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Travel related vein problems

What is “travel -related” DVT?

Venous thromboembolism (VTE) refers to deep venous thrombosis (DVT) and pulmonary embolus (PE). The main issue with the veins and travel is the possible development of a DVT and the associated possibility of a pulmonary embolus. Deep venous thrombosis is a condition where a blood clot develops in the deep veins of the leg (those veins that run through the muscles and which you can't see). When a DVT develops, there is a possibility that part can break off and travel to the lungs. If that happens, a person can become very ill and made die.

What is my chance of developing one?

The likelihood of developing VTE related to travel is very difficult to determine and varies depending on which study one looks at. The chance of developing a VTE increases with the length of time. With regards to aeroplane travel, the risk is generally considered very low in flights shorter than 4 hours. Flights longer than 4 hours are considered “long haul”. Even with long haul flights, the incidence of travel related VTE is very low. In flights of greater than 4 hours the rate appears to be approximately 1 in 5500. In 5 prospective studies the incidence of VTE after travelling for more than 8 hours showed an incidence of one in 200.

Why might I develop one?

The chance of developing VTE is increased in certain people who have pre-existing conditions. These include obesity, hormone replacement therapy, pregnancy, genetic predisposition to clot such as a family history or factor 5 Leiden, cancer or other serious illnesses. If you do not have any pre-existing conditions then the risk is significantly lower. There are risk factors which are much easier to manage such as dehydration (excessive alcohol intake leads to dehydration although the evidence for this is poor) and immobility. Studies suggest that adults who are either taller than average or shorter than average are both at risk, possibly because of the position in the seat, especially on aeroplanes. This may result in unusual posture.

How do I know if I have one?

Typical symptoms of DVT include pain or tenderness, particularly in the calf, lower limb swelling either with or without redness. A pulmonary embolus can lead to chest pain (particularly when you take a deep breath), cough or coughing blood and breathlessness.

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What would I need to do if I have these symptoms?

If you have these symptoms, and you are on an aeroplane, you need to notify the staff. Diagnosis of a DVT is made by ultrasound, and diagnosis of a pulmonary embolus is made by either a CT scan or possibly a nuclear scan. Either way the tests would need to be done in a hospital.

If I have a pre-existing condition or am at risk is there something I can do to prevent it?

There is no strong evidence, but there is some evidence to support:

- frequent walking, and calf muscle exercise such as flexing and extending the ankles
- sitting in an aisle seat which makes moving around the plane easier
- using properly fitted class II below knee graduated compression stockings. These generate 20 to 30 mmHg compression at the ankle.

The current guidelines do not recommend the use of an anti-thrombotic such as aspirin. There is no good evidence to support drinking more water than the usual daily intake (to counteract dehydration).

In people who are at high risk and considering a long haul flight, there is a place for either prophylactic doses of anticoagulation or possibly full anticoagulation. It relies on balancing the possible complications against the likelihood of VTE. This would need to be discussed with a doctor.

Pharmaceuticals that could be considered include Clexane (either daily or twice daily subcutaneous injection) and one of the novel oral anticoagulants such as Rivaroxaban or Apixaban. Those at particularly high risk could consider a duplex scan to check for a DVT around the 7th day after arriving at destination.