

Deep vein thrombosis (DVT)



Normally your blood moves freely throughout the body without any problems. However, if a blood clot forms in a vein it can stop your blood flowing properly. A clot that forms in any of the veins inside the leg is commonly called a deep vein thrombosis or DVT. It is important that a DVT is treated as sometimes parts of the clot can break off and travel in the blood to other parts of the body such as the lungs. If this happens, it's known as a pulmonary embolism or PE, which can cause shortness of breath and sharp chest pain. PE is a serious problem requiring urgent medical attention.

What causes a blood clot to occur?

The reasons why a DVT forms are not fully understood but evidence suggests that restricted movement can be a major contributing factor. Therefore patients who are ill in hospital or undergoing surgery which means they will be confined to bed rest are particularly at risk of DVT.

Other contributing factors can include:

- smoking
- taking the combined contraceptive pill
- increasing age
- being overweight
- pregnancy
- thrombophilia (an acquired or inherited tendency to clot).

How do I know if I have got a DVT?

There are many symptoms that indicate that a DVT could be present, these include:

- swelling in the calf that may be hot to touch
- a tender or painful calf
- pain in the calf when walking or bearing weight
- swelling and discomfort of the whole leg (this usually can mean you have a DVT in the upper part of the leg).

If you have these symptoms it does not mean that you definitely have a DVT as they can be due to other problems such as infection. The only way to find out whether you have a DVT is by carrying out special tests.

What do these tests involve?

There are several tests that can be used to diagnose a DVT. The two main tests are:

Doppler ultrasound scan

The blood flow in your leg is traced using ultrasound scanning. This can show where the blood flow is restricted and where a clot may be present. It is often the test used when clots in the upper part of the leg are suspected.

Venogram

A special dye that can be seen on X-ray is injected into a vein in your affected leg. This allows your veins to be seen on X-ray and can show if the blood flow is restricted due to a clot. However, approximately one in five of these tests are unsuccessful.

If I have a clot how will I be treated?

The standard treatment for a DVT is medication designed to prevent the body from developing any more clots. It aims to reduce the risk of the existing clot getting bigger or breaking off and causing a PE. This medication is often referred to as a 'blood thinner'. The technical term for this is 'anticoagulant'.

How do anticoagulants work?

Anticoagulants work by interfering with the body's own clotting mechanism. However, they don't dissolve clots that may be present, your body has an in-built system that will do this naturally over the next few weeks.

What medication am I likely to receive?

The main anticoagulants used are:

Direct Oral Anticoagulants (DOAC's)

These are relatively new drugs which are given in the form of tablets either once or twice daily. Unlike Warfarin there is no need for blood testing to monitor the blood thinning effect of the DOAC's. These anticoagulants have a shorter duration of action than Warfarin and heparin injections are not required when these blood thinners are introduced.

Heparin

This is generally given by injection under the skin usually once a day but can sometimes be given into a vein. Treatment may continue for up to 7 days. Your doctor will determine the amount of this medication you will receive and the dose is then unlikely to change. This drug is commonly given alongside Warfarin for 5 - 7 days until Warfarin treatment is fully established.

Warfarin

This is an anticoagulant given in the form of tablets, which are colour coded according to their strength. Each person responds differently to Warfarin and therefore the dose you receive will be suited to your specific needs. The effect of Warfarin on your blood is measured in the laboratory by testing how quickly your blood clots compared to normal. The result of this test is known as the International Normalised Ratio or INR for short. The normal INR is about 1.0 but in order to treat the DVT effectively your INR will need to be about 2.5 (although an INR reading between 2.0-3.0 is acceptable). At first the blood tests will be done quite frequently and your INR results will be recorded in a yellow record book, that will be given to you. As the Warfarin can take several days to gain effect in your body it is usual to continue Heparin treatment until the Warfarin is fully effective. It is likely you will need to stay on Warfarin for at least 3 months. Blood tests and advice on what dose of Warfarin to take will be given via a hospital clinic appointment or through your own GP surgery.

Your nurse will explain to you the benefits of each treatment and you will be allowed to discuss fully which treatment option may suit you best.

Before you leave hospital

- If you receive Warfarin an appointment will be made for you, which you must keep, to attend your GP surgery or hospital clinic for your next blood test
- Depending on which treatment you decide suits you best you will be given either a yellow 'Anticoagulant therapy record' booklet or a patient information booklet which will be explained to you. **You must always take this booklet with you whenever you see a doctor, or dentist.**

Will I have any problems with my treatment?

If you take your medication as recommended by your GP or hospital team you should not experience any problems. However if you become unwell, for example with diarrhoea, sickness, dizziness or a fever your medication may need to be reviewed. It is important that you contact your GP or hospital team if you are unwell or if you:

- injure yourself, especially if the injury is to your head or eye
- bleed excessively after a cut or have nosebleeds or bleeding gums
- have an abnormally heavy period
- develop bruises or black or brown spots on the skin without injuring yourself
- vomit up blood or material that look like 'coffee grounds'
- pass red-coloured urine or produce black faeces (stools)
- suffer sudden chest pain or shortness of breath.

What do I do if I cut myself?

Apply a clean cloth or dressing to the area and press on the wound for at least 5 minutes. If the bleeding continues contact your GP or hospital team.

What else can I do to help?

To help recovery from a DVT it is important that you look after yourself! It is advisable that you:

- avoid standing for long periods
- wear compression stockings if they have been provided

- put your feet up when sitting in a chair (ideally your feet should be higher than the seat of the chair where possible)
- take plenty of gentle exercise
- apply moisturiser to your legs to help keep them supple
- take your medication and attend for blood tests as instructed
- advise whoever is supervising your anticoagulation if you intend to start any other medication including anything bought over the counter at the chemist
- advise any other doctor, dentist or pharmacist that you are taking anticoagulant medication before you receive treatment from them
- avoid contact sports or activities that may cause you to bruise
- always wear slippers or shoes to protect your feet
- do not change your diet radically
- limit your alcohol intake to 1-2 drinks a day and do not binge!
- try to take your medication at the same time every day.

What if I forget to take my medication?

If you forget to take your tablets, or you think you may have taken too many tablets, inform whoever is monitoring your treatment as soon as you can. DO NOT take any extra tablets to make up for those you have missed.

Will my doctor call?

Your GP will be informed when you leave hospital that you have started anticoagulant therapy and will be given details of who will be monitoring your treatment. The doctor shouldn't need to call and you shouldn't need to see him unless you experience any of the problems mentioned in this leaflet.

Further information

Further information about blood clots and treatment is available from Thrombosis UK, PO Box 58, Llanwndra, SA19 0AD or online at www.thrombosisuk.org

**If you have any queries or worries about your treatment please contact
the Thrombosis Nursing Team at the Royal Cornwall Hospital:**

Monday to Friday 9am to 5pm

Tel: 01872 253597

Outside of the above hours contact:

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