

Preventing Venous Thrombosis (blood clots)

What is a venous thrombosis?

A blood clot within a vein is known as a venous thrombosis, and the most common type of venous thrombosis is a **deep vein thrombosis** (DVT) in the leg.

When this happens, if the DVT blocks all the blood vessel then all the tissues drained by the vein can become swollen and painful due to the blood being unable to escape.

A major concern is that someone with venous thrombosis may develop a **pulmonary embolism**.

When this happens, part of the clot (an embolus) may break off; travel up the body and through the heart to the lungs, blocking an artery.

This is a potentially life-threatening condition and up to one in ten people who suffer a serious pulmonary embolism will die if it is not treated.

How many people are affected by venous thrombosis?

In the UK up to one in every 1,000 people are affected by venous thrombosis each year.

Many of those affected have pre-existing risk factors such as serious illness or major surgery.

A significant number however have no known pre-existing risk factors and can develop apparently spontaneous events.

Around 30 percent of people who have had a venous thrombosis develop further

problems within the next ten years, despite treatment.

In nearly one third of cases, they develop **post-phlebotic syndrome** (this is explained later in the leaflet).

How can you prevent venous thromboembolism in hospital?

Just being unwell and in hospital leads to an increase in the risk of deep vein thrombosis, or a blood clot, usually in the deep veins of the leg.

The risk is particularly high if you're having abdominal operations or orthopaedic operations on the hips or legs.

Although a deep vein thrombosis (DVT) may cause swelling and discomfort at the time, more than half are clinically 'silent' and there may be no obvious symptoms.

But whether obvious or silent a DVT can, in the short term, lead to a **pulmonary embolism** when the clot in the leg breaks off and travels around the circulation through the right side of the heart to block the pulmonary arteries.

In the longer term, the DVT can also lead to **post-phlebotic syndrome** – swelling, pain, dermatitis, cellulitis, varicose veins, pigmentation of the skin and eventually chronic ulceration of the lower leg.

But prevention of a DVT, pulmonary embolism and post-phlebotic syndrome in hospital can be simple and very straightforward.

What is thromboprophylaxis?

On admission to Aintree Hospitals every adult should be risk assessed and given appropriate prevention if necessary – this is called Thromboprophylaxis.

The risk of DVT does vary enormously. For example, if you are admitted as a day case for a minor operation under local anaesthetic, then the risk is tiny.

If you are admitted for a hip replacement you may have around a 60 percent chance of a DVT. The risk increases with age.

The standard method we use of risk assessment is for a nurse or junior doctor to use a scoring system where risk factors can be checked. The risk factors include (amongst others):

- Are you over the age of 60?
- Do you, or do any members of your family, have a previous history of DVT or thrombosis?
- Are you overweight, or have you previously had cancer?
- Do you have heart problems, lung problems or an inflammatory bowel or joint problem?
- Are you being given a general anaesthetic or having an abdominal operation or hip or leg surgery?
- Is there any reason not to give you thromboprophylaxis, such as a low platelet count, you are already on anticoagulants or you have a bleeding disorder?

Depending on the answers given, our Hospital policy is to give injections of heparin and/or support (anti-embolic) stockings as appropriate.

Heparin injections are given once each day and a tiny amount of fluid is given through a small needle under your skin.

Anti-embolism stockings are elasticated stockings that increase the blood flow in your legs. Your legs will need to be measured to make sure they fit correctly.

The use of heparin injections is common and most people do not have any problems.

However, like many medications it may sometimes cause side effects.

The most common of these include pain, skin rashes and/or minor bruising at the site of your injection.

There are not many risks with wearing appropriately fitted stockings.

However you should not wear them if you have dermatitis, gangrene, leg ulcers, cellulitis, known allergies to stockings, gout, recent skin grafts, nerve or circulation problems in your legs or leg swelling (oedema).

We recommend that you accept the treatments offered after your risk assessment (heparin injections, anti-embolism stockings or both), however this choice is yours.

If you feel that you do not want this treatment then please tell either the nurses or doctors in your ward who will note this in your records.

Other things which may be useful to prevent venous thrombosis during your hospital stay include:

- if you are prescribed stockings wear them correctly at all times
- stay as mobile as your condition or pain allows
- if you are confined to bed you will be encouraged to do leg exercises
- it is important you do not become dehydrated, so drink fluids regularly or as directed by the nursing staff.

What will happen whilst I am in hospital?

Your requirement for heparin injections or stockings will be reviewed regularly by your ward team.

If they feel that your risk of developing a venous thrombosis has reduced sufficiently your treatment may be stopped.

What will happen when I am discharged from hospital?

When you are discharged you may need to continue with either the heparin injections and/or the stockings.

If this is the case your ward team will inform you of this and make any necessary arrangements for this (e.g. giving you the medications/stockings, arrange for District Nurses to give the injections etc.).

Most people however stop the injections and stop using the stockings once they are fit for discharge.

What should I look out for after I am discharged from hospital?

After discharge it is recommended that everyone is given information about the possibility of developing venous thrombosis in the first few weeks after discharge.

Deep vein thrombosis

A deep vein thrombosis (DVT) is a blood clot in the deep veins, usually within the leg, although it can occur elsewhere in the body.

These veins go through the muscle and cannot be seen beneath the skin.

A DVT can occur in the calf, behind the knee, in the thigh or very high in the leg veins within the pelvis.

Most DVTs occur in the calf veins, except during pregnancy, when they tend to lie within the thigh and pelvis.

Symptoms of deep vein thrombosis

Unfortunately 80% of people with DVT may not have any obvious symptoms at all. The most common symptoms include pain, tenderness and swelling of the leg, usually in the calf.

Sometimes this is accompanied by discolouration where the leg may be pale, blue or a reddish purple colour. This is a less common symptom.

If thrombosis occurs in the thigh veins, which is common during pregnancy, the whole leg may be swollen.

Pulmonary embolism

When someone has a thrombosis such as DVT in the leg, they are at risk from a pulmonary embolism.

When this occurs, part of the clot breaks off (an embolus), travels up the leg, through the right side of the heart and lodges in an artery in the lung (a pulmonary artery).

The blocked artery restricts the blood supply to the lung, causing that part of the lung to die.

It also affects the supply of oxygen to the lungs, resulting in breathlessness and chest pain.

Sometimes, over a period of time, many small particles may break off and cause multiple pulmonary emboli.

Symptoms of pulmonary embolism

The main symptoms of pulmonary embolism are shortness of breath and chest pain.

The symptoms of deep vein thrombosis may also be present.

Occasionally patients may have unexpected grey-clammy, dizzy, panicky episodes and/or persistent cough.

If you think you may have developed either a Deep Venous Thrombosis or a Pulmonary Embolism after you are discharged please get medical attention immediately.

This may be an appointment at your General Practitioner the same day if this is possible or attending the Accident and Emergency Department.

Your General Practitioner will be able to either reassure you or send you to hospital for further tests.

Further information:

Lifeblood: The Thrombosis Charity, increasing awareness of thrombosis among the public and health professionals

www.thrombosis-charity.org.uk

Acknowledgements:

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If you require a special edition of this leaflet

This leaflet is available in large print, Braille, on audio tape or disk and in other languages on request. Please contact:

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