Warfarin therapy for stroke patients with atrial fibrillation

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What is Atrial Fibrillation?

Atrial fibrillation (AF) is an irregular heartbeat. Each year around 50,000 people are diagnosed with AF in the UK. It becomes more common with old age. The heart is made of muscle. It can be divided into four chambers, two upper chambers called atria and two lower chambers called ventricles. In a normal heart, both the atria and ventricles contract in a co-ordinated way to pump blood around the body. In AF, the atria contractions are haphazard and often fast. This means that the blood is not pumped through the heart efficiently. Blood may pool in the atria and form a blood clot.

Why did Atrial Fibrillation cause my stroke?

A stroke occurs when blood does not reach the brain. This happens when the flow of blood to the brain is blocked called an ischemic stroke. Or, it may occur if there is bleeding into the brain called a haemorrhagic stroke. In AF, clots may form in the heart atria. These clots may then travel through the blood.
stream. If the clots travel to your brain, they may block the flow of blood causing an Ischaemic Stroke. Atrial fibrillation increases your risk of a stroke by five times.

What is warfarin therapy?
Warfarin is a type of medicine known as an anticoagulant. This means it interferes with chemicals in the blood to stop the blood cells sticking together and forming clots. Often people describe its action as thinning the blood, but this is not correct as the blood is the same thickness. In AF, Warfarin is given to stop the clots developing in the heart to reduce the risk of a stroke. If you have suffered from a haemorrhagic stroke, you will not be started on Warfarin. Warfarin is also used to treat other conditions, for example clots in the legs and lungs or after insertion of a mechanical heart valve.

What are the benefits of warfarin?
The risk of stroke is more than halved in patients who take warfarin.

### 100 patients with AF:

Number of patients who develop a stroke

<table>
<thead>
<tr>
<th>No warfarin</th>
<th>Warfarin</th>
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<td><img src="image" alt="Smiley faces" /></td>
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What does taking warfarin involve?

When to take the medication
Your doctor will prescribe your warfarin medication. You will need to take your medication once a day. It is usually taken in the evening unless you are advised otherwise.

Warfarin clinics
Warfarin or anticoagulant clinics take place to help monitor and manage your medication. These may be at your GP practice or at your local hospital. At these clinics a blood sample will be taken to measure your INR.

INR – International Normalised Ratio
The international normalised ratio looks at how well your warfarin is working by measuring how quickly your blood clots. If your INR is too high, that means your blood clots too slowly and you are at risk of bruising or bleeding. If it is too low, that means your blood clots too quickly and you may develop a blood clot. Doctors are aiming for your INR value to be between 2-3. When you first start Warfarin it is important to measure the INR daily or on alternate days. This allows the dose of Warfarin to be adjusted to suit your body. When your INR level is more stable, it can then be measured less frequently for example once or twice a month.

Warfarin strengths
Warfarin tablets come in different strengths. You may be told to take a different tablet after your INR has been measured. Each strength tablet has a different colour:

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<thead>
<tr>
<th>Strength</th>
<th>Colour</th>
<th>Amount</th>
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<tbody>
<tr>
<td>0.5mg</td>
<td>WFN</td>
<td>0.5mg</td>
</tr>
<tr>
<td>1mg</td>
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<tr>
<td>5mg</td>
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Alert cards and anticoagulant book
You will be given an anticoagulant book for all your INR measurements to be recorded in. This should be taken to all your appointments. Also, you will be given an alert card. You should carry this with you at all times in case of an emergency so people know that you are taking Warfarin if you become ill.
Missed dose
If you forget to take your Warfarin and you normally take it in the morning, take the tablet as soon as you remember. But, if it is time for the next dose, do not double the dose to catch-up. If you normally take Warfarin in the evening, only take the missed dose if it is before midnight on the same day.

Overdose
If you accidentally take too much Warfarin, speak to your anticoagulant clinic, GP or NHS direct for advice.

What are the risks of taking warfarin?
Because of its effect on the blood, the main risk of Warfarin is excessive bleeding, known as a haemorrhage. For example, it could cause bleeding into the brain or into the gut. Before starting warfarin, your doctor will assess your risk of bleeding. If you develop any of the following symptoms, you are advised to seek medical attention:

- Blood in your urine
- Blood in your stools or black stools
- Heavy periods or other vaginal bleeding
- Blood in your vomit
- Coughing up blood
- Severe bruising
- Prolonged nosebleeds (more than 10 minutes)
- Abnormal headache

Your risk of bleeding is greater if you INR is abnormal. This is why it is important for you to monitor your INR. The yearly average of severe bleeding is between 1 to 2%.

100 patients on warfarin

Number of patients who have had a severe bleed

😊 to 😞
Will there be any side effects from taking warfarin?

You may or may not experience side effects of warfarin. The main side effects include:
• Nausea or vomiting
• Diarrhoea
• Skin rash
• Loss of hair

Do I need to avoid certain foods or medicines?

Food
Some foods interfere with warfarin, especially if variable amounts are eaten. It is best to eat similar amounts of the following food. For example:
• Green leafy vegetables – broccoli, cabbage, Brussels sprouts, lettuce
• Mature cheese, blue cheese
And avoid altogether:
• Cranberry juice or berries

Medicines
Warfarin may interact with other medications that you take. This includes those that you have bought and herbal medicines. It is best to tell any pharmacist or doctor who is treating you that you are on warfarin. If you have any concerns, ask your GP or pharmacist. It is also recommended that you read the patient information leaflet that comes with the medicine. Drugs that must be avoided include:
• Aspirin
• Ibuprofen

Alcohol
Alcohol may also interact with Warfarin. It is dangerous to drink excess alcohol when taking Warfarin. Avoid drinking more than the recommended limit: 3 units a day for men and 2 units a day for women.

What if I am undergoing surgery?

We advise that you speak to the surgeon who is looking after you and inform them that you are taking warfarin. Normally, the surgeon will suggest that you stop taking
the warfarin five days before the planned surgery. Because you have suffered from a stroke, the surgeon may decide that you need a different anticoagulant therapy called Low Molecular Weight Heparin during this time period. Normally, warfarin is restarted at your normal dose on the evening of the surgery or the next day.

**Are there any alternatives to warfarin?**

There are other anticoagulant medications, for example Aspirin and Clopidogrel. These medicines are not as good as Warfarin in preventing strokes in patients with AF. There are new anticoagulant medicines that are being developed for example Apixaban. This medicine does not require INR checks. Your doctor will tell you if you are suitable for alternative anticoagulants.

**When should I not take warfarin?**

**Other health conditions**

Please tell your doctor if you know that you have other health problems. It is recommended that you should not take warfarin if you have:

- Severe problems with your liver and kidneys
- Very high blood pressure
- Peptic (stomach) ulcers
- Bacterial endocarditis
- Bleeding disorder – for example haemophilia

**Pregnancy related issues**

If you are or may be pregnant or planning to become pregnant please see your GP as warfarin should be avoided especially in the first and third trimester. This is because it can cause abnormalities of the fetus and fetal or placental bleeding. Warfarin is not present in breast milk in significant amounts and is safe to take during breastfeeding.
Where can I find out more information?

British Heart Foundation
Heart helpline – 0300 330 3311
Website – www.bhf.org.uk

The Stroke Association
Stroke helpline and information services – 0303 303 3100
Website – www.stroke.org.uk
Email – info@stroke.org.uk
Address – Stroke Helpline and Information Service
  Stroke Association
  Life after Stroke Centre
  Church Lane
  Bromsgrove
  Worcestershire
  B61 8RA

Anticoagulant Europe
Helpline – 0208 289 6875
Website – www.anticoagulationeurope.org

The Trust provides free monthly health talks on a variety of medical conditions and treatments. For more information visit www.uhb.nhs.uk/health-talks.htm or call 0121 371 4957.

Department of Stroke Medicine
Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston, Birmingham B15 2WB
Telephone: 0121 627 2000