

LUIZ HENRIQUE COELHO, M.D.

HOW TO AVOID THROMBOSIS WHEN TRAVELLING

15 TIPS FROM A VASCULAR SPECIALIST



EDITORA RECANTO DAS LETRAS

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To my parents Abílio (in memoriam) and Zenaide for conceiving me and intruding me to schooling, even in the face of an adverse social environment.

To my wife Flávia for her unconditional support in difficult times, for being a rock in crisis and a compass on stormy days.

To my thousands of patients who have inspired me in the creation of this booklet, as a source of help and an informative tool that can help save lives.

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Introduction

Apart from the critical period of restrictions imposed by the COVID 19 pandemic, in the last 15 years the multiple means of transport have recorded a significant increase in the number of trips, which therefore has exponentially raised the volume of passengers carried, especially in civil aviation and land transport.

According to data by ANAC (National Agency for Civil Aviation), in 2019, 119,4 millions of people were carried, considering both the domestic and the international market. In 2022, the number of commercial flights around the world exceeded 100 thousand a day, which set a historical record¹.

As a consequence, there was also an increase in the incidence of vascular diseases caused or triggered by long trips:

the most dreaded is the Deep Vein Thrombosis (DVT) due to its potentially serious consequences, like pulmonary embolism and even death.

The adoption of a few simple measures may reduce or even avoid the devastating effects in the more complex cases.

So, there's a constant search amongst specialists for a consensus on the physiopathological mechanisms that, during long trips, trigger the cascade of cellular events culminating in the formation of clots, as well as their potential and unwanted migration to the lungs.

On the other hand, there's also a discussion about the real incidence of these events; which passengers are more exposed to these conditions; what kind of impactful preventive measures can be adopted and what should be textually considered a long trip.

Finally, this e-book, fully based on medical consensus and on decades of experience gained by the author, aims to clarify these crucial points and give you, traveller, the most important preventive measures you can adopt to avoid thrombosis on your next trip.



Why purchase this book?

Despite the abundance of scientific literature and articles in the lay press informing about the risk of venous thrombosis after long trips, there's a relative scarcity of publications on this topic written by specialist doctors and aimed at the traveling public.

Therefore, in easy and uncomplicated language – but still not compromising scientific evidences – we offer, in the last paragraphs, simple but relevant recommendations that may make the difference in your experience at the end of a long work or leisure trip.

So, if you intend to head towards other continents for the first time or if you are planning a trip longer than 6 hours, this book was made for you.

Even those enthusiasts of long land trips should read the next pages and find out that prolonged immobility in any means of transport may result in them joining an unwanted statistic of travellers stricken by one of the most treacherous and potentially serious blood circulation diseases.

Silent and frequent in certain groups of passengers, the sudden obstruction of leg veins can be avoided through the adoption of simple measures, as we will see next.

Lastly, I invite you, reader, to share this content with as many passengers as possible; if at least one life can be saved, the purpose of this work will have been achieved.

Here is a first tip:

Are you going on vacation? Go see your vascular doctor for a consultation.

Are you travelling by plane? Make sure speaking to your surgeon is in your plans.

Are you gonna hit the road? Listening to your angiologist is a must.

Are you going for a tuk-tuk ride in Europe? Please don't forget to also recommend our e-book.

I shall remind you that the recommendations in this book can never replace a proper medical appointment.

... and never underestimate

the potential of an unexpected clot!

Enjoy your reading and have a nice trip!

Understanding the enemy

The word thrombus (from the Greek Thrómbos) means blood clot. Thrombosis is the formation or development of a blood clot within the blood vessels.

Thrombosis may occur in superficial veins, right under the skin, and in this case it is called superficial thrombophlebitis, or simply thrombophlebitis or phlebitis. All synonyms.

When a clot forms in deep veins, inside the muscles, it is called deep vein thrombosis, known in the medical field as DVT.

In any location, the clot will cause an inflammation in the vein, and may keep restricted and adhered to its initial formation spot or it may extend along the vein, causing its total or partial obstruction.

When it affects superficial veins, there is pain and an increase in temperature in the affected area, plus redness and swelling. A painful hardening can be felt in the course of the vein under the skin.



In deep veins, the symptoms that stand out the most are swelling and pain, usually restricted to one leg. Swelling may be located only in the calf and the foot or may be more exuberant in the thigh, indicating that the clot may be located in the deep veins of this region or further up the groin.

The doctor may diagnose superficial thrombophlebitis only based on your symptoms and by examining the affected vein (under the skin). However, DVT may present itself with symptoms that are not as evident, making it difficult to diagnose. To be safe, the doctor usually prescribes specialized tests, like the duplex scan or the phlebography. There are those who ask for a blood test to quantify a substance called D-dimer, whose levels are high when the thrombosis is recent. This is

Doctor, you might remember, I had a varicose vein operation. Can I travel by plane?" Or...

"I was treated for thrombosis a few years ago. Can I fly abroad?" Or...

"My legs have been swelling almost daily. Do I need to wear compression socks when travelling?" Or...

"I've been pregnant for a few weeks. Which precautions should I take when flying?" Or...

"I'm part of a group of elderly people about to visit Europe. What do we need to know about thrombosis risk so we can have a safe trip?" Or...

"There are several cases of thrombosis in my family. Do I need to take any precautions before getting on a plane?" Or...

"I underwent cancer treatment and now I have a trip booked. Do I need to worry about thrombosis?" Or...

"I've been taking hormones for a while. I'm going to the United States. Is there a risk of thrombosis on the plane? Or yet..."

"I'm well above my ideal weight. I've heard I'm in an at-risk group for thrombosis. Is it true?"

Questions like these are part of everyday life in vascular clinics and, seeing that the answers to these questions are often materialised by bad outcome situations has triggered the production of this informative booklet aimed at passengers who are about to go on long trips.

If you are planning to spend more than 6 hours on a plane, or even land transport, and you care about maintaining healthy leg circulation, embark on this scientific journey and share this content; find out why so many patients eagerly await the day of their "air consultation".

Have a nice reading and a great trip!