



Pharmacy Department

Preventing Blood Clots when you are in Hospital and at Home

We have written this leaflet to explain how the risk of developing deep vein thrombosis (DVT) and pulmonary embolism (PE) can be reduced.

What is DVT?

DVT is a common medical condition that occurs when a thrombus (blood clot) forms in a deep vein, usually in the leg or pelvis, leading to either partially, or completely, blocked circulation. A DVT may cause no symptoms at all, or cause swelling or discolouration of the leg and pain. A DVT, in some cases, can cause a serious problem known as pulmonary embolism (PE) in the lungs.

What is a PE?

If the clot or DVT in the leg breaks off and travels to the lungs, it will cause PE. PE may result in breathing difficulties and may be fatal. Signs of PE are:

- Shortening of breath
- Chest pain
- Coughing (with blood streaked mucus)
- Collapse

DVT and PE are known under the collective terms of venous thromboembolism (VTE).

Why can a blood clot form?

There are two factors that may trigger a clot to form:

- **Changes or damage to the blood vessels** - If there is pressure on a vein, a clot can form. This may be due to being immobile, surgery or long-distance travel
- **Problems with the blood** - This may be inherited (you are born with the condition), caused by some drugs, or conditions such as pregnancy.

If you are dehydrated, the blood can become more 'sticky' which can increase the risk of the blood forming a clot.

Who is mostly at risk?

There are several factors that increase the chance of developing a VTE. These include:

- Having had a previous DVT or PE
- Major surgery, particularly orthopaedic operations such as a joint replacement
- Major trauma or injury to the lower limb
- Aged over 60 years, family history of DVT or PE
- Advanced cancer and chemotherapy treatment for cancer
- Faulty blood clotting ie thrombophilia
- Recent medical illness (such as heart attack or lung disease, kidney failure or disease, recent heart attack or inflammatory conditions such as inflammatory bowel disease)
- Smoking
- Being obese (very overweight)
- Pregnancy and recent delivery
- Paralysis or immobility of the legs, including staying in bed for a long time
- Some types of HRT or contraceptive pill

The risk of a blood clot forming after an operation ranges from 10% - 40% depending on the type of operation. Orthopaedic surgery carries the highest risk.

Is travelling a risk?

Because being immobile increases the risk of developing blood clots, if you travel for more than three hours at one time in the month, before or after your surgery, your risk of forming a blood clot will be higher.

If you have had major joint replacement surgery, the risk is present for up to three months, particularly if you have had a long haul flight of over four hours.

How is VTE prevented in hospital?

Not all VTE can be prevented, but the risk of developing a clot can be significantly reduced.

Either in the pre-admission clinic or when you are admitted to hospital, your risk will be assessed either by a doctor or a nurse.

If you are considered to be at risk of VTE, a blood thinning medication called Enoxaparin may be prescribed. Enoxaparin is given once a day by sub-cutaneous injection under the skin of your abdomen. Alternatively, you may be given blood thinning tablets.

If you are unable to have Enoxaparin injections (because of a medical condition or the type of surgery you are having), you may be asked to wear compression stockings or use some other form of prevention.

Compression stockings (also known as TED or thrombo-embolic deterrent stockings) help maintain circulation and reduce the risk of blood clots forming in the veins of your legs.

They are available in several sizes and lengths. Your nurse will measure your legs and recommend the correct stockings for you.

What can I do to help myself?

Whilst the doctors can do something to reduce your risk, there are some very important and simple things that you can help to reduce your risk:

- Make sure that you get up and about as soon as possible
- Exercise your legs whilst in bed
- Make sure you drink plenty - water is particularly good for you
- Stop smoking
- Consider stopping contraceptive or hormone replacement therapy and talk to your doctor
- Lose weight

What happens when I go home?

You may need to wear compression stockings after you go home. Your nurse will show you how to put the stockings on and provide advice about washing and taking care of your stockings. Your nurse will tell you how long you need to wear the stockings for.

You may need to continue blood thinning treatment at home. Your nurse will teach you how to inject the blood thinning medication. You should use different areas of your abdomen, approximately 1 inch apart, for each injection.

Enoxaparin may cause bruising around the injection site, which is normal. If you notice any other bruising or bleeding, from your surgical site or elsewhere, please contact the hospital immediately.

You will be given a supply of medication and a sharps bin for safe disposal of used syringes. Please return the sharps bin to your GP surgery for safe disposal.

If you develop any signs or symptoms of a clot when you are at home, seek medical advice immediately.

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Written: September 2015
Updated & Approved: (By Medicines Committee) September 2020
Review date: September 2023
Edition: 2

If you have feedback regarding the accuracy of the information contained in this leaflet, or if you would like a list of references used to develop this leaflet, please email pals@dchft.nhs.uk



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