

Venous Thrombo-Embolism (VTE)

For surgical and general medical patients and carers - there are separate information leaflets for maternity and for stroke patients

Introduction

This leaflet gives you information about Venous Thrombo-Embolicism (VTE) and how to reduce your risk of developing it during your hospital stay. VTE is a collective term for Deep Vein Thrombosis (DVT) and Pulmonary Embolus (PE) which are both conditions involving blood clots.

What is Deep Vein Thrombosis (DVT)?

DVT is a common medical condition that happens when a thrombus (blood clot) forms in a deep vein, usually in the leg or pelvis, leading to either partially or completely blocked circulation. It is estimated that about 1 in every 1,000 people have a DVT each year in the UK.

Symptoms include:

- throbbing pain in 1 leg (rarely both legs), usually in the calf or thigh, when walking or standing up
- swelling in 1 leg (rarely both legs)
- warm skin around the painful area
- red or darkened skin around the painful area

These symptoms can also happen in your arm or tummy if that is where the blood clot is. However, DVTs can commonly cause little or no symptoms.

A DVT can be dangerous as it can cause a serious problem known as pulmonary embolus (PE). Some people can suffer long-term discomfort and ankle swelling following a DVT – this is called post-thrombotic syndrome.

What is Pulmonary Embolus (PE)?

A pulmonary embolism (PE) is when a blood clot blocks a blood vessel in your lungs. PE may result in breathing difficulties and could even be fatal. Signs of a PE are:

- shortness of breath that comes on suddenly
- chest pain which is worse when breathing in
- unexplained difficulty in breathing
- coughing up blood

If you experience any of these symptoms, you should seek immediate medical help.

Why does 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 travelling.

Problems with the blood – this may be inherited (you are born with this condition), caused by some medications or conditions such as severe infection or cancer.

Who is most at risk?

The most common cause is immobility. There are several factors which increase your chance of developing VTE. These include:

- having had a previous DVT or PE

- recent major surgery, particularly of the pelvis, abdomen, hip, knee (and for up to 90 days after your surgery)
- severe trauma, such as a car accident
- aged over 60 years
- family history of DVT or PE
- cancer and cancer treatments
- dehydration
- obesity (being overweight)
- smoking
- faulty blood clotting – called ‘thrombophilia’
- severe acute medical illness such as pneumonia
- paralysis or immobility of the legs including staying in bed for a long period of time (although the risk may reduce after several months)
- oestrogen containing contraceptive pills
- oral (tablet form) hormone replacement therapy (HRT) which contains oral oestrogen

Many people think that going on a long-haul flight is the biggest risk factor for VTE, but the risk of getting a blood clot in hospital is far higher. As many as 55 to 60 in every 100 cases of VTE occur during or following hospitalisation.

How is VTE prevented in hospital?

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

Either in the pre-admission clinic or when you are admitted to hospital, your risk will be assessed. Your risk of any adverse effect from treatment will also be considered.

You may be given one of these treatments:

Medication

Medicines that thin the blood can be used to help prevent blood clots. These can be given by injection into the skin or sometimes as a tablet. Your doctor will advise which is best for you, based on research evidence and your risk of bleeding.

In some situations, the medication may be continued for a while after you have left the hospital. If you need to continue with daily injections at home a nurse will show you how to give them correctly.

Blood-thinning medicines can reduce your risk of developing a clot but increase your risk of bleeding. This may lead to bruising or more serious internal bleeding.

Antiembolism stockings

You may be measured and fitted with anti-embolism stockings which are usually knee-length. The stockings work by reducing damage to the veins in your legs. The stockings should be worn day and night until you are back to your usual mobility. Anti-embolism stockings are effective in reducing the risk of DVT, particularly in surgical patients, but of less value for medical patients. It

is important that you are shown how to put the stockings on correctly, before you go home.

What can I do to help myself?

There are some simple but important things that you can do to help reduce your risk of VTE:

- keep as active as possible. Make sure that you get up and about as soon as possible, especially after surgery
- exercise your legs while in bed – bend your foot and ankle up and down at regularly intervals
- keep to a healthy diet
- maintain a healthy weight
- try to lose weight if you are obese
- make sure you drink plenty of fluids – water is particularly good for you
- if you do drink alcohol you should only do so in moderation
- stop smoking
- be alert for signs and symptoms of blood clots

If you would like information and support to stop smoking, please contact:

Healthy Lifestyles Gloucestershire

Website: www.hlsglos.org

Tel: 0800 122 3788

What can I do once I go home?

Once you get home, it is important to:

- continue to be as mobile as possible
- continue to drink plenty of water

If you are asked to continue blood thinning medication when you go home, you will be given further information.

What to look out for?

VTE can happen at any time during a stay in hospital or in the weeks after leaving hospital. Look out for any DVT symptoms such as swelling, pain or tenderness in your calf and any PE symptoms such as chest pain, breathlessness or coughing up little bits of blood.

If you experience any VTE symptoms or bleeding once you are at home, you should seek urgent medical advice from your GP or NHS 111.

If you think you have a DVT ask for an urgent GP appointment or get help from NHS 111.

If you have symptoms of a DVT or difficulty breathing and/or chest pain call 999 or go to your nearest Emergency Department.

Further information

DVT (deep vein thrombosis)

www.nhs.uk/conditions/deep-vein-thrombosis-dvt/

(22 March 2023)

Pulmonary embolism

www.nhs.uk/conditions/pulmonary-embolism/

(25 May 2023)

Thrombosis UK

<https://thrombosisuk.org/>

Content reviewed: February 2026

Shared Decision Making

If you are asked to make a choice, you may have lots of questions that you want to ask. You may also want to talk over your options with your family or friends. It can help to write a list of the questions you want answered and take it to your appointment.

Ask 3 Questions

To begin with, try to make sure you get the answers to three key questions if you asked to make a choice about your healthcare.

1. What are my options?
2. What are the pros and cons of each option for me?
3. How do I get support to help me make a decision that is right for me?



These resources have been adapted with kind permission from the MAGIC Programme, supported by the Health Foundation.

*Ask 3 Questions is based on Shepherd HL, et al. Three questions that patients can ask to improve the quality of information physicians give about treatment options: A cross-over trial.

Patient Education and Counselling, 2011;84: 379-85



<https://aqua.nhs.uk/resources/shared-decision-making-case-studies/>



Registered Charity 1051606

Every donation you choose to give helps your local hospitals do more to care for you, everyone you love and our passionate NHS staff.

If you would like to find out more, please contact:

Charity Office **0300 422 3231** or visit gloshospitals.nhs.uk/charity

GHP11040_02_26

Department: Pharmacy

Review due: February 2029

www.gloshospitals.nhs.uk