



York and Scarborough
Teaching Hospitals
NHS Foundation Trust

Atrial Fibrillation and Anticoagulants

A guide to your diagnosis and treatment

Information for patients, relatives and carers

① For more information, please contact:

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What is Atrial Fibrillation?

Atrial Fibrillation (AF) causes an abnormal or irregular heartbeat. In AF the processes in your heart that control the normal heartbeat stop working correctly. This causes the heart to beat faster than usual with an irregular rhythm. You may feel your heart 'racing'.

The aim of treatment will be to try to restore the heart rhythm back to normal or reduce the symptoms you might feel. In addition, you may be asked to take a medicine (called an anticoagulant) that prevents blood clots forming. This is usually recommended to reduce the risk of you having a stroke.

AF can be divided into three groups.

- **Paroxysmal AF** – means that you have sudden episodes of AF that come and go. Each episode will start suddenly, but stop again in two to seven days without needing any treatment. If the episodes are frequent and the symptoms make you feel unwell, your doctor may recommend that you take regular medicines.
- **Persistent AF** – means that the AF lasts longer than seven days. This type of AF often requires medicines to control the heartbeat. Your doctor may recommend a treatment called ‘cardioversion’, which can trigger the heart to beat in normal rhythm again. You may need to take an anticoagulant to reduce your risk of developing a stroke.
- **Permanent AF** – means that the AF is a long-term condition. Your doctor will prescribe medicines to control the fast heart rate however; your heart will continue to beat with an irregular rhythm. The majority of patients tolerate permanent AF very well. Most patients with permanent AF will have to take long-term medication and an anticoagulant to reduce the risk of you having a stroke.

What are the signs and symptoms of AF?

- A 'thumping' heart (palpitations)
- Dizziness
- Chest pains (angina)
- Breathlessness

What are the causes of AF?

- High blood pressure puts a strain on the heart muscle and is the most common cause of AF.
- Various heart problems can cause AF. An example is a condition called ischaemic heart disease. Ischaemic heart disease causes chest pain (angina) or heart attacks. If you are already being treated for problems with your heart and develop any new symptoms, you should speak to your doctor.
- Medical conditions such as pneumonia, overactive thyroid, obesity or lung cancer can cause AF. Drinking too much alcohol or drinks containing caffeine may also trigger AF.

No cause for the AF is found in one in 10 cases. The heart is otherwise healthy and there are no other medical conditions to explain it.

What are the possible complications of AF?

The main risk associated with AF is the possibility of a stroke. If you have AF the blood does not flow as smoothly through your heart and a blood clot can sometimes form. This blood clot can travel from your heart in blood vessels to other parts of your body. The blood clot may become stuck in smaller blood vessels in the brain (or sometimes in other parts of the body). When the blood clot gets stuck in the smaller blood vessels it blocks the blood supply and causes a stroke.

Other less common complications of AF include weakness of the heart muscle (cardiomyopathy), heart failure or an increase in chest pain if you suffer from angina.

What is my risk of having a stroke?

Your healthcare professional can use a risk score to estimate your risk of having a stroke (called the CHA₂DS₂-VASc) and risk of bleeding (called the HAS-BLED). The risk scores are based on factors such as your age and whether you have other medical conditions. The higher the score, the more likely it is that you will have either a stroke or major bleeding.

Treatment with anticoagulants

Anticoagulation is a treatment, which is often referred to as 'thinning your blood'. An anticoagulant does not actually thin the blood but alters the blood clotting process to stop clots from forming so easily. Taking an anticoagulant does not guarantee you will not have a stroke, but will significantly reduce the risk.

Warfarin

Warfarin was the most commonly prescribed anticoagulant. It interacts with the clotting processes to stop your blood clotting as quickly.

If you start treatment with warfarin, you will be given a yellow warfarin book explaining your treatment. You will need regular blood tests to check how quickly your blood clots and to make sure that the amount of warfarin in your system is right for you. The blood test result is called the INR (International Normalised Ratio). This indicates to the doctor, pharmacist or nurse looking after you what dose you will need to take. Your dose may vary depending on the INR result. The INR result and warfarin dose will be written in your yellow book.

Sudden illness or a change in your medications (e.g. antibiotics) can alter the INR. You must inform your clinic/GP if you become unwell or your medications change.

If for any reason your INR results are too high and you start to have problems with bleeding, the effects of warfarin can be reversed by a medicine called vitamin K. Your doctor or pharmacist will ask you some questions about your warfarin treatment before asking you to take vitamin K.

Direct acting oral anticoagulants (DOACs)

Dabigatran, apixaban, edoxaban and rivaroxaban are direct acting oral anticoagulants, commonly abbreviated as DOACs. These medicines may be used as an alternative to warfarin particularly if your INR blood results are not very well controlled.

Are regular blood tests needed to monitor all anticoagulants?

Regular INR blood tests are needed if you take warfarin. The blood tests will be every week at first. Once your dose is established and your INR results are stable then the frequency of the blood tests can be reduced slowly. When you are stable on warfarin treatment, you may only need an INR test every twelve weeks.

If you take DOACs, no INR blood tests are required. Blood tests to check your kidneys are working well will be done before starting treatment and at least once a year while you are taking these medicines. If you have severe kidney failure, the DOAC medicines may not be suitable for you.

Which of the anticoagulants is better for me?

DOACs have not been directly compared to each other in clinical trials. This means we are not able to say that one is better than another.

Before starting any anticoagulant, your doctor will need to know about any other medical conditions you might have. The doctor will discuss your individual needs before deciding which anticoagulant is best for you.

More information can be found about anticoagulant medicines at:

National Institute for Health and Care Excellence
NICE AF Patient decision aid

Website: <https://www.nice.org.uk/guidance/ng196>
[Accessed November 2021]

Is it worth changing from warfarin?

Warfarin has been prescribed for over 60 years and therefore we have a lot of experience of its use. Trials have shown that when warfarin is taken correctly and the INR is well controlled it is as effective as DOACs.

If warfarin control is poor, despite taking it properly DOACs may offer a better treatment.

What happens if I miss a dose of my anticoagulation medicine?

It is important that you take your regular dose as agreed with your doctor. If you find it difficult to remember to take your regular dose then DOACs may not be suitable for you because the protective effect wears off quickly. Warfarin however, stays in your system for longer and may offer some protection if you forget to take a dose. You could discuss with your pharmacist ways to help to remember to take your tablets e.g. using a medication aid.

Your doctor or pharmacist will advise you what to do if you miss a dose. You should avoid taking a double dose to make up for a missed dose. Remembering to take your anticoagulant medicine every day is the best way to ensure your risk of a stroke is kept as low as possible.

Should I be worried about bleeding?

All anticoagulants have the potential to cause bleeding since they slow the blood clotting process. You may find that you bruise more easily and bleed for longer if you cut yourself.

Tell the doctor, pharmacist or nurse looking after you as soon as possible if you experience any of the following:

- Blood in your bowel motions or urine.
- Coughing up or vomiting blood.
- Heavy nose bleeds that you are unable to stop (for example, longer than 10 minutes).
- Sudden and large areas of bruising.

You should get urgent medical advice if you experience any of the following:

- A severe accident in which you are hurt.
- A significant blow to your head.
- Bleeding which you are unable to stop.

Do DOACs cause less bleeding than warfarin?

In clinical trials:

- All of the DOAC's cause less bleeding into the brain (intracranial bleeding) than warfarin.
- Dabigatran and rivaroxaban caused more nosebleeds and blood in urine (haematuria) than warfarin.
- Bleeding in the stomach or bowel (gastrointestinal bleeding) is a concern with anticoagulants as it can be severe. Bleeding events among patients taking DOAC's increased with age, with the greatest risk occurring in individuals age 75 and older.

If bleeding occurs, can it be reversed?

If you are taking warfarin, vitamin K and clotting factors can be given to reverse the effects depending on the severity of the bleeding and the INR result.

If you are taking DOACs, the symptoms of bleeding still can be managed using clotting factors but we do not have any specific medicines that can be given to reverse the effects directly, except for dabigatran.

Are there any other side effects with anticoagulation?

Warfarin is generally well tolerated. Rashes, nausea, hair loss and diarrhoea can occur rarely.

We have less information on the side effects of DOACs other than experience from the clinical trials. Dabigatran and rivaroxaban can cause more gastrointestinal symptoms than warfarin (indigestion and stomach ache).

When you are prescribed your medicine, you should find an information leaflet enclosed with it. It is important that you read this leaflet before you start taking your new medicine.

Do anticoagulants interact with food or alcohol?

Warfarin interacts with some foods and alcohol.

You should not need to change your diet when you start warfarin.

The amount of vitamin K in your diet may affect your INR result. There are large amounts of vitamin K in certain foods such as: liver, broccoli, brussel sprouts and green leafy vegetables such as spinach, coriander and cabbage.

If you make a complete change to your diet once you are stable on warfarin, you should seek advice from the clinic that monitors your warfarin or your GP, since your warfarin dose may need to be changed.

Alcohol can affect the INR so it is important that you avoid drinking excess amounts of alcohol or 'binge' drinking. We recommend that if you drink alcohol that you keep to healthy limits:

- Do not drink more than 14 units a week on a regular basis.
- Spread your drinking over three or more days if you regularly drink as much as 14 units a week.

There are currently no known food or alcohol interactions with DOACs, but we still recommend that you keep to healthy limits.

Are there any problems taking anticoagulants with other medicines?

Warfarin interacts with many medicines. If any of your regular medicines change you may require extra INR monitoring to ensure you continue to take the right dose. It is important to inform the area that monitors your warfarin when any medications are changed.

DOACs have fewer interactions with other medicines compared to warfarin but it is important to check before any new ones are started.

Always ask your doctor or pharmacist about all the medicines you take including over the counter medications, vitamins and herbal supplements when you are taking any anticoagulant.

How long do I need to take anticoagulants for?

You will need to take anticoagulants for as long as you have AF.

Sometimes AF can be reversed to restore normal heart rhythm using cardioversion or other techniques. If this is offered to you, the results may not be permanent so you may be advised to continue with your anticoagulant medicine.

Other important information

When you receive your anticoagulant medicine you should be given an information booklet and an anticoagulant alert card. There is also a patient information leaflet with your medicine. It is important that you read the information provided and carry the alert card with you whilst you are taking your anticoagulant medicine and show it to any healthcare professional or complimentary therapist.

If you are taking warfarin, you will be given a yellow warfarin booklet, which contains information specific to warfarin.

You may need to stop your anticoagulant before surgery or any other procedure. It is important that you inform the surgeon, doctor, dentist or nurse that you take an anticoagulant. They will advise about any changes you may need to make to your medicines before and after the procedure.

If you have any questions about your anticoagulant medicine, you should speak to the hospital specialist looking after you or your GP.

For further information about AF or reversal techniques, you can visit the following website:
www.patient.co.uk [Accessed November 2021], contact the British Heart Foundation or talk to your doctor.

Tell us what you think of this leaflet

We hope that you found this leaflet helpful. If you would like to tell us what you think, please contact:

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Teaching, training and research

Our Trust is committed to teaching, training and research to support the development of health and healthcare in our community. Healthcare students may observe consultations for this purpose. You can opt out if you do not want students to observe. We may also ask you if you would like to be involved in our research.

Patient Advice and Liaison Service (PALS)

PALS offers impartial advice and assistance to patients, their relatives, friends and carers. We can listen to feedback (positive or negative), answer questions and help resolve any concerns about Trust services.

PALS can be contacted on 01904 726262, or email pals@york.nhs.uk.

An answer phone is available out of hours.

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