

Fit Facts™

FROM THE AMERICAN COUNCIL ON EXERCISE®

How to Avoid Deep Vein Thrombosis on Long Plane Flights

CONCERN ABOUT DEEP VEIN thrombosis (DVT), a potentially life-threatening disorder in which blood clots form in the deep veins of the body, particularly the legs, has been growing in recent years after several cases were attributed to long flights. DVT can lead to a pulmonary embolism (PE), 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. As a result, DVT has been dubbed “economy class syndrome.” The potential for the problem is greater when in-flight airline personnel keep the

seat belt sign lighted and discourage passengers from moving about the cabin due to air turbulence.

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

Approximately 4 percent to 5 percent of high-risk individuals may suffer DVT on flights of 10 hours or more. Swelling, tenderness, discoloration or redness in the lower legs may be signs of DVT. Unfortunately, however, there are often no symptoms at all.

What Precautions Can You Take?

At the American Heart Association's Scientific Sessions in 2001, the results of research conducted by an international group of scientists from the U.K., Australia and Italy suggested that low-to-medium risk patients may prevent DVT with compression stockings, while a single dose of heparin, a blood thinner, may work for high-risk individuals. Consult with your physician if you are concerned about DVT and to discuss how to best reduce your risk.

In addition, you can

- Walk around the cabin every 15 to 30 minutes if possible during flights of three hours or longer
- 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
- Bring your own water bottle, or request water if your flight has a beverage service
- Walk briskly through the airport during layovers

In-flight Exercises

Ankle turns: Lift your feet off the floor and move your toes in a circle, one foot moving clockwise and the other foot moving counterclockwise. Change direction and repeat.

Foot lifts: Place your heels on the floor and bring your toes up as high as you can. Then put both feet back flat on the floor. Then pull your heels up while keeping the balls of your feet on the floor.

Knee lifts: While keeping your knee bent, raise your leg while tensing your thigh muscle. Repeat 20 to 30 times, alternating legs.

Shoulder rolls: Raise your shoulders and then move them forward, downward and then backward in a smooth circular movement.

Arm bends: Start with your elbows on the armrests and your hands pointed forward so that your lower and upper arms make a 90-degree angle. Take turns moving your left and then your right hand toward your chest and back, and continue for 30 seconds.

Knee to chest: Bend slightly forward. Fold your hands together around your left knee and pull it toward your chest. Hold this position for 15 seconds and let your knee drop slowly. Change legs and repeat.

Forward bends: Place both feet on the floor and pull your abdomen in. Bend slowly forward and “walk” your fingers along your shins to your ankles. Hold for 15 seconds and sit up slowly.

Upper-body stretch: Stretch both arms over your head. With your right hand, grab your left wrist and pull it slowly to the right. Hold for 15 seconds and change arms.

Shoulder stretch: With your right hand, grab your left elbow and pull your outstretched left arm slowly toward your right shoulder. Hold for 15 seconds and change arms.

Neck roll: Relax your shoulders, let your head drop to your right shoulder and roll your head slowly to the front and then to your left side. Repeat five times.

Source: KLM Royal Dutch Airlines

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