Atrial fibrillation: management

Information for the public
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About this information

NICE guidelines provide advice on the care and support that should be offered to people who use health and care services.

This information explains the advice about atrial fibrillation that is set out in the NICE guideline on atrial fibrillation.

This is an update of advice on atrial fibrillation that NICE produced in 2006. It includes new advice on treating atrial fibrillation, including drugs that have become available since the 2006 guideline was published.

Does this information apply to me?

Yes, if you are an adult (aged 18 years or over) who has or may have atrial fibrillation. It does not cover people with atrial fibrillation caused by heart disease they were born with.

Atrial fibrillation

If you have atrial fibrillation (sometimes shortened to AF), your heart beats irregularly and usually too fast. It happens when the electrical impulses that control your heartbeat become disorganised.
Atrial fibrillation is one of the most common heart conditions, especially among older people, and is not usually life-threatening. However, it can increase your risk of having a stroke.

**Your care team**

A range of professionals who specialise in different areas of treatment or support may be involved in your care. These could include GPs, cardiologists (doctors who specialise in heart care) and other specialist doctors, cardiac nurses, pharmacists, and doctors and nurses who work in anticoagulation clinics.

**Working with you**

Your care team should talk with you about atrial fibrillation. They should explain the tests, treatments and support you should be offered so that you can decide together what is best for you. Your family or carer can be involved in helping to make decisions, but only if you agree. There are questions throughout this information that you can use to help you talk with your care team.

You may also like to read NICE's information for the public on Patient experience in adult NHS services. This sets out what adults should be able to expect when they use the NHS. We also have more information on the NICE website about using health and social care services.

Some treatments or care described here may not be suitable for you. If you think that your treatment does not match this advice, talk to your care team.

**Diagnosis**

Symptoms of atrial fibrillation are often mild, and some people have no symptoms.

Your doctor should check your pulse for irregularities if you have any of the following:

- shortness of breath or difficulty breathing
- palpitations (when you can feel your heart beating)
- dizziness or fainting
- chest pain or discomfort
• a stroke or transient ischaemic attack (or TIA for short, often called a 'mini-stroke').

If your pulse is irregular and your doctor thinks you might have atrial fibrillation they should offer you a test called an electrocardiogram, or ECG for short, which records the electrical impulses that control your heartbeat. Depending on the results of your ECG, you may be offered further tests. These may include an ambulatory ECG (in which you wear a small portable ECG recorder for 24 hours, or longer if you have symptoms that happen more than 24 hours apart) or an echocardiogram (an ultrasound scan of the heart).

Questions to ask about diagnosis

• What should I do if I have symptoms of atrial fibrillation?
• What is a normal pulse?
• What should I do if I don’t have any symptoms but my pulse seems fast?
• What is an ECG? What does it tell you?
• How is an ECG done? How long does it take?
• When and where can I have an ECG?
• How long will it take to get the result?
• Will I need any more tests? If so, can you tell me what these will involve?

Personalised care and information

If you are diagnosed with atrial fibrillation you should be offered a personalised package of care and information. This should include information on stroke awareness and measures to prevent stroke, as well as treatment to control your symptoms of atrial fibrillation. You should also be offered psychological support if you need it. The treatments you are offered should be explained and discussed with you.

Your doctor or nurse should give you information about the causes, effects and possible complications of atrial fibrillation, about support networks for people with the condition, and who to contact for advice if needed.
Questions to ask about atrial fibrillation

- Can you explain what atrial fibrillation is?
- What causes it?
- Does it run in families?
- How abnormal is my heartbeat?
- Will it lead to other problems with my heart?
- Will it affect my everyday life?
- Will it go away?
- Are there any support organisations for people with atrial fibrillation in my local area?
- Can you provide any information about atrial fibrillation for my family/carers?

For family members, friends or carers

- What can I/we do to help and support the person with atrial fibrillation?
- Is there any additional support that I/we as carer(s) might benefit from or be entitled to?

Assessing your risk of stroke

Why you might be at risk of stroke

Atrial fibrillation makes your heart less able to pump blood around your body. This can increase your risk of a blood clot forming that could block the flow of blood to your brain and cause a stroke. If you are at risk of stroke, lowering your risk is an important part of the treatment for atrial fibrillation.

How your risk of stroke is assessed

Your doctor should assess both:
• Your risk of stroke and

• Your risk of having problems with bleeding (such as bleeding more than usual if you have a cut) if you were to start taking a type of drug called an anticoagulant, which is used to lower the risk of stroke.

Your doctor should use risk scores to estimate your risk of stroke (called the \textit{CHA}_2\textit{DS}_2\textit{-VASc}) and risk of bleeding (called the \textit{HAS-BLED}). These scores estimate your risk on a scale of 1 to 9. For stroke risk, a score of 2 or higher generally indicates an increased risk of stroke. The risk scores are based on factors such as:

• Your age.

• Whether you have other conditions that could increase your risk of stroke, such as diabetes or problems with your circulation.

• Whether you are taking drugs to treat another condition.

\textbf{When your stroke risk should be assessed again}

If you are not at an increased risk of stroke and are not offered an anticoagulant your doctor should assess your stroke risk again:

• when you reach age 65 or

• at any age if you:
  
  - are diagnosed with diabetes
  
  - develop other problems with your heart or circulation
  
  - have a stroke or transient ischaemic attack (a 'mini-stroke', sometimes shortened to TIA).

If you are at an increased risk of stroke, but you and your doctor decide that you won’t take an anticoagulant because your bleeding risk is too high, or for other reasons, your doctor should check your risk of stroke and your risk of bleeding every year.

\textbf{Questions to ask about your risk of stroke}
Am I at risk of having a stroke?

Are there other treatments that can lower my risk of stroke?

Is there anything I can do to lower my risk of stroke, such as exercising more or changing my diet?

Treatment to lower your risk of stroke

Anticoagulants

If you have atrial fibrillation but are under 65 years old and with no other risk factors, you will probably not be offered stroke prevention treatment.

Your doctor should discuss your options for anticoagulant treatment with you. Anticoagulants work by making it less likely that blood clots, which can cause strokes, will form. Blood clots are also the body’s way of stopping the bleeding if you have an injury. So, although anticoagulants can lower your risk of stroke, they can also increase the risk of problems for people with a higher risk of bleeding.

If your stroke risk score is 2 or higher, your doctor should offer you an anticoagulant, unless your risk of having problems with bleeding is too high. If you are a man and your stroke risk score is 1 or higher, your doctor may discuss with you whether an anticoagulant would benefit you.

Your doctor should explain that the benefit of taking an anticoagulant is likely to outweigh your risk of having problems with bleeding. Sometimes your risk of bleeding problems can increase, for example if you develop high blood pressure, so your doctor needs to keep a careful eye on your bleeding risk if you are taking an anticoagulant.

Being at risk of having a fall should not prevent you from taking an anticoagulant.

The anticoagulant you are offered may be a type of drug known as a vitamin K antagonist (for example, warfarin) or one of the newer drugs such as apixaban, dabigatran etexilale or rivaroxaban (your doctor may call these non-vitamin K oral anticoagulants, or NOACs). Your doctor should discuss the risks and benefits of all the anticoagulants with you.
You should also be given practical advice and information about taking anticoagulants in relation to venous thromboembolic disease. (Venous thromboembolic diseases is a term used to describe a group of disorders that involve the clotting mechanism of the blood.)

**Helping you decide about taking an anticoagulant**

NICE has produced a patient decision aid to help you decide whether to take an anticoagulant. It will help you and your healthcare professional discuss the pros and cons of anticoagulants so you can decide together what’s best for you.

**Checking how well your anticoagulant is working**

If you are taking a vitamin K antagonist such as warfarin, you will need to have regular blood tests to check whether the dose you are taking is at the right level to lower your stroke risk without putting you at unnecessary risk of bleeding problems. Your dose may need to be changed so your doctor should check it at every appointment.

If the vitamin K antagonist isn't working well or you are having problems with it, your doctor should check whether there are things that could be changed (such as the way you take your vitamin K antagonist, another drug you are taking at the same time for a different condition, your alcohol consumption or your diet) to help the vitamin K antagonist work better for you. If this isn't possible your doctor should discuss alternatives to the vitamin K antagonist with you.

No matter what type of anticoagulant you are taking, your doctor should check at least once a year to see if you are having any problems with it and whether you need to keep taking it. They should also check it if you develop any new problems that might be related to your atrial fibrillation or the treatment you are having for it.

**If you can't take an anticoagulant**

You should not be offered aspirin on its own as a way of preventing stroke caused by atrial fibrillation.

**Left atrial appendage occlusion**

A procedure called left atrial appendage occlusion may be offered as an alternative to drug treatment if you have an increased risk of stroke but cannot take an anticoagulant. Your doctor should explain what left atrial appendage occlusion involves and discuss the benefits and risks with you.
Questions to ask about treatment to lower your risk of stroke

- I’m already taking aspirin. What should I do now?
- What types of anticoagulants are there?
- How do they work?
- What is the difference between the different types?
- What are the side effects of the different types?
- Will the anticoagulant cause me to have a problem with bleeding? If so, how serious is it likely to be?
- What might happen if I decide not to take an anticoagulant?
- What do I need to know if I am starting an anticoagulant? Will I need to change my diet or lifestyle?
- Who will carry out checks to make sure my dose is right, how often will this happen and where will I need to go for this?
- Can I switch from one anticoagulant to another?
- What should I do if I get any side effects? (For example, should I call my GP, or go to the emergency department at a hospital?)
- How long will I need to take the anticoagulant for?
- Are there any long-term effects of taking an anticoagulant?
- Is there some other information (like a leaflet, DVD or a website I can go to) about anticoagulants?
- What are my options if I can’t take an anticoagulant?
Types of treatment

The symptoms of atrial fibrillation are caused by the heart beating irregularly and often too quickly. There are 2 main types of treatment. One type of treatment, called rate control, helps to control your heart rate (how fast the heart beats) when you have atrial fibrillation. See Treatment to control your heart rate for more information. The other type of treatment, called rhythm control, helps to keep your heart rhythm (the amount of time between heartbeats) normal. See Treatment to control your heart rhythm for more information.

Treatment to control your heart rate

You may be offered drug treatment with either a beta-blocker or a calcium-channel blocker as part of a strategy to control your heart rate. If you don't do any physical exercise, or do very little, you may be offered a drug called digoxin instead. Digoxin doesn't work as well when people are exercising so is more suitable for people who don't spend much time doing exercise.

If a single drug doesn't work well enough, you may be offered any 2 of a beta-blocker, diltiazem and digoxin together.

You should not be offered a drug called amiodarone as a long-term treatment to control your heart rate.

Questions to ask about treatment to control your heart rate

- Should I take a drug to control my heart rate?
- How long will it take the drug to work? When will I notice a difference in my symptoms?
- What should I do if I still have symptoms after I start taking the drug?
- What should I do if I get any side effects? (For example, should I call my GP, or go to the emergency department at a hospital?)
- How long will I need to take the drug for?
- Are there any long-term effects of taking this drug?
• What might happen if I decide not to take this drug?

Treatment to control your heart rhythm

Sometimes treatment to control heart rhythm, rather than heart rate, is the best option. You should be offered treatment to control your heart rhythm if, for example:

• your atrial fibrillation is caused by another condition that can be treated, such as an overactive thyroid gland or

• you have heart failure that your doctor thinks is caused by your atrial fibrillation or

• you've never had atrial fibrillation before and your symptoms have lasted less than 48 hours or

• you have atrial flutter that your doctor thinks can be treated with an ablation strategy (a treatment that aims to control or correct an abnormal heart rhythm) or

• you've had treatment to control your heart rate but you still have atrial fibrillation symptoms.

Electrical cardioversion

If your symptoms of atrial fibrillation last longer than 48 hours you may be offered a procedure called electrical cardioversion, in which a controlled electric shock is used to bring your heart back to a normal rhythm. If you are having electrical cardioversion your doctor should talk with you about whether it would be helpful for you to take a drug called amiodarone before and after the procedure, to help regulate your heart rhythm.

Regular drug treatment

Your doctor should assess whether you need regular treatment to control your heart rhythm. They should take into account any other health problems you have that might be related to your atrial fibrillation, and how likely it is that your atrial fibrillation symptoms will happen again.

If you and your doctor decide that you need regular treatment to control your heart rhythm you should be offered drug treatment with a beta-blocker. If you can't take a beta-blocker, or it doesn't work well enough, your doctor should discuss with you other drugs you might be able to take as an option to a beta-blocker.
If you have heart failure or a condition known as left ventricular impairment you may be offered amiodarone.

'Pill in the pocket'

If your atrial fibrillation symptoms happen only occasionally or you know what causes them, for example, drinking caffeine or alcohol, and they usually last less than 48 hours (known as paroxysmal atrial fibrillation), you may not need regular drug treatment. Your doctor may suggest that you have a drug to carry with you to take only when you have symptoms (sometimes called a 'pill in the pocket'). This type of treatment may be suitable for you if:

- you have not had other kinds of heart disease before and
- your atrial fibrillation happens only once in a while and
- your blood pressure and heart rate are not too low and
- you are able to decide how and when to take the drug.

Left atrial ablation

If drug treatment doesn't control your atrial fibrillation symptoms you may be offered a procedure called left atrial ablation. This procedure treats areas of the heart that trigger the symptoms of atrial fibrillation. The exact type of procedure will depend on whether your symptoms last less than 48 hours (known as paroxysmal atrial fibrillation) or whether they last for longer, usually more than 7 days (known as persistent atrial fibrillation). Your doctor should explain this procedure and should discuss with you whether it is suitable for you.

If you are having surgery on your heart or chest, your left atrial ablation may be carried out at the same time.

Pacemaker

If your atrial fibrillation symptoms have lasted for a longer period of time, usually more than a year (known as permanent atrial fibrillation), you may be offered a pacemaker (a small device inserted into your chest to help your heart beat regularly). If the pacemaker together with drug treatment doesn't control your symptoms you may then be offered a procedure called atrioventricular node ablation, in which an area of the heart that triggers symptoms of atrial fibrillation is treated. Your doctor should explain this procedure to you.
Questions to ask about treatment to control your heart rhythm

- Should I have treatment to control my heart rhythm?
- What kinds of treatments are available?
- What might happen if I decide not to have treatment to control my heart rhythm?

Electrical cardioversion

- Do I need to have electrical conversion to control my heart rhythm?
- What happens during electrical cardioversion? Can you explain the procedure?
- When and where will it be done?
- How long does it take to recover?
- Will I need more treatment afterwards?
- What should I do if I still have symptoms of atrial fibrillation afterwards?
- Are there any long-term effects of electrical cardioversion?

Drug treatment

- Is there a drug I can take to control my heart rhythm?
- How long will the drug take to work? When will I notice a difference in my symptoms?
- Does it have side effects?
- What should I do if I am taking the drug but if I still have symptoms of atrial fibrillation?
- What should I do if I get any side effects? (For example, should I call my GP, or go to the emergency department at a hospital?)
- How long will I need to take the drug for?
- Are there any long-term effects of taking this drug?
'Pill in the pocket'

- If my atrial fibrillation comes and goes, and doesn't happen very often, can I have a drug to take only when I have symptoms?
- Does the drug have any side effects?
- How long will it take to work?
- Is it better for me to avoid things that cause my atrial fibrillation? (For example, should I stop drinking coffee?)
- What should I do if I get any side effects from the drug? (For example, should I call my GP, or go to the emergency department at a hospital?)
- Are there any long-term effects of taking this drug?

Left atrial ablation

- Will I need left atrial ablation to control my heart rhythm?
- What will happen during the procedure?
- When and where can I have it done?
- Do I need to do anything to prepare for it?
- How long will it take to recover?
- What should I do if I still have symptoms of atrial fibrillation afterwards?
- Are there any long-term effects of this procedure?

Pacemaker

- Will I need a pacemaker?
- How is it inserted?
- When and where can I have it done?
- Will having a pacemaker affect my everyday life?
• Will it need to be replaced after a time?

Emergency treatment for severe atrial fibrillation

Rarely, atrial fibrillation can sometimes be severe enough to affect the circulation of the blood around the body. When this happens there is not enough blood circulating to support the body's organs. You should be given emergency electrical cardioversion straight away (see Electrical cardioversion).

If treatment doesn't improve your symptoms

If you still have atrial fibrillation symptoms after treatment, tell your doctor. They should refer you promptly for more specialist care (usually within 4 weeks).

Preventing atrial fibrillation after surgery

Having surgery for another condition can sometimes cause atrial fibrillation afterwards (even if you haven't had atrial fibrillation before). If you are having surgery on your heart or chest you should be offered drug treatment with amiodarone, a beta-blocker or a calcium-channel blocker before you have the surgery, to help control your heart rate and prevent atrial fibrillation. If you are already taking a beta-blocker you should continue to take it.

If you develop atrial fibrillation after heart or chest surgery you should be offered the treatment described in Treatment to control your heart rhythm.

If your surgery was not on your heart or chest and you develop atrial fibrillation afterwards you should be offered the treatment described in Types of treatment.

After any type of surgery, if you develop atrial fibrillation you should be offered an assessment to check your risk of having a stroke and treatment to lower your stroke risk if you need it (see Assessing your risk of stroke and Treatment to lower your risk of stroke).
Sources of advice and support

- Arrhythmia Alliance
  www.arrhythmiaalliance.org.uk

- Atrial Fibrillation Association
  www.atrialfibrillation.org.uk

- British Heart Foundation, 0300 330 3311
  www.bhf.org.uk

- Stroke Association, 0303 3033 100
  www.stroke.org.uk

You can also go to the NHS website for more information.

NICE is not responsible for the quality or accuracy of any information or advice provided by these organisations.

Update information

Minor changes since publication

December 2019: We updated links to the CHA₂DS²-VASc tool and other NICE guidance.

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Accreditation