

Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation (AF)

What is AF?

AF causes the heart to beat irregularly and sometimes too fast so blood doesn't flow through the heart and the rest of the body properly. This increases your risk of blood clots which can block blood vessels in the brain causing a stroke. With AF the risk of stroke is about 5 times greater than without AF⁽¹⁾. The individual risk for each person also depends on other factors including your age, gender, whether you have already had a stroke or TIA and whether you have heart failure, vascular disease, diabetes or high blood pressure.

Stroke can cause weakness in one side of the body, numbness, problems with speech, problems with vision, confusion or sometimes it is so severe it can kill a person straight away.

1. Treatment Options to decrease risk of stroke

Anticoagulants make the blood take longer to clot ('thin the blood') so reduce the risk of clot formation and decrease the risk of stroke. They are about 64% effective at reducing this risk⁽²⁾.

The treatment is preventative and is usually long term.

Aspirin is much less effective at preventing stroke and is no longer recommended by the National Institute of Health and Care Excellence (NICE).

You can choose whether to take an anticoagulant or not. If you decide to take an anticoagulant you can choose either Warfarin or one of the NOAC's (stands for new oral anticoagulant but are also known as Non Vitamin K or direct acting oral anticoagulants) such as Apixaban, Rivaroxaban, Dabigatran or Edoxaban. However, if you have certain heart valve problems or a mechanical heart valve replacement, you will only be able to choose Warfarin, as there is not enough information about the effectiveness of the NOACs in these conditions.

2. Risks of taking Anticoagulants

All anticoagulants can increase the risk of bleeding which can be minor such as nose bleeds, bruising or major (internal) bleeding such as in the brain and gut. Major bleeding could be dangerous and sometimes even fatal.

Your Doctor will use risk scores to calculate your risk of stroke using CHA₂DS₂- VASc and your bleeding risk using HAS-BLED. Using these scores the doctor will then make a decision about whether treatment with an anticoagulant is beneficial or not.

If the bleeding risk is greater than the benefit of treatment an anticoagulant will not be offered. The bleeding risk may reduce over time and an anticoagulant may be offered at a later date after re assessment of your risk.

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017	Review Date: March 2019	
	Approved by County Durham & Darlington APC	Page 1 of 6
	Current Version is held on the APC website	

3. What is involved in taking either Warfarin or a NOAC

Question	Warfarin	NOAC
<i>What Dose will I take?</i>	1 or more tablets will be taken once a day usually in the evening. The dose will vary depending on blood results. The dose will be written down as the number of mgs and the number of tablets to take worked out from the available strengths (0.5mg, 1mg, 3mg or 5mg tablets) e.g. 6mg dose can be taken as 2x3mg tablets or 1x1mg + 1x5mg tablet or 6 x 1mg tablets	1 tablet twice a day for Apixaban 1 capsule twice a day for Dabigatran. 1 tablet once a day for Rivaroxaban and Edoxaban. Rivaroxaban needs to be taken with food The dose will stay the same
<i>How long will I need to take this treatment?</i>	Long-term	Long-term
<i>Are any blood tests needed?</i>	Yes. Frequent blood tests are needed for the first few weeks or months then a blood test every 1-2 months is needed for most people. This involves visiting a warfarin clinic of your choice either at a GP surgery, hospital or Pharmacy. Some patients who have difficulty attending the clinic can have their blood test taken at home. Some patients may be able to self-test at home and be dosed using a telephone service.	Yes. A blood test is required before treatment then usually once a year to check kidney and liver function. More frequent testing will be needed if you have liver or kidney problems
<i>Can you measure effect of drug?</i>	Yes. Using the international normalised ratio (INR). This measures the effect the drug has on how long your blood takes to clot. The aim is to have an INR of 2 to 3 to ensure it is effective to prevent stroke and your blood is not too thin to increase risk of bleeding.	No. Routine tests are not needed and are not reliable at present.
<i>How effective is it at reducing risk of stroke?</i>	Your doctor will work out your individual risk of stroke using the CHA ₂ D ₂ VASc Tool. The risk ranges from 1.3% per year with a score of 1 to 15.2% per year with a score of 9. Warfarin reduces this risk by approximately 64%.	All are at least as effective as Warfarin.

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017	Review Date: March 2019	
	Approved by County Durham & Darlington APC	Page 2 of 6
	Current Version is held on the APC website	

Question	Warfarin	NOAC
<i>What is the risk of a major bleed?</i>	Ranges from 1% to 12.5% depending on your HAS-BLED Score. Your Doctor will calculate your bleeding risk and if this risk outweighs the benefit you will not be offered treatment with an anticoagulant.	All have a reduced incidence of intracerebral haemorrhage (bleed in Brain) than Warfarin.
<i>What are the other main Side effects?</i>	Minor bleeding such as nose bleeds and bruising	Minor bleeding such as nose bleeds and bruising with all NOACs. Indigestion, sickness, stomach ache and/or diarrhoea may occur with some of the NOACs.
<i>Can its effect be reversed in an emergency?</i>	Yes. Effect on clotting can be measured using INR and reversed using vitamin k and the blood product Beriplex which replaces clotting factors that have been inactivated by Warfarin	A reversal agent has recently become available for Dabigatran but it will only be used in specialised circumstances. At time of writing reversal agents for the other NOACs are under development. Treatment of bleeding is mainly to control symptoms e.g mechanical compression, giving fluids, blood transfusion, possible surgery. These medicines stay in the body for less time and so the bleeding resolves more quickly than if you are taking warfarin.
<i>Can I receive clot busting treatment if I have a stroke?</i>	Possibly if INR is low enough	No but there may be some circumstances where your doctor may decide it is safe to do so depending on timing of last dose.
<i>Does it interact with other medications?</i>	There are many interactions with other medications including over the counter and herbal medicines. It is important to check with a health care professional before starting or stopping medication	There are several interactions with other medications including over the counter and herbal medicines. It is important to check with a health care professional before starting or stopping medication
<i>Do I need to change what I eat or drink?</i>	Warfarin acts by interfering with the production of vitamin K which is needed in the clotting process. Foods high in vitamin K, such as liver, brussel sprouts and broccoli can prevent Warfarin working as it should. As it is important to eat a variety of fruit and vegetables try and eat set quantities of these foods regularly rather than stop eating them altogether. This will keep a	No but a healthy diet is still recommended. Alcohol needs to be kept to the recommended safe limits with no binge drinking.

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017	Review Date: March 2019	
	Approved by County Durham & Darlington APC	Page 3 of 6
	Current Version is held on the APC website	

Question	Warfarin	NOAC
	<p>fairly constant level of vitamin K in your bloodstream. Obtain advice from a health care professional before you make any major changes to your diet as this can affect how you respond to Warfarin and more frequent bloods tests may be needed for a short time. Cranberries and cranberry juice should be avoided. Alcohol needs to be kept to the recommended safe limits with no binge drinking</p>	
<p><i>What happens if I forget to take a dose?</i></p>	<p>If taken in the evening you can take it as soon as you remember up to midnight otherwise miss a dose and take the next dose at the usual time. Never double a dose. Make a note of the missed dose and inform the healthcare professional at the warfarin clinic.</p> <p>Obtain advice from a healthcare professional if you think you have taken an extra dose by mistake</p>	<p>It is essential NOACs are taken every day as they act for a much shorter period of time than Warfarin so if you miss a dose you're not protected. If you miss a dose and it is less than half the time to the next scheduled dose, take the medicine and continue as normal. If not then take the next dose at the scheduled time. Do not take a double dose to make up for a missed dose.</p> <p>Obtain advice from a healthcare professional if you think you have taken an extra dose by mistake</p>
<p><i>What happens if I need planned surgery or dental treatment?</i></p>	<p>It is important to tell anyone treating you, including your dentist, that you are taking warfarin. You should tell them well before your appointment and show them the alert card that you will be given. You would usually stop taking warfarin about 5 days before planned surgery, and start taking it again straight away afterwards. You would not usually need to stop taking warfarin before dental surgery, but your blood clotting would be tested to help decide</p>	<p>It is important to tell anyone treating you, including your dentist, that you are taking a NOAC. You should tell them well before your appointment and show them the alert card that you will be given. You would usually stop taking the NOAC for up to 48 hours before planned surgery or dental treatment, and start taking the NOAC again straight away after the surgery.</p>

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017	Review Date: March 2019	
	Approved by County Durham & Darlington APC	Page 4 of 6
Current Version is held on the APC website		

Which NOAC is best?

If you decide to go on a NOAC, your Doctor will then decide which one is best for you by taking into consideration your other medical problems. The choice is usually between Apixaban or Rivaroxaban but there may be some circumstances when Dabigatran will be the preferred option. If remembering to take your tablets is an issue then Rivaroxaban may be the better option as it is only taken once a day.

Information about your treatment

You should be counselled about your new treatment prior to starting the oral anticoagulant and be given written information in the form of a NOAC Alert Card or the Yellow Anticoagulation Book for Warfarin. The alert cards need to be carried with you to aid health professionals when treating in emergency situations.

References

- (1). Wolf PA, Abbott RD, Kannel WB. Atrial Fibrillation as an independent risk factor for stroke: the Framington Study. *Stroke* 1991;22:983-8.
- (2). Hart R, et al. *Ann Intern Med* 2007;146:857-867.

Further information:

Information used in this patient decision aid has been obtained from the National Institute for Health and Care Excellence (NICE) patient decision aid for atrial fibrillation: medicines to help reduce your risk of a stroke- what are the options? Visit www.nice.org.uk/guidance/cg180/resources/patient-decision-aid for more detailed information.

An alternative decision aid is available on <http://patient.info/decision-aids/atrial-fibrillation-medicines-to-help-reduce-your-risk-of-a-stroke/decision-aids>

Patient Information on anticoagulants can be obtained from:

<https://www.bhf.org.uk/publications/heart-conditions/medical-information-sheets/anticoagulants>

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017	Review Date: March 2019	
	Approved by County Durham & Darlington APC	Page 5 of 6
	Current Version is held on the APC website	

Summary of Recommendations

- AF increases risk of stroke by 5 times more than if you had no AF
- An anticoagulant is the recommended treatment to reduce this risk by 64%
- Aspirin is no longer recommended by NICE as it is much less effective at reducing this risk
- You can choose to be treated with an anticoagulant or not.
- If you decide to be treated you can choose either warfarin or a NOAC.
- All anticoagulants can cause bleeding as a side effect which can be minor such as nosebleeds and bruising or major internal bleeding such as from gut or brain which may be fatal.
- If your risk of bleeding outweighs the benefit of treatment with an anticoagulant you will not be offered treatment. You may be offered treatment in the future as your bleeding risk can reduce over time.

Summary of differences between Warfarin and the NOACs

- Both are as effective at reducing risk of stroke.
- Both can cause bleeding as a side effect, some of the NOACs **may** have a slightly reduced risk of major bleeding than warfarin. All have a reduced risk of a bleed in the brain compared with Warfarin.
- Warfarin is taken once a day but the dose is variable and has to be decided on frequent blood tests which measures how long your blood takes to clot (INR test). This involves attendance at a Warfarin clinic which is frequent initially but then changes to 1-2 monthly after first few weeks or months for most people. The blood tests can be done at home if you have difficulty getting to a clinic or can be done using self testing and via a telephone service if preferred.
- The effect of NOACs are more predictable so a specified dose is given once or twice a day depending on the NOAC and the dose remains the same. There are no reliable blood tests to monitor the effect of NOACs so these are not needed. A blood test will be taken initially and at least annually thereafter to monitor kidney and liver function.
- Warfarin has an antidote if major bleeding occurs. Only one NOAC has an antidote at present but the others have antidotes in development.
- There are more interactions with other medications and dietary restrictions with warfarin than with NOACs.
- It is essential that you comply with treatment as missing doses leaves you unprotected and this is particularly so with the NOACs due to their short duration of action.

Issue: 1	Patient Decision Aid for Treatment Options to Reduce Stroke Risk in Atrial Fibrillation	
Effective from: March 2017		Review Date: March 2019
Approved by County Durham & Darlington APC		Page 6 of 6
Current Version is held on the APC website		