

FitFacts®

How to Avoid Deep Vein Thrombosis on Long Plane Flights

THE FEAR OF FLYING IS COMMON AMONG THE GENERAL PUBLIC. EVEN THOUGH FLYING HAS BEEN CALLED THE SAFEST WAY TO TRAVEL, SOME PEOPLE JUST CAN'T SHAKE THAT FEELING IN THE BACK OF THEIR MINDS THAT A PLANE CAN ALWAYS GO DOWN.

Add that concern to the potentially life-threatening disorder called deep vein thrombosis (DVT), which has been known to occur during long flights, and you've got all the reasons you need to never book a flight again! But relax—there are simple things you can do to prevent DVT.

DVT occurs when blood clots form in the deep veins of the body, typically the legs. DVT can lead to a pulmonary embolism, when a clot breaks free and lodges in a lung. If the clot is large enough, it can cause sudden death.

In an airplane, the dehydration caused by the dry air may thicken blood. In addition, the low cabin pressure, combined with immobility in cramped seats, may cause blood to collect in the legs.

WHO IS MOST SUSCEPTIBLE?

- People with cancer, chronic heart or respiratory failure, or an inherited or acquired predisposition to clotting, obesity or varicose veins
- Those who recently have had major surgery, have been bed-ridden or have suffered a blow to the leg
- Women who are pregnant, who've recently had a child, who are taking contraceptives or who are undergoing hormone replacement therapy
- People 40 years and older may also be at increased risk.

The risk of developing DVT is small (about one in a million), but increases after four hours of travel. Swelling, tenderness, warmth and discoloration or redness in the lower legs may be signs of DVT. Consult your doctor right away if you notice any of these symptoms after long travel. Unfortunately, only half of people who have DVT have any symptoms.

WHAT PRECAUTIONS CAN YOU TAKE?

Compression stockings have been shown to reduce the risk of DVT. For people with cardiovascular diseases, a single dose of heparin, a blood thinner, may work. Consult with your physician if you are concerned about DVT and want to discuss how to best reduce your risk.

In addition, you can also do the following:

- Walk around the cabin every 15 to 30 minutes if possible during flights of three hours or longer
- Wear loose-fitting clothing
- Do some simple stretching exercises while seated
- Sleep only for short periods—up to 30 minutes at a time



- Limit alcohol and caffeine, which may contribute to dehydration
- Request water if your flight has a beverage service
- Walk briskly through the airport during layovers

Also, try these simple in-flight exercises to keep your blood flowing:

- Ankle rotations—Lift your feet off the floor and draw a circle with your toes, trying to get a full range of motion through your ankle. Repeat in the opposite direction.
- Foot lifts—Alternate keeping your toes on the floor and lifting your heels with keeping your heels on the floor and lifting your toes.
- Knee lifts—Sitting straight up, keep your knee bent and lift your thigh so that you're flexing at the hip. Alternate legs.
- Toe curls—Curl your toes and release. Also try pressing your toes down against the floor or just wiggling them inside your shoes.

ADDITIONAL RESOURCES

[Goldhaber, S.Z. & Fanikos, J. \(2004\). Prevention of deep vein thrombosis and pulmonary embolism. *Journal of the American Heart Association*.](#)

[National Heart, Lung and Blood Institute](#)

[Flight Health](#)

[WebMD](#)