

Deep Vein Thrombosis (DVT) - Advice Leaflet

What is a DVT?

A **deep vein thrombosis** (DVT) is a clot which has formed in a deep vein, usually in the leg. It most commonly starts in the calf veins, but can extend up in to the thigh veins. It can also occur in deep veins in other parts of the body. The deep veins of the leg are the larger veins that go through the muscles (not the veins you can see just below the surface of the skin) and carry blood towards the heart.

Why do blood clots form in the veins?

Blood flow through the leg veins is helped along by movement of the muscles which squeeze the veins. Most clots occur because of three factors- reduced flow in the vein and/or damage to the vein walls, and changes making the blood sticky.

What makes you more at risk of developing a DVT?

Pregnancy:	Increases the risk of clotting. About 1 in 1000 pregnant women develop a DVT
Age:	Older people are more likely to have a DVT, because blood gets stickier with age, and they are more likely to have other health problems that predispose to DVT
Immobility:	Lack of mobility causes the flow of blood in the veins to slow leading to an increased likelihood of clotting
Going into hospital:	Admission to hospital, whatever the reason is a risk factor for developing a DVT. A surgical operation increases the risk too, especially in people more susceptible to DVT, but in fact more DVT are seen in those who are in hospital not having surgery
Cancer:	Cancer and its treatments can damage the veins. Cancer patients often have sticky blood and may be less mobile
"The Pill" or Hormone Replacement Therapy:	The oral contraceptive pill (OCP, also known as the combined oral contraceptive pill) and hormone replacement therapy (HRT) that contain oestrogen can increase the risk of a DVT
Long distance travel:	Long journeys by plane, train, or car cause a minor increase in the risk of DVT
Family history:	Some inherited conditions, such as Factor V Leiden, which causes the blood to clot more easily, can lead to an increased risk of DVT
Obesity:	Being overweight increases your chances of developing a DVT, the risk gets larger with increasing size

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What are the symptoms of a DVT?

The typical symptoms of DVT are pain and tenderness in the calf with a sensation of heat and swelling sometimes associated with skin discolouration, usually in the calf but sometimes the whole leg can be affected, particularly in pregnancy. However these supposedly “typical” changes are uncommon! In fact, 80% of DVTs produce no outward signs at all, only pain.

What tests will I have?

It is often hard for a doctor to be sure of a diagnosis of DVT just from the symptoms, for pain and swelling in the calf can be caused by other reasons such as muscle strain or infection for example. If you have a suspected DVT you will normally be advised to have some tests done urgently to confirm the diagnosis. Two commonly used tests are:

- **The D-dimer test:** This is usually positive in DVT but can be positive in other conditions. It is used to exclude DVT, i.e. if the test is negative, a DVT is unlikely
- **Doppler Ultrasound scan:** An ultrasound scan detects a clot in a vein and is used in most patients

These tests are not 100% conclusive and if the doctor is convinced there is a DVT then treatment will be given and the Doppler ultrasound scan repeated in 7-10 days.

Is a DVT serious?

It can be a very serious and is a potentially life-threatening condition if a pulmonary embolism occurs.

Pulmonary embolism (PE): This is when part of a blood clot breaks off and travels in the blood stream. A moving clot is called an embolus. The clot will be carried up into the larger veins, through the heart, and becomes lodged in the lung arteries, which supply blood to the lung tissues. This is called a pulmonary embolus (PE). Symptoms can include shortness of breath, either sudden or of gradual onset, chest pain which can be worse on breathing in and sudden collapse. The symptoms of DVT (pain, tenderness and swelling) may also be present.

What is the treatment for a DVT?

Treatment for DVT is anticoagulation. Currently we tend to use direct oral anticoagulants from day one - these are tablets such as rivaroxaban or apixaban. If you are not suitable for these tablets then you will be offered injections of low molecular weight heparin (LMWH) followed by warfarin.

If you have cancer then you will be offered daily injections of low molecular weight heparin. Your health care clinician will advise you as to which treatment would be best suit you and your medical needs.

All anticoagulants act to slow down the blood's clotting process. LMWH is injected and works almost immediately, so may be prescribed for short-medium term use or as an immediate therapy until it is appropriate and safe to prescribe warfarin.

Oral anticoagulants such as apixaban, dabigatran, endoxaban and rivaroxaban, reach good levels in the blood very quickly after being swallowed, which is why they can be used from the start of treatment. However, warfarin takes several days to ‘thin’ the blood and the dose required varies between individuals. Warfarin is often affected by other medication and the individual's diet. Because warfarin's effectiveness can be affected by diet and other medications, if you are prescribed warfarin you will need regular blood tests to monitor the ‘INR’ level (International Normalised Ratio) - this measures the clotting levels of your blood.

Other oral anticoagulants have few interactions with medications, food and general health, so those taking them require fewer check-ups with a healthcare team.

A clinician must prescribe an anticoagulant, and there will be important information on safely managing these treatments, including if your health or other medication changes.

It is very important to remember that anticoagulants only continue to work if you take them regularly and as prescribed.

How long will I need to take anticoagulation?

The length of time you will continue on treatment is usually 3 months if the event was “provoked” - this means there was a clear cause, such as admission to hospital, or pregnancy or being on the combined oral contraceptive pill. However, those who have unprovoked clots (no identifiable cause, it happened out of the blue), may need to stay on anticoagulation in the long-term. Your doctor or hospital specialist will advise. You may also be advised to use compression stockings to compress the leg veins, if you have a swollen leg afterwards, this helps relieve swelling.

Pregnancy

During pregnancy low molecular weight heparin is the anticoagulant used. It is the only anticoagulant known to be safe in that it does not affect the fetus.

Preventing or reducing the risk of a DVT

- Avoid prolonged periods of immobility such as sitting in a chair for many hours
- Get up and walk around now and then when sitting for long periods
- Take regular exercise, for example a regular walk for 30 minutes a day
- When going on long trips on planes, trains or in the car, get up and walk around every so often and perform calf exercises when sitting
- Just being unwell and in hospital whether you are having surgery or not increases your chances of a DVT
- Keep to a healthy weight