

Deep Vein Thrombosis Research Published

The summary of results from an extensive research programme published today by the Department for Transport confirms that long-distance travel leads to a small but increased risk of deep vein thrombosis (DVT). The risk, which applies to all forms of travel, appears to be predominantly the result of prolonged immobility.

Following the largest ever study of its kind, it was found that all forms of transport involving a journey of 4 hours or more led to an increase in the risk of blood clots forming in the veins of the legs. And in a study of air passengers of working age, for example, one case of DVT was found for every 6000 journeys that lasted 4 hours or more.

However, such clots are far more common amongst those in hospital than in those who travel. Every year DVT occurs in about 1-3 per 1000 people in the general population, ranging from fewer than 1 in 3000 in people under the age of 40 up to 1 in 500 in those over 80. In all incidences of DVT, travel related or otherwise, only 1% of cases prove to be fatal.

The project was funded by the Department of Transport, the Department of Health and the European Commission, and carried out by a consortium of medical research scientists under the auspices of the World Health Organisation.

Commenting on the results Transport Minister Karen Buck said:

"This important research project has shown that DVT can occur in any form of travel where people remain seated for a long time.

"Incidences of DVT are generally low, but long journeys were found to increase the risk by approximately three-fold, which is a level comparable to the risk of DVT faced by women during pregnancy.

"It has also confirmed our understanding of the categories of people who are at higher risk, such as older people, those with hereditary blood conditions, women using oral contraception, people on journeys of more than 12 hours and very tall people.

"Despite the rarity of these occurrences, I recommend that all travellers refer to the Department of Health's advice."

The Department of Health website offers advice on reducing the risk of DVT during journeys. Sitting still for long periods of time on long journeys - whether by plane, train, car or coach - can lead to DVT (a blood clot in the leg). Department of Health advice is to move your feet around, or get up and walk around as regularly as you can. It is also important to drink a reasonable amount of water or non-alcoholic drinks to avoid dehydration. The advice is available at:
www.dh.gov.uk/PolicyAndGuidance/HealthAndSocialCareTopics/BloodSafety/VTE/fs/en
and www.dh.gov.uk/VTE

Notes to editors

1. Venous thrombosis is a condition in which a blood clot (thrombus) forms in a vein. Blood flow through the affected vein can be limited by the clot, causing swelling and pain. Venous thrombosis most commonly occurs in the 'deep veins' in the legs, thighs, or pelvis. This is known as a deep vein thrombosis (DVT). An embolism is created if a part or all of the blood clot in the deep vein breaks off from the site where it is created and travels through the venous system. If the clot lodges in the lung a very serious condition, pulmonary embolism (PE), arises. Venous thrombosis can form in any part of the venous system. However, deep vein thrombosis and PE are the most common manifestations of venous thrombosis. DVT and PE are known as venous thromboembolism (VTE).
2. In both cases a clot forms within the veins. In terms of numbers such clots are far more common amongst those in hospital than in those who travel.
3. The two-year research programme was initiated to assess whether there is a direct link between air travel and the incidence of DVT. It concluded in December 2004 and was carried out by a consortium of medical research scientists known as the WRIGHT¹ Project Group and was funded by the UK and the European Commission. The summary of the results of the WRIGHT project may be viewed here ([link](#)).
4. Although full results are not expected to be published in medical journals until early in the new year, the participating researchers presented the findings of their work at a conference organised by the International Society on Thrombosis and Haemostasis (ISTH), held in Sydney 6 - 12 August 2005.
5. The research showed that the relative risk of thrombosis rose sharply for travellers with factor V Leiden mutation (as well as some other prothrombotic coagulation variations); those using oral contraception; in those who travelled for more than 12 hours; and for those who were more than 1.90m tall. Some of these synergistic effects were more pronounced in air travel than for other modes of travel.
6. The study of air passengers was a retrospective cohort study amongst employees of international companies and organisations. Exposure was defined as the four week period immediately following a flight of four hours or more. The risk is likely to be higher for the elderly and infirm.
7. It is wise to ask your doctor for further advice if you:
 - have ever had a DVT or clots in your lung;
 - have a family history of clotting conditions;
 - have had major surgery - especially a hip or knee replacement in the last three months; or
 - suffer from heart disease, cancer or have ever had a stroke.

Any of the above may result in an increased risk of DVT.

8. In response to the Health Select Committee report on Venous Thromboembolism (VTE) in Hospitalised Patients earlier this year the Government has established an independent expert working group to help develop a comprehensive strategy for both treatment and prevention of VTE.

¹ World Health Organisation Research Into Global Hazards of Travel.

9. As part of this work, the VTE Expert Group will also be looking at the interface between primary and secondary care. This will contribute to the prevention of VTE both in hospitals and outside. People who develop DVT as a result of travel will be included. The expert working group will be making its recommendations to Professor Sir Liam Donaldson by summer 2006 at the latest.