumb
- Press your skin lightly until you can feel your pulse - if you can’t feel anything, you may need to press a little harder or move your fingers around
- Count the number of beats you feel for one full minute
- You can also check if your pulse is regular or irregular by feeling its rhythm for about 20 to 30 seconds.
- An occasional irregularity is normal and is called an ectopic beat (extra beat)
- Atrial fibrillation produces a random and constantly irregular pulse for more than 30 seconds continuously

Your Atrial Fibrillation Journey
From symptoms to diagnosis and treatment, this guide will help you understand what to expect, what your options are and what questions to ask your doctor at each stage.

DATE  TIME  SYMPTOMS  HOW LONG DID THE SYMPTOMS LAST AND HOW WAS IT RELIEVED  PULSE RATE BEATS PER MINUTE (BPM)

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<thead>
<tr>
<th>DATE</th>
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It is important that your GP rules out the possibility of other conditions when establishing a diagnosis of atrial fibrillation, such as thyroid disease and other heart conditions.

Questions to ask your GP

- What have you learnt from my pulse check/ECG?
- What condition do I have/do you suspect?
- Are you referring me to see a specialist?
- What type of specialist are you referring me to?
- Is he/she an expert in atrial fibrillation?
- How urgently do I need to see the cardiologist?

Diagnostic tests

What to expect
You may have the following tests to help diagnose your condition:

- **Resting ECG** An ECG is a simple test used to measure the electrical signals that cause your heart to beat. Wires are connected to your arms, legs and chest to pick up the electrical signals. These signals can be seen on a screen or are traced out on a piece of paper.

- **Ambulatory ECG** This test is also called a Holter monitor, 24 or 48 hour ECG, whereby you wear an electronic recorder for 24 to 48 hours. This shows the electrical activity of your heart over the course of 24 hours or longer. It’s useful for showing any irregular heart rhythm (arrhythmia).

- **Transthoracic Echocardiogram (TTE)** A TTE uses ultrasound (sound waves) to check the structure of your heart and how well it’s working. An ultrasound sensor is moved over your chest to get pictures of your heart. This can help to check how well your heart is pumping blood and can identify defects in your heart’s structure such as a valve problem.

Questions to ask your cardiologist

- What tests do I need?
- Why do I need these particular tests?
- What do you expect to find?
- What conditions do you need to rule out?

What can you do?

- Keep a record of your symptoms and regular pulse rate checks
- Find out about any similar medical conditions in your family

If your GP diagnoses or suspects atrial fibrillation they will often refer you to see a Cardiologist (a doctor who specialises in identifying and treating heart and blood vessel conditions). Your cardiologist will perform additional tests, confirm your diagnosis and deliver appropriate treatment. There are different types of cardiologists and if your GP suspects atrial fibrillation it may be more appropriate for you to see an electrophysiology specialist, an expert in heart rhythm problems.

Transoesophageal Echocardiogram (TOE)
This test is not common for patients with atrial fibrillation. It is a more invasive test than a TTE so is carried out in a hospital and you are likely to be given sedation. A doctor will pass an ultrasound sensor into your oesophagus (the pipe that goes from your mouth to your stomach). This gives more detailed images of your heart than a standard echocardiogram and is typically given where more invasive treatment such as ablation is being considered.
There are different types of atrial fibrillation. The type of atrial fibrillation you have will depend on whether or not the episodes of atrial fibrillation stop and start.

**Paroxysmal**
- You will have repeated episodes of atrial fibrillation that last less than a week (and usually under 48 hours)
- Your symptoms stop without any treatment

** Persistent**
- This type of atrial fibrillation does not usually stop without treatment
- Symptom episodes last more than 1 week

**Permanent or Accepted**
- This type of atrial fibrillation is longstanding and accepted
- Your treatment will usually focus on managing your heart rate rather than restoring it’s rhythm

**Questions to ask your cardiologist**
- Which type of atrial fibrillation do I have?
- Do you have any other information I can have about my specific type of atrial fibrillation?
- Have you ruled out other conditions?
- Do I need treatment and how quickly?
- Is this treatment that I can get from my GP?
- What will happen in the medium and longer term if I do not take the treatment?

**Stroke Prevention**
- This type of treatment:
  - prevents clot forming in the heart which can dislodge and cause stroke
  - is provided by antithrombotic drugs (see next page)
  - is only required if you are at significant risk of stroke. You may be at significant risk of stroke if you have one or more of the following:
    - Congestive heart failure
    - Hypertension
    - Age over 65 years
    - Diabetes
    - A past history of stroke or transient ischaemic attack (also known as a “mini stroke”)
- For patients who cannot take these medicines then a device like a left atrial occlusion device may be implanted to help reduce the risk of stroke.

**Rate control: drug therapy**
- This type of treatment:
  - manages your symptoms and improves your quality of life
  - aims to maintain your heart rate to a comfortable resting rate (less than 110 beats per minute)
  - is likely to be the first line of treatment

**Rhythm control: procedure**
- This type of treatment:
  - aims to restore your heart’s irregular rhythm back to normal (sinus rhythm)
  - is used if you are still getting symptoms despite heart rate control
  - includes the ‘pill in pocket’ approach to restore your heart to its natural rhythm when you experience symptoms

For paroxysmal atrial fibrillation, sometimes no treatment is needed, for example where you have few or no symptoms and episodes are infrequent.
How is stroke prevention achieved?
If you have atrial fibrillation and any one of the previously mentioned stroke risk factors then it is generally recommended that you have treatment to thin your blood (anticoagulation). This significantly reduces your risk of a stroke. There is however an increased risk of bleeding so your doctor will balance the benefits against the harms and discuss with you the right treatment for you.
Common medicines used for anticoagulation are shown in the table below:

<table>
<thead>
<tr>
<th>MEDICINE</th>
<th>ADDITIONAL INFORMATION</th>
<th>COMMONLY REPORTED SIDE EFFECTS</th>
</tr>
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<tbody>
<tr>
<td>Warfarin</td>
<td>You will need to have regular blood tests by your doctor to ensure you are taking the correct dose for you</td>
<td>There is an increased risk of bleeding / bruising, and the medicine can interact with various others (eg antibiotics) and foods (eg broccoli and alcohol).</td>
</tr>
<tr>
<td>Dabigatran etexilate</td>
<td>This medicine does not require routine monitoring to adjust the dose</td>
<td>There is an increased risk of bleeding/bruising, indigestion and gastrointestinal bleeding. There are fewer drug and food interactions than there are with Warfarin.</td>
</tr>
<tr>
<td>Apixaban</td>
<td>This medicine does not require routine monitoring to adjust the dose</td>
<td>There is an increased risk of bleeding/bruising. There are fewer drug and food interactions than there are with Warfarin.</td>
</tr>
<tr>
<td>Rivaroxaban</td>
<td>This medicine does not require routine monitoring to adjust the dose</td>
<td>There is an increased risk of bleeding/bruising, indigestion and gastrointestinal bleeding. There are fewer drug and food interactions than there are with Warfarin.</td>
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How is rate control achieved
Rate control is aimed at managing your heart rate to keep it at a comfortable resting rate. This is typically achieved through use of medication. There are several different medicines that can help control atrial fibrillation. Your treatment will be tailored to you, and will depend on your own symptoms and the cause of your atrial fibrillation. Below is a table outlining commonly used medications for rate control.

How is rhythm control achieved?
There are a number of different treatments which may be used to treat your condition. Some of these will be performed by your cardiologist in a hospital. They will decide which is best for your condition.

In general rhythm control can be achieved by:
‘Pill in the pocket’ – a pill is taken to stop the atrial fibrillation after you get symptoms. The drugs may take an hour or so to work so this is useful if you get rare but prolonged episodes of symptoms.
Regular medication – when atrial fibrillation symptoms are occurring very frequently you may need to take regular tablets.
Electrical (DC) Cardioversion – if medication is not effective, this is usually the first choice procedure for achieving rhythm control. A controlled electrical shock is applied to your chest through a machine called a defibrillator, to help restore your heart to its normal rhythm. Cardioversion is usually given under general anaesthetic. Cardioversion is less likely to work the longer you have had atrial fibrillation and rarely works in the long term because it simply resets the heart rhythm but does not eliminate the underlying cause. For this reason you may need to take anti-arrhythmic medicines for some time before and after the procedure in order to increase its success.
Ablation of the atrioventricular node (AV node) and pacemaker – is sometimes used if you are having a lot of symptoms and your atrial fibrillation hasn’t responded to other treatments. Your cardiologist may perform a procedure to deactivate an area in your heart called the AV node and implant a pacemaker. The AV node is the electrical connection between the upper and lower chambers of your heart.

Your cardiologist will decide which treatment is best for your condition.
The following table describes some commonly used medicines for both rate and rhythm control. Next to each medicine or group of medicines is a description of when they would typically be used as well as potential side effects. These will vary from person to person and should be discussed with your doctor if you have any concerns. These medicines are usually taken regularly but some are only taken when you have symptoms ('pill in pocket' approach).

<table>
<thead>
<tr>
<th>MEDICINE</th>
<th>WHEN SHOULD IT BE USED</th>
<th>POTENTIAL SIDE EFFECTS</th>
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</table>
| Beta-blockers (mainly rate control) | Metoprolol tartrate (oral or intravenous)  
Propanolol hydrochloride (oral or intravenous)  
Bisoprolol fumarate (oral)  
Atenolol (oral) | These are used to slow down your heart rate when it is too fast  
Low blood pressure, heart failure and airway obstruction  
These should not to be taken if you have asthma |                                                                                  |
| Calcium-channel blockers (rate control) | Diltiazem hydrochloride (oral or intravenous)  
Verapamil hydrochloride (oral or intravenous) | These are used to slow down your heart rate when it is too fast  
Low blood pressure, heart failure, problems with your heart’s electrical system and gastrointestinal problems |                                                                                  |
| Amiodarone hydrochloride (oral or intravenous) (rate and/or rhythm control) | This is used where you also have other heart disease or where other medicines have not worked  
Blurred vision, skin sensitivity to the sun, nausea, changes to your sense of taste, nightmare and disturbed sleep |                                                                                  |
| Flecainide acetate (oral or intravenous) (rhythm control) | This is commonly used for treating paroxysmal atrial fibrillation if you have no underlying problems with the structure of your heart. It is used to provide rhythm control. It is also often used as “pill in pocket”  
Blurred or double vision, abdominal pain, nausea, diarrhoea, constipation and headache |                                                                                  |
| Digoxin (oral or intravenous) (rate control) | Used to slow the heart rate primarily in people who have an inactive lifestyle  
Dizziness, blurred or yellow vision, nausea, diarrhoea and a skin rash |                                                                                  |

Questions to ask your cardiologist
- Why have you selected this treatment for me?
- Will I need more than one treatment?
- What is the goal of the treatment - management or cure?
- What is the likelihood my atrial fibrillation will return?
- I am already taking medicines for another condition, how will this impact on my treatment?
- Am I likely to experience any side effects?
- How will this impact on my other health problems?
- What should I do if the treatment doesn’t work?

What can you do?
- Reduce your alcohol intake
- Make a note of any medicines that may interfere with those you take to manage your atrial fibrillation
- If your symptoms continue or return, make a note of when and how they occur and arrange to see your doctor. Whether this is your GP or cardiologist will depend on how long after treatment you experience symptoms returning.
Tom James, 29, double Olympic gold medallist suffered from atrial fibrillation during the final lead up to the London 2012 Olympics. A prompt diagnosis resulted in fast and effective treatment and ultimately saved his place in the gold medal winning team.

Back in December 2011, during the training and selection process for the upcoming London Olympic Games, I was given the worrying news that I had the heart condition, atrial fibrillation. This came as a huge shock to me, particularly as at first I just assumed I had the virus that had been going round the team. However, due to the extreme fatigue and persistence of my symptoms - even walking upstairs made me out of breath - I soon realised that it had to be something more and went for further medical tests.

It was identified that I had an erratic heartbeat and through the Bupa health insurance provided to all UK Sport athletes, I was referred to a consultant who diagnosed me as suffering from atrial fibrillation. I was devastated; as an Olympic athlete you are accustomed to getting injured, but for me this felt much more serious and life affecting. The timing couldn’t have been worse as I had been working hard to recover from a long list of injuries and I was fighting for my place in the boat - I needed to be at my physical peak. Suddenly, I was faced with a condition that I felt I couldn’t control or navigate through. This wasn’t simply a torn muscle or even something visible - it was my heart and it felt very frustrating and upsetting.

When I realised I had a cardiac problem I also felt confused and worried. I am young, healthy and very fit and I certainly didn’t expect to have a heart condition. I also had the added strain of knowing that time was of the essence and any further time off from rowing was likely to scupper my Olympic dreams. I was extremely lucky however because my prompt diagnosis meant that I was given the correct treatment very quickly. I have since learnt that the speed at which you are treated has a huge impact on the success of your treatment and recovery. In fact, if it is not caught early, it can be impossible to return your heart back to its natural rhythm. Fortunately, I responded well to treatment, my heart went back into sinus rhythm and I was told that I could be back in a boat within about four weeks. I was off training for five weeks in total and it substantially affected my training - not qualifying became a very real possibility.

I did however finally manage to earn the last seat in the top four man boat, which went on to win gold in the London 2012 Olympics. This was an incredible feeling, not only because it was my second gold medal but also because I felt I had overcome a huge health hurdle. Had I been diagnosed two weeks later, I would have been eliminated from the top boat and the story would have had a very different ending.

I have since discovered a strong family history of atrial fibrillation and it has been interesting to hear how my treatment and experience compares. My uncle’s situation really brings home the importance of early detection and treatment. He wasn’t diagnosed until he had a mid life insurance medical which found an irregular heartbeat. Unfortunately, it was too late for it to be corrected and he hasn’t been in sinus rhythm since.

My health is generally good now, I will probably have another episode at some point but I feel well informed enough to understand the condition and how to manage it. My experience has highlighted to me just how important it is to raise awareness of this heart problem. In doing so I hope to help others spot the symptoms early on and encourage them to see a medical professional as soon as possible, which will ensure that they - like me - can return to a normal, healthy lifestyle.
ON-GOING MONITORING
AND MANAGEMENT

The goal of treatment is to either cure your condition or to ensure it is well controlled. Atrial fibrillation can recur so your condition needs to be monitored and well managed. Usually you will see your GP for regular check-ups. They will also be your first point of contact if you have any further symptoms.

Questions to ask your cardiologist / GP

- (To cardiologist) How long should I continue to see you before returning to the care of my GP?
- (To GP) How often should I come and see you?
- How can I best monitor / manage my atrial fibrillation?
- How can I improve my lifestyle to reduce my risk factors?

What can you do?

- You may need to make lifestyle changes to minimise factors that may increase your risk of atrial fibrillation which means ensuring your blood pressure is well controlled and minimising your alcohol intake
- Monitor your symptoms
- Remember to take your prescribed medicines as advised by your doctor
- See your GP if you have any concerns or changes to your condition

Additional frequently asked questions for your cardiologist

Each type of atrial fibrillation is different so the answers to many of these questions will vary. However, these are routine questions to ask and your cardiologist will be able to answer them according to the particular type of atrial fibrillation that you have.

- Why did I get atrial fibrillation?
- Can I be cured?
- Will I die early?
- Can I still exercise?
- Can I still have sex?
- Does this mean I’m going to have a heart attack?
- Am I going to have a stroke?
- How can I reduce my risk of having a stroke?
- Is it something you can catch or pass on?
- What can my family do to help?

Further information

This guide is not intended to be exhaustive and there are many sources of further information and support, a few of which we have listed here:

Arrhythmia Alliance
arrhythmiaalliance.org.uk

Atrial Fibrillation Association
atrialfibrillation.org.uk

British Heart Foundation
bhf.org.uk

Bupa
Health information - bupa.co.uk
Finder* - finder.bupa.co.uk

NHS Choices
nhs.uk

Patient.co.uk
patient.co.uk

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- Dr Yassir Javaid MB BChir MRCGP
  GP with a specialist interest in cardiology

- Tom James
  Double Olympic gold medallist

*Bupa’s Finder is a new search engine on our UK website which hosts a wealth of information about Bupa recognised healthcare professionals and facilities including consultants, therapists and hospitals.

This guide may feature medical techniques, surgery or drugs that are not covered by your Bupa health insurance scheme. If you are a Bupa member and want to find out if a treatment is included under your membership, please call the helpline number provided on your membership certificate, or 0845 600 7264*. Our advisers will be able to give you details about your cover before any treatment begins. The health information in this guide is intended for general information only and does not replace the need for personal advice from a qualified health professional. Always check with your doctor if you have any concerns about your condition or treatment. This booklet contains links to other websites that are not operated by Bupa. Such links are provided for your reference only and Bupa is not responsible for their content.

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