

**Travelers' thrombosis, or economy class syndrome**

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“People who travel aboard suddenly collapse and die the moment they start walking on arriving at the destination following a long flight” is the profile of economy class syndrome that the mass media has depicted.

When I heard this disease name for the first time, I was terribly surprised and wondered if a completely new disease has emerged. On learning what this disease was really about, I realized that it referred to deep-vein thrombosis that physicians are all familiar with. This is a disease whereby a mass of blood forms inside the vein. Thrombosis, which ordinarily occurs after surgery or after being bedridden for extended periods, was found to occur after long flights. So it was given a new, high-profile name, “economy class syndrome” and made a flashy debut in society. Thanks to the mass media’s tremendous power, the disease spread like wildfire and came to be widely recognized by the general public. However, the affirmative (and discriminatory) name is liable to invite misunderstandings. I am concerned if all of you may also be perceiving the disease in a wrong way.

I repeat: it is not only in the economy class where people develop thrombosis in their veins.

By nature, blood is a substance that is liable to clot. This is because when you are injured, the blood must clot right away to cover the wound. Ordinarily, however, you never develop a thrombus. There are a number of reasons for it to develop. The blood may have become liable to clot (such as while taking contraceptive pills or during pregnancy, etc.), the blood flow may be stagnated (such as long hours of lying in bed or sitting down: this may occur even in the first class section of an airplane!), or there may be problems with the vascular wall (such as arteriosclerosis, diabetes, or other diseases).

You may think that it is the power of the heart that moves the blood. However, it is only arterial blood that is being pushed and carried along by the heart. Blood inside the veins which is after the blood vessels separate into capillaries, is moved by the power of contraction of the muscles around the blood vessels. (This is why it is easier to collect blood by having patients put force into their arms. Remember how you are asked to clasp your hand and loosen it when you donate blood?) If you stay seated, your muscles do not move, so venous blood stagnates. What’s more, the air inside the airplane is dry, so water tends to be lost from the body. This makes the blood more concentrated. If some condition is added to this state, the blood easily forms a thrombus.

If a thrombus stays still at the site where it was formed, the flow of the vein is blocked, causing swelling of the lower extremities (venous thrombosis); if it leaves the site where it was formed and goes into the blood stream, it passes the

heart and enters the pulmonary artery, clogging some area of the blood vessel that gradually narrows (acute pulmonary thromboembolism). The person collapses as a result.

Prevention consists of hydration and exercises. As far as exercises are concerned, trains are more advantageous than airplanes since it is easier to move around inside trains. I therefore encourage everyone to travel by train.