

Those Legs Were Made for Walking.

--[Frank Gillingham, MD](#)

Anyone who has worn a cast for an extended period of time knows that the body needs to move to stay healthy. Unused muscles atrophy. Joints stiffen.

Immobilization can also lead to blood clots, or Deep Venous Thrombosis (DVT), which can be a problem for travelers. In plain English DVT means blood clots in the large veins that are well below the skin. DVT usually, but not always, occurs in the legs. If a DVT stays put, it generally causes only minor problems. But a DVT can break off, completely or in pieces, and travel through the blood to distant places in the body. Once it starts moving it's called an embolus and it will usually end up in the lungs, which is called a pulmonary embolus, or PE. A PE is a very serious medical complication of DVT and can result in death. It is also common -- among the U.S. population as a whole (not just travelers) there are probably more than 500,000 PEs a year.

Sometimes DVT/PE occurring in a traveler is called the Economy Class Syndrome because the seats in economy don't provide much room for movement. But don't think a business class or first class seat will immunize you against this malady. All travelers should be aware of this condition and take common-sense precautions.

Immobilization of any kind raises your risk of developing DVT -- this includes immobilization on an airplane, in a car, etc. Other factors that can raise the risk of DVT include: regular smoking, obesity, pregnancy, use of birth control pills, dehydration, recent surgery or other medical problems requiring hospitalization, certain types of cancer or heart disease, and structural abnormalities of the veins. Some people are genetically predisposed to blood clots -- so your family history is important--and senior travelers may also be at higher risk. If you've had a DVT or a PE in the past you're more likely to get one again in the future. And, keep in mind -- the longer the flight or the car trip, the higher the risk.

Symptoms of a DVT often include leg pain or tenderness, redness, or swelling. Typically these symptoms will occur in just one leg -- it's rare to have DVT in both legs at the same time. Symptoms of a PE often include chest pain, shortness of breath, and cough (sometimes with blood tinged sputum). Rarer symptoms of PE include loss of consciousness and abnormal heart rhythms. Both DVT and PE are difficult to diagnose even in a hospital. Rarely do patients have all the classic symptoms and often patients will have symptoms of PE without ever noticing symptoms of DVT.

Should you be traveling?

DVT is a serious problem. If you're at high risk (see above), you should talk to your doctor before traveling. Be especially sure to seek his/her advice if you've had surgery or been hospitalized in the last 3 months, if you're pregnant, or if you've had a DVT/PE in the past.

When you are traveling, follow these tips:

- Get up, stretch and/or walk around every 60 minutes or so. Request an aisle seat so it's easier to do so. Bulkheads and exit rows also provide more leg space and easier entry/exit. If you can, elevate your legs intermittently during the flight.
- Drink plenty of fluids to avoid dehydration (coffee and alcoholic beverages don't count!).
- Move around and exercise in your seat, making sure the seat presses up against a different part of your legs every once in a while. Don't cross your legs for prolonged periods of time.
- Wear comfortable clothing that allows easy movement and doesn't restrict blood flow.
- More leg room is better. If upgrading to business or first class is a possibility, consider it, especially on really long trips. However, don't rest easy once you've upgraded -- be sure to follow these other tips. And bear in mind that hundreds of millions of people fly in economy class each year without suffering from DVT/PE.
- Medical Grade support stockings can be helpful and don't require a lot of effort to either obtain or to use -- ask your doctor or pharmacist.
- According to a recent trial (the Lonfit 3 study, published in *Angiology* 2002; 53:1-6), a blood thinner called low molecular weight heparin (LMWH), which is injected under the skin, is effective at preventing inflight DVTs. Discuss this option with your doctor--most Travel Medicine physicians limit the use of LMWH to high risk patients.

Unfortunately, in the Lonfit 3 study, simple Aspirin was not helpful in preventing inflight DVTs.

If you develop symptoms:

- Seek medical attention at an emergency room or physician office. Don't ignore persistent leg pain, redness, or swelling.
- Similarly, if you have shortness of breath, cough, or chest discomfort, get help.
- The evaluation of DVT/PE involves both physical examination and diagnostic tests. Some of the more sensitive tests (e.g. the highest quality Doppler) will not be available in less well equipped medical centers. Do your research!
- Treatment of DVT/PE involves blood thinners, first intravenous (heparin) then oral (usually Coumadin). The duration of treatment depends on the extent of the problem but typically several months are required.

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