



University Hospitals Birmingham
NHS Foundation Trust



Prevention of Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)

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This guide has been written for you if you have been or are being admitted to hospital in the near future. It is intended to help you understand venous blood clots (called venous thromboembolism or VTE), which can form in your body after illness or surgery. After reading this guide, you may wish to discuss VTE with your doctor and ask about the best way to reduce the risk of this condition.

What is VTE?

VTE is the name given to a deep-vein thrombosis (DVT) or a pulmonary embolism (PE). A DVT is a thrombus (blood clot) that forms in a deep vein, most commonly in your legs or pelvis and can cause swelling and pain. In the longer term, DVT can cause painful, long-term swelling and ulcers. If a clot becomes dislodged and passes through your circulation and reaches your lungs, this is called a PE and can cause coughing (with blood stained phlegm), chest pain and breathlessness. It can be fatal. VTE diagnosis requires immediate treatment.

If you develop any of these symptoms either in hospital or after discharge, please seek medical advice immediately.

Who is at risk of VTE?

In addition to admission to hospital, there are other factors which place you at greater risk of VTE. These include a previous VTE, a recent diagnosis of cancer, and certain blood conditions such as clotting disorders. Immobilization, pregnancy, and certain contraceptive and hormone replacement tablets can increase your risk.

Will my risk of VTE be assessed?

The Government recognises VTE is an important problem in hospitals and has advised doctors and nurses that everyone being admitted to hospital should have a risk assessment completed. Your individual risk

for VTE will be assessed by your clinical team. If you are at risk, your doctor or nurse will discuss with you what can be done to reduce your risk and will follow national guidelines and offer you protection against VTE.

What can I do to reduce my risk of VTE?

If your hospital admission has been planned several weeks in advance, there are some precautions which you can take to reduce your risk of VTE:

- Talk to your doctor about your contraceptive or hormone replacement tablets. Your doctor may consider stopping them in the weeks before your operation
- Avoid any journey lasting more than three hours in the month before your operation if possible
- Try to maintain a healthy weight

When in hospital/after discharge:

- **If you are able to do so safely:** Regularly stand up and walk around, as leg exercises are valuable. Whilst sitting or lying down, move your feet and ankles up and down to stretch the calf muscles in your legs. If you are unable to manage this you can ask to see a physiotherapist for alternative exercises that can improve your circulation
- Drink plenty of fluid to keep hydrated

In hospital, what will be done to reduce my risk of VTE?

If you are having an operation, ask your anaesthetist to consider which type of anaesthesia is most appropriate for you. If considered appropriate by your doctor, you will be measured and fitted with anti-embolism stockings. Anti-embolism stockings are worn on your legs and may be knee or thigh length. You should be shown how to wear them and advised to report any new symptoms in your feet or legs when wearing them to a health care professional. These will reduce your risk of VTE.

The clinical team may ask you to wear a special inflatable sleeve or cuff around your legs while you are in bed. This will inflate automatically and provide pressure at regular intervals, increasing blood flow in your legs back to your heart. If they have been removed for more than three hours they should not be reapplied, unless agreed by a doctor.

Finally, your doctor might consider that you should take an anticoagulant injection or tablet, which reduces the chance of your blood clotting and stop VTE from forming. This may increase the risk of bleeding. The drug normally prescribed at the Trust is heparin, which is given by an injection, usually into the abdomen. Heparin is derived from pigs, so if you have any concerns about using animal products, please tell your doctor and they will discuss your concerns. There are new drugs becoming available in tablet form, which may be offered to you.

To be effective, these methods of prevention must be fitted, used and administered correctly and for the right duration, so if you have any questions or concerns, please ask your doctor for advice.

What happens after I have been discharged from hospital?

Anti-embolism stockings should be worn from admission until you return to your usual level of mobility. You may need to continue taking the anticoagulant injections or tablets and wear the anti-embolism stockings when you leave the hospital.

Before you are discharged from the hospital a health care professional should advise you about how to use your treatment, how long to continue using it for, and who to contact if you experience any problems. Your nurse should advise you about how to care for the anti-embolism stockings at home and how to check your skin. If you need help with the administration of injections or tablets, please ask your nurse before discharge. If you do require injections after discharge, you will be given a 'sharps bin' so that you can safely dispose of them after use. Once your treatment is complete, close the lid on the sharps-bin until sealed and you can return it to UHB. Some GP surgeries or local councils may also agree to dispose of these.

Please remember that it is illegal to dispose of injections or sharps bins in your household waste. If you develop any signs or symptoms of VTE at home, then seek medical advice immediately, either from your GP or your nearest hospital emergency department.

You can further reduce your risk of VTE by the simple measures described earlier in this leaflet.

What if I think I've got a DVT or PE?

You should seek urgent medical attention from your GP or local Emergency Department (ED). If you are unwell you should call the emergency services on 999.

If you are diagnosed with a DVT or PE within 90 days of hospital discharge, please contact us

- Queen Elizabeth Hospital Birmingham:
email **anticoagulantTeam@uhb.nhs.uk**
- Heartlands, Good Hope or Solihull hospital: tel: **01214241706** or
email **anticoagulationdepartmentbhh@heartofengland.nhs.uk**.

Hospital-associated thrombosis cases are thoroughly investigated in our Trust and we directly inform our patients if we feel significant omissions have occurred in their care.

Where can I get more information?

The NHS website (**www.nhs.uk**) provides patient information on VTE.

We have video about DVT and PE prevention on the Trust website (**www.uhb.nhs.uk/hospital-acquired-dvt.htm**)

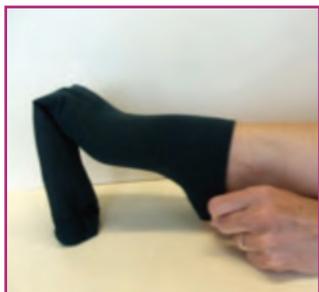
The thrombosis charity also has more information on (**www.thrombosis-charity.org.uk**)

There are also video and information leaflets on our website (**www.uhb.nhs.uk/dvt**)

Guide on how to use stockings:



1 Insert hand into stocking as far as the heel pocket



2 Grasp center of heel pocket and turn stocking inside out to heel area



3 Carefully position stocking over foot and heel. Be sure heel is centered in heel pocket



4 Pull stocking up and lift around ankle and calf, working up to final position (bottom of knee cap). Make sure heel and toe are positioned correctly. Smooth out any excess material between top of stocking and ankle. Pull toe section forward to smooth ankle and instep area and allow for toe comfort

Important points to remember:

- The stockings will feel tight because they are designed to create pressure around the blood vessels in your legs in order to help blood circulate
- Make sure you have been measured with a tape measure just above your ankle and have been provided with the correct size stockings before you leave hospital
- Remove your stocking for 30 minutes each day, to check your skin and to have a wash
- Whilst in hospital you will be given a new pair of stockings every three days
- When at home you will need to wash your stockings at least every three days; this will need to be done sooner if they are soaked or dirty. Wear your spare pair of stockings while the other pair is being washed
- Stop wearing your stockings and tell your doctor or GP if you experience leg pain, swelling, numbness, sore skin, skin marking, blistering or discolouration, particularly over the heels and bony prominences. You will be told by your medical team when to stop wearing them. They will advise you on what to do next

Haematology

Queen Elizabeth Hospital Birmingham
Mindelsohn Way, Edgbaston
Birmingham, B15 2GW
Telephone: 0121 627 2000