

New Oral Anti-Coagulant or NOAC Medicines

**Important information
for patients**



What is this booklet for?

This booklet is about ‘New oral anti-coagulant’ medicines or NOACs.

- ‘Anti-coagulants’ are medicines that thin the blood.
- ‘Oral’ means they are taken by mouth – as a tablet or capsule.

These new medicines are different to warfarin - the main blood thinning medicine available before. This booklet contains important information to take the medicine safely and effectively.

What if I am taking warfarin?

If you have been prescribed warfarin you do not need to read this booklet. Talk to your doctor.

What other information will I be given?

NOAC ALERT Card

This is to carry with you all the time.

- Take this card out of the red folder.
- Fill in your information on the card including the name of the NOAC you take
- Ask your doctor if you need help filling it in.

Carry the card with you all the time - put it in your wallet or purse. Show this card if:

- you buy a new medicine or supplement over the counter
- you see your dentist or another healthcare professional
- you have an accident or become very ill - ambulance and hospital staff need to know that you take a NOAC.

Patients taking a NOAC long term should consider joining Medic Alert (www.medicalert.org.uk or telephone 01908 951045). This would allow healthcare professionals to see your Summary Care Record.

Oral anti-coagulation card

This card is for your doctor or pharmacist to fill in. It helps information on your care be transferred between your GP and your hospital doctor.

Patient information leaflet

With your medicine pack you will get a 'Patient leaflet' from the manufacturer.

- Read this patient information leaflet as well as this booklet to get all the information about your medicine.

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1. What is a New Oral Anti-Coagulant (NOAC)?

New Oral Anti-Coagulants, also called NOACs, are medicines which thin your blood.

- They help to lower the risk of blood clots - they do this by delaying the time it takes for blood to clot
- Blood clots can cause serious medical problems such as:
 - Stroke - blood clot in the brain
 - DVT – blood clot in the legs
 - Pulmonary embolus – blood clot in the lungs.

Some people are now calling these DOACs: Direct Acting Oral Anti-Coagulants.

2. Types of New Oral Anti-Coagulants (NOACs)

At the moment there are four different NOAC medicines.

- Dabigatran - also called Pradaxa®
- Rivaroxaban - also called Xarelto®
- Apixaban - also called Eliquis®
- Edoxaban - also called Lixiana®

These medicines are also listed on the following page - with an example of what the tablets or capsules look like.

Which medicine will I take?

Your doctor will prescribe **one** of these medicines for you. They will decide which one is best for you and your illness.

Medicine name	Strengths available	Example of tablet or capsule
<p>Dabigatran Capsules</p> <ul style="list-style-type: none"> • also called Pradaxa[®] 	<ul style="list-style-type: none"> • 110mg • 150mg 	
<p>Rivaroxaban Tablets</p> <ul style="list-style-type: none"> • also called Xarelto[®] 	<ul style="list-style-type: none"> • 2.5mg • 10mg • 15mg • 20mg 	
<p>Apixaban Tablets</p> <ul style="list-style-type: none"> • also called Eliquis[®] 	<ul style="list-style-type: none"> • 2.5mg • 5mg 	
<p>Edoxaban Tablets</p> <ul style="list-style-type: none"> • also called Lixiana[®] 	<ul style="list-style-type: none"> • 30mg • 60mg 	

3. Why have you been prescribed a New Oral Anti-Coagulant (NOAC)?

Your doctor may have prescribed a NOAC for you if you have one of the following medical problems:

Atrial Fibrillation (AF)

- AF is an uneven heartbeat - this can increase the risk of blood clots forming in the heart.
- If a clot forms it may then travel to the brain or other parts of the body - this may lead to serious medical problems such as a stroke.
- NOACs lower your chance of having a stroke by helping to stop blood clots forming.

Recent hip or knee replacement surgery

- People who cannot move around a lot have a higher chance of getting a blood clot. This includes people who have had a hip or knee replacement
- Patients having this surgery may need an anti-coagulant to stop blood clots until they can move around again.

Deep Vein Thrombosis (DVT)

- A blood clot in one of the veins in your body - usually in your leg.

Pulmonary Embolism (PE)

- A blockage in blood flow when a blood clot from a vein breaks off and travels to the lungs.

Acute Coronary Syndrome (ACS)

- This is when the blood supply to some of the heart muscles is suddenly blocked - like in a heart attack.

4. What you need to know before you start taking your New Oral Anti-Coagulant (NOAC)

NOACs may not be suitable for some people

Talk to your doctor or pharmacist before taking a NOAC if any of the following applies to you. This is because NOACs may not be suitable for you if you have:

- high blood pressure which is not well controlled, liver or kidney problems.
- artificial heart valves (particularly 'mechanical' valves)
- had recent surgery (particularly brain, spine or eye surgery)
- ever had bleeding problems - such as stomach ulcers.

If any of the above apply to you (or you are not sure), talk to your doctor or pharmacist before taking your NOAC.

Tests and checks

Unlike warfarin, with NOACs you do not need regular blood tests to check how well your blood is clotting.

However, it is important to have regular check-ups and blood tests to check your kidneys. Your doctor will do these tests before you start taking a NOAC. After that:

- If you are 75 years or older, are frail or have kidney problems you will need blood tests every 6 months (sometimes every 3 months)
- For other patients tests are needed at least once a year.

Your doctor will do extra blood tests if:

- you become very dehydrated – if you lose lots of water from your body
- you have any other problems that may affect your kidneys.

Other medicines and NOACs

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines. This includes medicines you buy and herbal medicines, including vitamins. This is because NOACs can affect the way some other medicines work. Also some other medicines can affect the way NOACs work.

Tell your doctor or pharmacist:

- what other medicines you regularly take before you start taking your NOAC
- that you are taking a NOAC before you start taking any other medicines (including herbal medicines)

They need to know because your NOAC and other medicines may affect each other.

In particular, **do not start taking your NOAC** before speaking to your doctor if you are taking any of the following medicines:

- medicines for fungal infections - such as ketoconazole, itraconazole, voriconazole and posaconazole
- medicines for HIV - such as lopinavir, ritonavir and saquinavir
- medicines used to suppress the immune system - such as ciclosporin, tacrolimus
- verapamil - used for high blood pressure and atrial fibrillation - only applies if you are taking the NOAC called dabigatran - also called Pradaxa[®]
- other medicines to prevent blood clots - such as warfarin, enoxaparin, dalteparin.

Other medicines may affect the way your NOAC works and your doctor may need to change your medicine or your dose. Tell your doctor or pharmacist if you are taking any of the following medicines:

- other medicines to prevent blood clots - such as clopidogrel, ticagrelor, prasugrel and aspirin
- some medicines to relieve pain or prevent inflammation - such as aspirin, ibuprofen, naproxen, diclofenac, meloxicam, and celecoxib
- medicines for atrial fibrillation - such as amiodarone, diltiazem
- some antibiotics - such as clarithromycin and rifampicin
- St John's Wort - a herbal medicine used for depression
- medicines for epilepsy - such as carbamazepine, phenytoin and phenobarbitone.

There may be other medicines not listed here. Ask your pharmacist or doctor for more information.

If any of the above apply to you (or you are not sure), talk to your doctor or pharmacist before taking your NOAC.

NOACs and food

There are no foods you should not eat while taking NOACs.

There are no fruit juices that you need to avoid.

NOACs with alcohol

Alcohol can affect the way your NOAC works and can have an effect on bleeding.

- Do not drink large amounts of alcohol while you are taking a NOAC (no more than 3 units a day).
- Small amounts of alcohol (around 1 to 2 units a day) should not cause problems.

Pregnancy and breast-feeding

NOACs are not recommended during pregnancy or while breast-feeding. If you are pregnant or breast-feeding, think you might be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking a NOAC.

5. How to take your New Oral Anti-Coagulant (NOAC)

Always take your medicine exactly as your doctor has told you. Check with your doctor if you are not sure.

Take your medicine regularly:

- If prescribed once a day - take your medicine at the same time each day, either morning or evening. Taking at the same time helps you to remember. Chose the time easiest for you to remember.
- If prescribed twice a day - take your medicine in the morning and evening. Make the gap as close as possible to 12 hours – such as 8 o' clock in the morning and then 8 o' clock in the evening.

The instructions for how to take your medicine are on the following pages. However, these might be changed by your doctor. Always take your medicine exactly as your doctor has told you.

Make sure you know:

- the name of the medicine you have been prescribed
- what the medicine is for
- how you should take the medicine.

Dabigatran (Pradaxa[®])

- Swallow the capsule(s) whole with or without food.
- Do not chew or open the capsule(s).
- Keep the capsules in the original pack - do not put the capsules into a dose administration aid such as a Nomad or Dosette box (unless the box has been supplied by the drug company).

Medical problem	How to take
Atrial Fibrillation (AF)	<ul style="list-style-type: none"> • Take the medicine twice a day
Hip or knee replacement - to prevent a blood clot after surgery)	<ul style="list-style-type: none"> • Take the medicine once a day
Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE)	<ul style="list-style-type: none"> • First you will be given an anti-coagulant by injection for at least 5 days • Then take the medicine twice a day

Apixaban (Eliquis®)	
<ul style="list-style-type: none"> • Swallow the tablet(s) whole with or without food. 	
Medical problem	How to take
Atrial Fibrillation (AF)	<ul style="list-style-type: none"> • Take the medicine twice a day
Hip or knee Replacement - to prevent a blood clot after surgery	<ul style="list-style-type: none"> • Take the medicine twice a day
Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE)	<ul style="list-style-type: none"> • Take the medicine twice a day

Rivaroxaban (Xarelto®)

- Swallow the tablet(s) whole with food.

Condition	How to take
Atrial Fibrillation (AF)	<ul style="list-style-type: none"> • Take the medicine once a day
Hip or knee replacement -to prevent a blood clot after surgery	<ul style="list-style-type: none"> • Take the medicine once a day
Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE)	<p>First 3 weeks:</p> <ul style="list-style-type: none"> • Take the medicine twice a day <p>After that:</p> <ul style="list-style-type: none"> • Take the medicine once a day
Acute Coronary Syndrome (ACS)	<ul style="list-style-type: none"> • Take the medicine twice a day

Edoxaban (Lixiana®)

- Swallow the tablet(s) whole with or without food.

Condition	How to take
Atrial Fibrillation (AF)	<ul style="list-style-type: none"> • Take the medicine once a day
Deep Vein Thrombosis (DVT) or Pulmonary Embolism (PE)	<ul style="list-style-type: none"> • First you will be given an anti-coagulant by injection for at least 5 days • Then take the medicine once a day

What if you forget a dose?

If you take your NOAC **once a day** and you have forgotten a dose:

- If it is less than 12 hours since the time for the missed dose:
 - take the missed dose straight away.
- If it is more than 12 hours since the missed dose:
 - do not take the missed dose
 - take your next dose at the usual time and then continue taking your medicine as normal
 - do not take a double dose to make up for a forgotten dose.

If you take your NOAC **twice daily** and you have forgotten a dose:

- If it is less than 6 hours since the time for the missed dose:
 - take the missed dose straight away.
- If it is more than 6 hours since the missed dose:
 - do not take the missed dose
 - take your next dose at the usual time and then continue taking your medicine as normal
 - do not take a double dose to make up for a forgotten dose.

If you are not sure what to do or if you miss more than one dose of your NOAC talk to your doctor or pharmacist.

How long should I take my NOAC for?

Your doctor will tell you how long to take your NOAC medicine and when you can stop.

- The length of treatment will depend on your medical problem – see the following page. It will also depend on your risk factors.
- Do not stop taking your NOAC medicine unless your doctor tells you to.

Atrial Fibrillation (AF):

- Keep taking your medicine for as long as your doctor tells you. You may need to take them for the rest of your life.

After a hip replacement to prevent a blood clot:

- You will usually take the medicine for 28 to 38 days.

After a knee replacement to prevent a blood clot:

- You will usually take the medicine for 10 to 15 days.

For a blood clot such as a Deep Vein Thrombosis (DVT) or a Pulmonary Embolism (PE):

- Keep taking your medicine for as long as your doctor tells you.
- How long you take depends upon a number of risk factors.
- Most people keep taking the medicine for between 3 to 6 months.

Acute Coronary Syndrome (ACS):

- You will take the medicine until you have a medical procedure to relieve the cause of the Acute Coronary Syndrome. This may only be a few days.

6. Bleeding problems

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Contact your doctor straight away if you have any signs or symptoms of significant or unusual bleeding.

As with all anti-coagulants, bleeding is the main side effect of NOACs.

- If the bleeding is severe go to the nearest Accident and Emergency department or call 111 for advice.

To help reduce the risk of bleeding, take this medicine exactly how your doctor tells you to. It is important that you:

- know what to do if bleeding starts – you may also want to tell your family, friends and work colleagues what they should do
- tell your doctor or dentist that you are taking a NOAC well before any planned procedure or surgery
- do not do activities and sport that may cause serious injuries
- tell your doctor that you are taking a NOAC if you are having medical attention for an emergency bleed – show them your **Alert Card** (see page 3).

Medicines to stop bleeding (antidotes)

The effects of some medicines can be reversed with another medicine – called an antidote:

- warfarin – may use Vitamin K, or blood products such as Beriplex® or Octaplex®
- rivaroxaban, apixiban, edobaxan – currently there are no specific antidotes
- dabigatran – there is an antidote called idarucizumab (also called Praxbind®) – you will be given this medicine if you need it.

Signs and symptoms of bleeding

Some common signs and symptoms of unusual bleeding are:

- unexpected bleeding or bleeding that lasts a long time - including nose bleeds, bleeding from your gums, bleeding from cuts and scrapes, or menstrual periods).
- blood in your motions (stools) - they might look red or black - like tar
- severe or unexplained bruising, or bruising that gets bigger for no reason
- passing water (urine) which is red or dark
- coughing up blood or vomiting blood or material that looks like wet ground coffee
- headache, feeling dizzy, tired or weak, looking pale
- new pain, swelling or discomfort for no reason
- passing out ('loss of consciousness') or being very sleepy.

Talk to your doctor straight away if you have any signs or symptoms of unusual bleeding. If there are signs of bleeding inside your body or the bleeding is severe - go the nearest Accident and Emergency Department.

Medical and dental procedures and bleeding

Tell your doctor or dentist that you are taking a NOAC well before any planned procedure. This includes operations in hospital, minor procedures at the doctor's surgery and some dental procedures. This is because bleeding may be increased if you are taking a NOAC.

Your NOAC medicine will be part of the planning of your procedure. For simple dental procedures and minor skin surgery you may not need to stop taking your NOAC. For others - like endoscopy or operations - you may need to stop taking your NOAC. Your doctor will tell you what to do.

Things that might cause bleeding – how to reduce the risk

When taking a NOAC you can do all normal daily activities - but you are at risk of bleeding more than usual if you are injured.

To reduce your risk of injury, which may cause bleeding:

- do not do activities such as 'contact sports' that may cause injury – such as football, rugby, boxing
- take care to not fall over – this may lead to significant injury
- wear gloves when gardening
- consider using an electric razor instead of a blade

If you do cut or hurt yourself:

- clean and treat minor cuts and scrapes straight away
- even if there are no outward signs of injury tell your doctor about any falls, knocks to the head or body, or other major injuries

7. Other possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects

Tell your doctor straight away or go to Accident and Emergency at your nearest hospital if you notice any of the following serious side effects – you may need urgent medical treatment:

- Allergic reaction – the signs include rash, itching, swelling of any parts of the body, difficulty breathing
- signs of liver problems such as yellowing of the skin and whites of the eyes (jaundice)
- signs of significant bleeding: see Section 6 above.

Tell your doctor straight away or go to nearest Accident and Emergency if you notice any of these serious side effects.

Other side effects

Tell your doctor or pharmacist if you notice any of the following side effects and they worry you:

- indigestion or discomfort when swallowing
- diarrhoea, stomach ache
- feeling sick (nausea), being sick (vomiting)
- feeling dizzy or breathless
- fever or generally feeling unwell.

Tell your doctor or pharmacist if you notice any of the side effects listed above.

8. Other information including how to store your medicine

How to store

- Store all medicines out of the sight and reach of children.
- Keep your tablets or capsules in the pack until it is time to take them.
- Keep your tablets or capsules in a cool dry place where the temperature stays below 30°C. Do not leave your medicine on a window sill or in a car, and do not store your medicine in the bathroom or near a sink.

Important information on how to store Dabigatran

- Dabigatran (also called Pradaxa®) capsules must not be taken out of the original packaging (foil pack).
- Do not put in dose administration aids such as NOMAD or dosette boxes unless it is a specific one provided by the drug company.

This does not apply to apixapan, rivaroxaban or edoxaban.

Information about you - The Data Protection Act 1998 (Caldicott Audit)

Confidential records are kept about your health and the care you receive from the NHS. These records are important and help to make sure you receive the best possible care from us. The information may also be used to plan NHS services and assist in the teaching and training of health professionals. To make sure that patient confidentiality is maintained a policy has been written informing all staff of their responsibilities.

How to comment on your treatment

We aim to provide the best possible service and staff will be happy to answer any questions that you have. However, if you have any concerns you can also contact the Patient Advice and Liaison Service (PALS) on 0800 917 6039 who will be happy to talk to you. Alternatively, you can obtain a leaflet on “How to make a Comment, Complaint, or Raise a Concern about our services” from the ward, department or the Health Information and Resource Centre.

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