

Leg Swelling After Business Travel? A Trip to the Hospital Emergency Room May Save Your Life



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A SEVEN-HOUR FLIGHT. A swollen left calf. Not ordinarily the signs that most people would accept as reason enough to visit an emergency room. Nevertheless, this is a decision that could have dire consequences.

Vein disease, deep venous thrombosis, blood clots and phlebitis are all serious health problems that can happen to any traveler. You may remember that NBC reporter David Bloom died from just such an occurrence, and the blood clot that ultimately killed him could have been potentially treated with early intervention.

DVT (Deep Venous Thrombosis) is a problem that is estimated to affect 300,000 people per year. Not everyone develops the life-threatening complication of blood

Travelers should be aware of the risks of travel, what they can do to prevent problems, where they should go to diagnose the problem and what methods are available to treat a blood clot.

clots traveling from leg veins to the heart or lungs (pulmonary embolus), but the risks require that you consider preventative medical attention.

Clots that remain in your leg vein can also cause long-term damage that affects the legs themselves over the course of your life; clots can cause swelling, aching, throbbing, skin changes and ulcers at the ankles. It's important to not only diagnose the problem early, but to treat it early too. Prompt treatment prevents life-threatening and leg-threatening problems.

How do veins work? Veins carry blood back to the heart and lungs where it then can absorb oxygen and travel back to the rest of the body, so that all organs can function. The leg veins have one-way valves. These valves direct the blood up the leg towards the heart. Every time you contract (squeeze) your leg muscles, they pump the blood up the veins in the direction of the

continued on page 84

continued from page 82

heart. If the veins are blocked with a blood clot, two problems develop. First of all, if the clot blocks the blood flow back to the heart, the leg can swell, ache and throb. Secondly, the clot in the leg veins may break away and travel to the heart and lungs causing significant damage and perhaps death.

What causes blood clots? If blood doesn't flow, it has a tendency to get "thick" and clot. So, that seven-hour



After a long flight, a swollen left calf is often not reason enough to visit an emergency room. Nevertheless, this is a decision that could have dire consequences, since blood clots can develop in any traveler and can be fatal if not treated.

plane trip with your legs hanging down and the blood not flowing well doesn't help. A blood clot could develop. Another cause of blood clots is inherited problems. There are about eight to 10 inherited clotting disorders called thrombophilias. They can easily be diagnosed with simple blood tests, but one needs a high index of suspicion. If you have had a blood clot already for no apparent reason such as a long plane or car trip, broken leg, recent surgery, cancer, etc. then you probably should be investigated for having thrombophilia. A family history of blood clots in veins, early heart attack in parents or siblings (under age 50) or an early stroke are also reasons to investigate the possibility of an inherited clotting problem.

Other risk factors as alluded to already can be additive for your risk of blood clots. Some risk factors are; recent surgery, obesity, pregnancy, hormonal medication, cancer, varicose veins, increased age above 40 years, fracture of leg bones and recent extended plane, train or auto trips greater than four hours.

How can I prevent blood clots? The obvious answer is to minimize the risk factors listed above. It is very important to flex your leg muscles and move about during long travel trips. Dehydration especially during plane trips can cause the blood to be "thicker." Therefore, consciously drink more water, juice, soda, etc. before and during long trips. Most airlines now address the issue of DVT in their travel magazines. Over-the-counter or prescribed graduated-compression, knee-high stockings can also help maintain good blood flow in the veins. I feel it is important to wear these on long plane or car trips. The business traveler should be aware of these simple, preventative measures.

How do I know if I have a blood clot? You don't. Even vascular surgeons are only right 50 percent of the time by examining the patient alone. We need more information. An ultrasound (doppler) is the gold standard. This test utilizes sound waves to look at the leg veins and "see" if any blood clots are present. In experienced hands, the ultrasound test is almost 100-percent effective in identifying life-threatening blood clots. This examination gives us the information we need. The ultrasound exam is completely non-invasive, requires no preparation, and lasts approximately 20 minutes. There is no discomfort. It may also identify other reasons for the symptoms of calf tenderness and swelling.

What if I have a blood clot? The goal of treatment is to dissolve the blood clot so that it doesn't cause damage to the leg veins and it does not travel to the heart or lungs. The most common form of treatment is "blood thinners." There are two types of blood thinners; one type works immediately but requires injections or intravenous treatment and the other type is a pill that takes a few days to begin its effect. Usually we begin with the immediate type (heparin, Lovenox) and give the oral type until it begins to take effect; then we stop the

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continued on page 86



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continued from page 84

immediate type and continue oral blood thinner for at least six months. Most treatment can be done as an outpatient. The injections of the immediate-acting blood thinners can be self-administered at home. If a patient has significant risk factors, they may be hospitalized for a few days until the oral medication takes effect.

In some cases, the clot may be so extensive or the risk of blood thinners so great that patients need another type of protection. These patients may require the placement of a vena cava filter. The vena cava is the main vein in the abdomen. Both leg veins lead to the vena cava. A vena cava filter can be thought of as a "strainer" or "colander" that traps any blood clots that are traveling from the leg veins to the heart. By doing this, it prevents the life-threatening complication of leg vein blood clots—pulmonary embolus. This filter is designed in such a configuration that it is self-cleaning i.e.: once a clot is trapped, it is slowly dissolved over time.

The newest minimally invasive methods of clot dissolution are mechanical and chemical techniques. We are now able, with one small needle stick, to place devices that utilize ways to dissolve clots by softening them and vacuuming them out of the body in a matter of hours. This removes the clot quicker and reduces the risk of blood clots damaging the leg veins or traveling to the heart. Patients can get back to living their lives more quickly than traditional methods of DVT management.

How can you ensure safe and healthy travels? Travelers can reduce their risks by wearing support stockings, moving their legs, and keeping hydrated. Anyone with a family history of blood clots or unexplained blood clots of their own should seek the advice of vascular specialists. By being aware, travelers can be proactive and prevent problems. ■

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