Deep vein thrombosis - frequently asked questions

What is a DVT?
A deep vein thrombosis (DVT) is the formation of a blood clot in a deep vein, most commonly in the leg but it can also occur in the arm. The vein can be either partially or completely blocked.

Why is DVT a cause for concern?
A serious complication of DVT is a pulmonary embolism (see below). Long term complications with the leg can occur. This is known as post thrombotic syndrome.

How common is DVT?
Every year, DVT occurs in about 1 in 1000 people in the general population: ranging from 1 in several thousand people under the age of 20 years, up to 1 in 100 in those aged over 80 years.

What causes DVT?
Normally, blood flows smoothly through the veins without clotting. Clots develop in the body when the blood cells are triggered to clump together. The formation of DVT clots can be triggered by a combination of factors including:

- **Reduced blood flow through the veins** increases the likelihood of blood cells sticking together. When people are immobile for a long period of time a DVT can form, eg as a result of being bed bound after an accident, surgery or illness, during long-distance travel (air, car, coach or train) or any situation which reduces mobility.

- **Changes in the clotting mechanism of the blood** caused by pregnancy, some drug
treatments and an inherited tendency to clot. This can make the blood cells stickier.

- **Damage to the lining of the blood vessel wall.** This can trigger blood cells to stick to the lining in an attempt to mend it eg after surgical procedures, trauma or inflammation.

**Who is most likely to get a DVT?**

90 to 95% of all those people who develop DVT or pulmonary embolism are in the following groups:

- **age:** people aged over 40 years

- **previous history:** people who have had a previous DVT or PE

- **existing health problems:** recent treatment for cancer, recent surgery, especially on the pelvis, hips or knees

- **hormonal changes in women:** women who are pregnant or have recently had a baby; women who are taking the contraceptive pill or are on hormone replacement therapy (HRT).

- **inherited risk:** people who have an inherited clotting tendency or who have a family history of blood clots

Some people do not have any of these risk factors but still develop a DVT, which is why it is useful to know some of the symptoms (see below) so you can seek early advice.

**What can I do if I am in a high-risk group for DVT?**

If you know you are in a high-risk group for DVT, you can be more aware of the symptoms of DVT. If you are concerned, do discuss this with your general practitioner (GP).

**How will I know that I have a DVT?**

DVT is difficult to diagnose. The symptoms are usually sudden (acute) and may include:
pain and tenderness in the leg

- swelling in the leg (this is different from the mild ankle swelling that many people get during long-haul flights)
- redness and/or discoloration in the leg
- being unable to weight bear (if the clot is in the leg).

DVT nearly always affects one leg only. If a DVT is associated with a journey, these symptoms may develop hours or even days later.

**How bad are the symptoms?**

The severity of the symptoms you experience depends on the site and the size of the DVT. The symptoms can vary greatly between individuals.

**Is treatment always necessary for a DVT?**

DVT is a serious condition and needs urgent investigation and treatment.

**If I am concerned what should I do?**

You should see your general practitioner (GP) urgently for a medical assessment. If, for any reason you cannot be seen by your GP, you should go to your nearest emergency department.

**I am local to Addenbrooke’s. What will my GP do?**

Your GP will examine you and if he or she suspects you have a DVT, they will refer you directly to the thrombosis treatment team at Addenbrooke’s. In the evenings and at weekends, local GPs can refer their patients to the emergency department at Addenbrooke’s.

**How is DVT diagnosed in hospital?**

Currently, at Addenbrooke’s, we use a range of investigations including assessment of the leg, blood test and an ultrasound scan (this uses sound waves to examine the flow of blood in your veins and is generally painless) to diagnose DVT.
If I am found to have a DVT, what will happen next?

If we find you have a DVT, we will arrange a medical assessment in the emergency assessment unit. Most patients are suitable for outpatient management by the thrombosis treatment team. You will need to return to the thrombosis treatment team for daily blood monitoring for an average of 5-6 days.

What is the treatment for DVT?

The usual treatment is with anticoagulant drugs such as heparin and warfarin. The specific treatment will depend on your general health and previous medical history.

What does heparin do?

Heparin is used to prevent blood clotting. For the treatment of DVT, we use low-molecular weight heparin. This is given as an injection under the skin each day for an average of 5-6 days. The dose will be calculated according to your body weight.

What does warfarin do?

Warfarin is also used to prevent blood clotting. For the treatment of DVT it is taken daily as tablets. The dose of warfarin differs from person to person and depends on their blood-clotting time, which we will test before starting treatment. At first, daily blood samples will be taken to monitor the dose required. These will become less frequent as your anticoagulant therapy becomes stable. The decision regarding the length of warfarin treatment will be made by the anticoagulation service.

These drugs are given to:

- reduce the risk of a pulmonary embolism developing
- prevent the blood clot extending
- relieve the symptoms
- reduce the occurrence of post-thrombotic syndrome.

What is post-thrombotic syndrome (PTS)?

PTS results from the damage caused to the leg by a DVT. PTS can present over a long
period of time with limb swelling, pain, skin discolouration and ulceration. The incidence of PTS can be reduced with the measurement and fitting of compression hosiery. This can be discussed with the thrombosis treatment team.

**Is DVT the only type of thrombosis?**

People can also develop blood clots in the superficial varicose veins in the legs (these are closer to the surface of the leg). This condition is called phlebitis and is much less serious than DVT. General practitioners (GPs) will usually treat this for you. People can also develop a thrombus (clot) in other parts of their body eg in the heart (‘heart attack’) and the brain (one type of stroke). It is important to remember that these are not related to DVT.

**What is a pulmonary embolism (PE)?**

Pulmonary embolism may develop when a blood clot breaks free from the DVT and travels first to the heart and then onto the lungs. In the lungs, the clot can block the blood supply to part of the lung, causing the lung to collapse leading to heart failure. Pulmonary embolism can be life threatening and requires urgent medical attention.

**How will I know if I have a pulmonary embolism?**

The symptoms of pulmonary embolism vary and may be severe. They include one or more of the following:

- severe shortness of breath
- a sharp pain in the chest, which is worse on breathing
- dizziness due to low blood pressure
- coughing up small amounts of blood
- a rapid heart beat

**I have been diagnosed with DVT, what can I do to reduce the swelling and pain in my leg?**
keep the leg elevated when you are sitting down.

- take gentle exercise (eg walking and swimming).
- wear graduated compression hosiery as instructed. These should be fitted by a healthcare specialist. We offer this to all suitable patients.

If you have been diagnosed with a DVT at Addenbrooke’s, the nurses from the Thrombosis Treatment Team will give you careful instructions about how to look after yourself.

For further information contact: thrombosis treatment team, Box 249, EAU3, Addenbrooke’s Hospital, Hills Road, Cambridge CB2 0QQ; Tel: 01223 217 877; Fax: 01223 217 877