

# Airhealth.org

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## Athletics, Fitness

About 85% of air travel thrombosis victims are athletic, usually endurance-type athletes like marathoners. People with slower resting blood flow are at greater risk of stasis, stagnant blood subject to clotting. Also, they are more likely to have bruises and sore muscles that can trigger clotting.

No other risk factor comes close to this. Age over 60 is supposed to be a risk factor, but these victims are younger, 82% of them under 60.

Athletes should flex their legs at fifteen minute intervals during air travel. If other risk factors are present, such as a personal or family history of clots, more frequent flexing would be advisable, and wearing compression stockings. Avoid sleeping. The English soccer team flying to the World Cup games in Japan broke the trip into two segments with a two-day rest stop and wore compression stockings during the flights.

The injury often feels like a muscle cramp and is usually misdiagnosed, aggravating the injury and increasing the risk of permanent disability or death. Tips on recognizing symptoms and avoiding misdiagnosis are available in a free [Leaflet](#).

New hope for victims lies in an experimental treatment being studied at National Institutes of Health by Dr. Richard Chang. He is using recombinant tissue plasminogen activator (rt-PA) to dissolve clots. By dissolving clots immediately instead of waiting weeks for lysing to dissolve them, the chance of permanent vein damage is greatly reduced. But the treatment must begin within two weeks of clot formation, after which the clot resists this treatment. Many victims, including physicians who are victims, are not able to recognize symptoms and get a correct diagnosis within two weeks. The free [Leaflet](#) could make you one of the lucky ones. For free treatment, contact Richard Chang at [RChang@mail.cc.nih.gov](mailto:RChang@mail.cc.nih.gov).

**You can help.** Post this notice on the bulletin board at the health club, locker room, or anywhere it will be seen by other athletes.

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## **ATHLETES AT RISK OF DISABLING, SOMETIMES FATAL INJURY**

Tim Hentzel, 26, a competitive triathlete, was recently diagnosed with DVT, deep vein thrombosis, a blood clot in the leg, after a flight from Minneapolis to San Francisco. His life has been difficult since then, revolving around pain, swelling, warfarin (rat poison) tablets, and blood tests.

Medical journals report that, during air travel, blood flow slows down, especially in the lower legs, and coagulability rises hour by hour. Blood clots form in the calves of about 5% of air travelers. Clots can cause pain and swelling. If a blood clot reaches the lungs, it can cause pain, fainting, and death. Athletic people are at greater risk because, with lower resting blood flow to the large muscles, they are more prone to stasis, stagnant blood subject to clotting. A large majority of air travel thrombosis victims contacting [Airhealth.org](http://Airhealth.org) are athletic, usually endurance-type athletes like marathoners. No other risk factor comes close. Age is supposed to be a risk factor for DVT, but 83% of these victims are under age 60.

Experts recommend wearing compression stockings and flexing the legs at thirty minute intervals. For people at higher risk, such as athletes, flexing more frequently is advisable. Don't confuse compression stockings with support stockings. Support stockings may actually be harmful. Compression stockings are graduated with much greater pressure at the ankle.

The injury often feels like a muscle cramp and is usually misdiagnosed, aggravating the injury and increasing the risk of death. Tips on recognizing symptoms and avoiding misdiagnosis are available in a free [Leaflet](http://www.airhealth.org) at [www.airhealth.org](http://www.airhealth.org). There are no strings; no advertising and no plea for contributions.

### **Common Misconceptions**

**If I am in good shape, it won't happen to me.** Athletic people are at much greater risk than other passengers. See our [Athletes](#) page. No one is safe from this. More than half the victims have no risk factor other than air travel. On our [Messages](#) page you will see remarks from victims who were young, fit, and active: champion cyclists, runners, a scuba diver. A ten year old girl suffered DVT on a flight to Hong Kong.

**Older folks are more at risk.** Kevin Wake had heard this. On a flight from Singapore to London with his daughter Alayn, 28, he was wearing compression stockings to prevent clots. Shortly before reaching London, Alayn died from a pulmonary embolism. In our registry of cases, 85% are under age 60.

**I'll just upgrade and avoid the cramped seats.** At cabin altitude, blood coagulability rises steadily and the altitude is the same in the front of the plane as in the rear. A Japanese study found 70% of victims in coach class, 25% in business class, 5% in first class, and one pilot. The term economy class syndrome (ECS) is a misnomer. The ratio of victims is the same in all sections of the aircraft, including the flight deck. Gianni Belcaro's latest study, LONFLIT IV, Business 2003, finds 4.5% of frequent business class travelers developing one or more clots per year.

**You just need to stretch if you feel a cramp.** You probably won't feel a cramp, and if you do, it's too late. Researchers find that 94% of blood clots are silent, symptomless. John Scurr found symptomless blood clots in 10% of air travelers. But symptomless blood clots are not harmless. They can progress to fatal pulmonary embolism without warning .

**If I get a clot, drugs will dissolve it.** The usual heparin/warfarin treatment doesn't dissolve the clot. It arrests clot formation. The original clot has to be broken down in a natural process called lysing, which can take months. Getting a correct diagnosis and treatment often takes several weeks. During this time the clot is doing permanent damage, often resulting in chronic phlebitis which can be disabling. **A clot-dissolving treatment is available if you can get to Dr. Richard Chang before the clot is more than two weeks old.** See the [News](#) page, 6/26/02, Dr. Richard Chang.

**Pilots acclimate. They don't need to worry.** Pilots are at risk, too, and the first sign often is fainting. Dr. David McKenas, medical director at American Airlines, says that the most common causes of sudden pilot incapacitation are cardiac arrest, arrhythmia, and fainting. (All of which are often caused by a blood clot in the lung.) With DVT, pilots, like other victims, often struggle with symptoms for days or weeks, not knowing what is wrong. During that time they are at risk of sudden collapse, a danger to themselves and their passengers. Pilots are also at risk of sudden collapse due to arterial clots causing heart failure or stroke.