

# Reducing the risk of venous thrombo-embolism (VTE) in hospital and after discharge



## **What is a venous thromboembolism (VTE)?**

This is a medical term that describes a blood clot that develops in a deep vein (deep vein thrombosis) or when part of a blood clot breaks off and travels to your lungs (pulmonary embolism).

In healthy adults the clotting of blood is the body's normal response to an injury. In ill health or in pregnancy the body's clotting system naturally becomes stronger. This can lead to an increased risk of developing a clot. Some operations, such as abdominal surgery or orthopaedic operations on the hips or legs, may also lead to an increased risk of developing a clot.

## **What are the symptoms of deep vein thrombosis (DVT)?**

DVT usually develops in your calf, but may also form in your thigh or other deep veins in your body. A DVT may cause a swelling, tenderness or pain around the site, but sometimes despite these symptoms, no obvious DVT is found.

It is also possible for you not to have any obvious symptoms at all. This is known as a 'clinically silent' event.

A long term complication of DVT is post-phlebitic syndrome, which may lead to swelling, pain, dermatitis, cellulitis, varicose veins, discolouration of your skin and eventually chronic ulceration of your lower leg.

## **What are the symptoms of pulmonary embolism (PE)?**

If part of the blood clot in your leg breaks off and travels in your blood stream it is carried up into the larger veins, through your heart and becomes lodged in your lung. Symptoms may include:

- breathlessness, which is usually sudden in onset
- chest pain, which can be worse on breathing in
- slight fever
- rapid heart beat
- dizziness
- cough, with or without blood-stained sputum
- sudden collapse.

Pulmonary embolism is a potentially fatal condition and must be treated right away.

## **What conditions increase the risk of a DVT or PE?**

Some conditions can increase the risk of developing a blood clot, such as:

- significantly reduced mobility for 3 days or more
- surgical procedures that involve the pelvis or lower limbs, and take longer than 60 minutes
- abdominal surgery or inflammatory conditions
- other surgical procedures that require general anaesthetic and take longer than 90 minutes.

Other factors that increase the likelihood of developing VTE include:

- age – individuals above 60 years of age, especially if other risk factors are present, such as immobility, other medical conditions eg cancer (and cancer treatments), heart disease, respiratory disease, inflammatory conditions, varicose veins with phlebitis
- known blood disorders
- obesity
- previous history of VTE or a close relative with a history of VTE
- dehydration
- certain medication eg hormone replacement therapy and oestrogen-containing contraceptive pills
- pregnancy or first 6 weeks after giving birth.

## **What will be done to reduce my risk of developing blood clots in hospital?**

When you are admitted to hospital or in pre-assessment clinics you will have a risk assessment against the likelihood of you developing a VTE. The risk varies depending on a number of factors. For example, if you are having a minor operation as a day case under local anaesthetic then the risk is usually very small.

If there is an increased risk of you developing a VTE, to help reduce the risk of you developing a VTE you may be given blood thinning medication (called anticoagulants) either by injection or in tablet form. These measures can reduce the risks for DVT and PE by 70%.

Your risk of developing a VTE will be re-assessed after 24 hours and when your clinical condition changes.

### **What are the side-effects of anticoagulation medication?**

As the medication helps thin your blood to stop it clotting in your blood vessels, it may increase your risk of bleeding. To make sure you receive the most appropriate preventative measure you will be assessed against your risk of bleeding. This assessment will take place on admission and after 24 hours.

You will need special attention if you:

- are already bleeding
- have acquired bleeding disorders such as in acute liver failure, or inherited bleeding disorders such as haemophilia
- have thrombocytopenia (low numbers of platelets in the blood)
- are already taking anticoagulants
- have uncontrolled high blood pressure
- have had an epidural, lumbar puncture or spinal anaesthesia within the past 4 hours or are due to have one within the next 12 hours
- have a suspected or definite stroke.

The most common medication used to prevent blood clots is heparin. This is given by injection just under the skin (subcutaneous), which may cause bruising around the injection site. Heparin is made from animal sources, so tell the doctor in charge of your care if you would prefer an alternative. Oral anticoagulant therapy (tablets) may be used in elective hip or knee surgery.

As with most medication, there is a possible risk of an allergic reaction to any of the medication compounds. Occasionally patients develop an immune reaction to heparin, heparin-induced thrombocytopenia. This can happen in about 1% of medical patients and up to 5% of surgical patients.

## **What can I do to reduce my risk of getting a blood clot?**

### **Do:**

- remain as active as possible. Try to keep moving in hospital as early as possible after any operation
- if you are unable to move around, simple foot / leg exercises that 'pump' the blood may help even when lying in bed. Ask for a nurse or therapist to help if necessary
- due to continued lower levels of mobility change your position regularly
- if you are prescribed compression stockings, wear them as instructed. While these may feel tight, they are designed to help circulation
- Keep well hydrated. Drink plenty of fluids, unless advised otherwise by medical staff.

### **Avoid:**

- sitting down for lengthy periods by standing briefly, with assistance if required
- crossing your legs or placing pillows under your knees when in bed.

**Make sure you ask your doctor or nurse what is being done to reduce your risk of developing a VTE.**

## **What will happen when I leave hospital?**

The risk of developing a blood clot may continue after discharge due to lower levels of activity so please ask about any measures that you will need to take when you are discharged.

If you are to continue taking anticoagulants or wear compression stockings at home, you will be given further information and advice regarding ongoing care. Please share this information with your GP to make sure that the correct treatment continues for the recommended period, and that any blood monitoring continues as required.

## **Continuing Heparin injections**

If you are required to continue the blood thinning injections after you leave hospital the nurses looking after you will teach you how to administer these correctly and the correct process for disposal of the needles once completed.

If you are unable to give the injections yourself a family member may be taught how to administer these or alternatively a district nurse may be arranged to give the injections at home.

If you are to continue with blood thinning injections or tablets after discharge your nurse will tell you how long you will need to take them for. If you develop any bleeding you should stop the blood thinners and contact your GP for advice.

## **Anti-Embolism Stockings**

You may be advised to continue to wear the compression stockings after discharge. If this is the case you must let your nurse know if you feel you will not be able to put them on or take them off without help.

If you are given stockings to wear after discharge then you should:

- Remove them daily for hygiene purposes
- Stop wearing them if you notice any skin marking or blistering
- Stop wearing them if they become too tight or if you develop any leg swelling.

Your nurse will advise you how long you should wear the stockings after discharge however there is usually no need to continue to wear them once you are back to your normal level of walking.

## **Any questions?**

It is important that you understand the treatment offered and that you consent to treatment. Please speak with your doctor or nurse if you have any questions or concerns regarding your care. They will be able to provide you with more information and advice.

You should also inform your doctor or nurse if you develop any of the symptoms described in this leaflet whilst you are in hospital and consult your GP if any of these symptoms develop after you have been discharged from hospital.

If you would like this leaflet in large print, braille, audio version or in another language, please contact the General Office on 01872 252690

