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Travel-Related Deep Vein Thrombosis

Introduction

Deep vein thrombosis (DVT) is the name for a blood clot (or thrombus) in one of the body's deep veins, usually in the lower leg. This is dangerous because part of the clot can break off and travel to the lungs, which can be fatal.

DVT can occur after long haul (longer than 6 to 8 hours) flights. In the past this was called 'economy class syndrome'. However, this term is misleading: DVT can occur following any type of immobility, for example after an operation, or long car and train journeys. The preferred phrase for DVT that occurs following travel is: "Travel-Related DVT".

Risk for Travellers

For many years doctors have been aware of the risk of DVT after long periods of limited movement. Recent research has found that the risk of DVT is similar after air, bus, car, and train journeys. Studies have found that the risk increases with the length of journey and when travellers have certain health issues. Long-haul flights that typically last for 8 to 10 hours are thought to pose the highest risk.

Factors which increase travellers' risk of DVT include:

- Having a DVT or blood clot in your lungs in the past.
- A member of your family having a DVT or clot.
- Blood disorders, especially those causing abnormal clotting.
- Being very overweight.
- Pregnancy and the first 6 weeks after having a baby.
- Cancer and certain types of cancer treatment, such as chemotherapy.
- Some heart conditions, for example heart failure.
- Recent surgery and major operations, especially hip and knee replacements.
- Taking the contraceptive pill or hormone replacement therapy.
- Dehydration.
- Problems with your circulation or if you have had a stroke.

You should see your GP for advice before travelling if any of the above medical issues apply to you.

Research has shown that flights longer than eight hours are associated with an abnormally increased blood clotting in some travellers, particularly in those taking oral contraceptive pills and those with a genetic tendency to DVT.

Signs and Symptoms

Long periods of inactivity can slow the blood flow from the lower legs, which can result in blood pooling. A blood clot or DVT may then form, blocking the blood vessel. Pressure, caused for example by an airline seat pressing on the veins in the back of the knee, can contribute to reduced blood flow.

Many cases of DVT cause no symptoms. However, some people may have pain, swelling and redness in their limbs, usually the calf. Often just one leg is affected. The area may become warm to the touch. If the vein is completely blocked, the leg may darken and become very swollen.

A serious complication of DVT is a clot in the lungs, called a **pulmonary embolus**. This happens when a part of the clot breaks off and travels to the lungs. This is extremely dangerous and can be life threatening. Suddenly becoming very short of breath is the most common symptom. Other symptoms included chest pain, coughing up blood and sudden collapse.

If you experience *any* symptoms of either a DVT or a pulmonary embolus, you must seek immediate emergency medical treatment.

Treatment

The main aim of treatment of a DVT is to prevent it developing into a pulmonary embolism. As a rule, anyone with a suspected DVT is admitted to hospital. Treatment to reduce blood clotting, typically with injections of a drug called heparin and tablets called warfarin, is started immediately. Warfarin is usually prescribed for up to six months, under careful medical supervision, that includes regular blood tests. Patients are advised to wear a properly fitted elastic compression stocking on the affected limb.

Prevention

There are a number of ways to reduce the risk of travel-related DVT. Anyone planning to travel long distances in planes, trains or motor vehicles should be aware of this advice:

- Avoid dehydration and drinking too much alcohol.
- Don't wear constrictive clothes, especially around the waist or lower legs.
- Walk around as much as possible, at regular intervals, during your journey.
- Regularly flex and extend your ankles. This will encourage blood flow from the lower legs.
- Avoid storing anything under your seat, especially on planes, as this restricts leg movement
- Take regular deep breaths.

Compression stockings

Travellers with an increased risk of DVT can consider wearing compression stockings. It is vital that compression stockings are correctly measured and properly fitted, as badly fitting stockings can actually increase the risk of DVT.

Heparin

In some cases an injectable drug called heparin (see treatment section above) is given. It reduces blood clotting in travellers with an increased risk of DVT. Your GP should discuss the suitability of prescribing this medicine with a doctor who has specialised in blood disorders. If heparin is appropriate for you, then your GP or nurse will train you and/or your travelling companion in the correct injection technique.

Aspirin

It is **not** recommended that travellers should take aspirin to try and prevent DVT. There is not enough evidence to support taking aspirin to prevent travel-related DVT and there is a potential risk of stomach irritation and allergy.

Links

NHS Direct. Health encyclopaedia: Deep vein thrombosis. June 2007. Available at:
<http://www.nhsdirect.nhs.uk/articles/article.aspx?articleID=122>

Department of Health. Advice on travel-related DVT. March 2007. Available at:
http://www.dh.gov.uk/prod_consum_dh/idcplg?ldcService=SS_GET_PAGE&siteId=en&ssTargetNodeId=104&ssDocName=DH_4123480