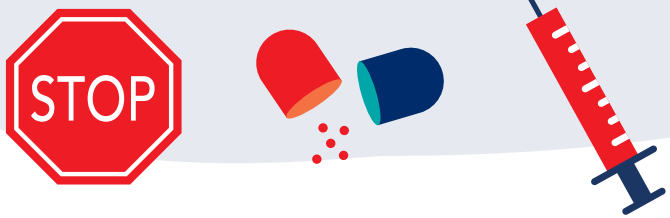
Special situations

1. In case of **reduced mobility and/or high risk** of venous thromboembolism, consider the use of **graduated compression stockings** to promote blood flow from the veins of the legs to the heart, if not contraindicated and after prior medical consultation.

2. **Very rarely**, for some travelers at **high thrombotic risk**, **anticoagulant or antiplatelet drugs** to be administered/taken before travel may be considered. The use of these drugs remains controversial and with limited evidence for the prevention of traveler's thrombosis. Therefore, **their self-administration is strongly discouraged in the absence of specific medical evaluation and advice**, also in consideration of the possible side effects (e.g. bleeding and allergies).

3. The traveler may **already be on anticoagulant or antiplatelet therapy** for specific medical conditions with particularly high thrombotic risk. **The previous recommendations** (see the paragraph "What I can do to reduce the thrombotic risk") **remain valid also in this case.**



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Traveler's thrombosis:
no fear, just some advice

Venous thrombosis is due to the activation of coagulation in the wrong place, inside the venous vessels, causing their **obstruction by a blood clot**. Venous thromboembolism includes **deep vein thrombosis**, generally in the lower limbs, and **pulmonary embolism**, which is usually caused by a piece of clot, the embolus, which detaches from the venous thrombus, reaches the heart and then the lungs, obstructing the flow of blood to the lungs. Venous thromboembolism can be triggered by **multiple risk factors including long-distance air travel**.

Causes

The causes of traveler's thrombosis are diverse and often unclear. Although **various mechanisms** have been proposed, from dehydration causing blood thickening to exposure to reduced oxygen pressure during air travel, the **primary risk factor is certainly prolonged immobility** (which must be taken into account not only during air travel, but also while on other forms of travelling such as car or train journeys). **Prolonged sitting**, especially in **confined spaces**, limits leg movement and reduces blood flow in the veins of the legs, thus promoting the risk of thrombosis.

How it presents

Symptoms of deep vein thrombosis:
pain, redness and/or swelling of the lower limbs (much more rarely the upper limbs), usually occurring asymmetrically.
Symptoms of pulmonary embolism:
difficulty breathing and shortness of breath (the most important symptom), chest pain, heart palpitations, fainting, coughing up traces of blood.

The size of the problem

The absolute **risk** of venous thrombosis in the air traveler **increases with the duration of the journey** but remains **generally low**. Studies have estimated that **air travel lasting more than 4 hours** is associated with a 2-3 times higher risk of venous thrombosis compared to the general population, nevertheless leading to only a moderate probability (with approximately 1 thrombotic event occurring per 4,600 flights, or 0.02%).

Who is most at risk

The risk of traveler's thrombosis is higher in individuals who already have other risk factors (the more risk factors they have, the higher their overall risk):

- old age
- obesity
- female gender
- pregnancy and puerperium (6-8 weeks postpartum)
- use of oral contraceptives and hormone replacement therapies
- personal history of previous venous thromboembolism
- family history of venous thromboembolism (particularly in the case of first-degree family members who experienced the thrombotic event at a young age)
- hereditary thrombophilias
- active cancer
- smoking
- recent surgery or trauma (within 6 weeks prior to travel)
- other specific medical conditions (e.g. chronic heart failure, rheumatological diseases, venous insufficiency in the lower limbs).

What I can do to reduce thrombotic risk

1. While waiting for boarding, **walk** through the permitted areas.
2. During the journey, **if possible, get up every two hours and walk down the aisle**. When sitting, alternately flex and extend your knees and ankles at regular intervals and move your shoulders.
3. On board, **sit stretching your legs** to avoid keeping your knees flexed at 90 degrees (this position can hinder blood flow in the veins of your legs).
4. Minimize the size of carry-on luggage under the seat to ensure that your legs have **enough room to move**.
5. On the day of the journey, wear **comfortable clothes.**
6. Before and during the journey, **keep well hydrated** with water and **abstain from alcohol.**
7. **Avoid taking sleeping pills**, which can promote long periods of immobility.