

Prevention of Clots During Flights

Why are clots in flights a problem?

During long flights, some people experience swelling in the legs. This is due in part to blood not circulating through the legs normally, because people are sitting still for long periods of time. Sitting still for long periods — not just on planes, but also in cars, trains, or even at a desk — can allow clots to form in the leg veins because of this reduced circulation. Blood clots in the leg can occasionally grow and break off, travelling to the lungs and causing problems with breathing.

How often do clots develop in people on flights?

The true risk is smaller than many people assume, and depends heavily on flight length and individual risk factors. Current data suggests a clot that causes symptoms develops in roughly 1 in every 4,000–5,000 flights longer than 4 hours — the risk rises further with longer flights (over 8–12 hours) and multiple flights close together.

Older studies that actively screened travellers with ultrasound (rather than waiting for symptoms) found small, silent clots in a higher proportion of people, particularly those with existing risk factors — but most of these resolve without ever causing a problem. The vast majority of people who travel by air, even long distances, will not develop a clot.

What makes a person at risk of developing a clot during a flight?

Risk is higher if you or a close relative has had a clot before (particularly if it occurred without any obvious cause), if you're pregnant or taking the oral contraceptive pill or hormone therapy, if you have significant obesity, if you're recovering from recent surgery or a hospital admission, if you have active cancer, or if you're unusually short or tall. The exact risk for any one person is difficult to estimate precisely, and is best discussed with your doctor if you have any of these factors and are planning a long flight.

What can I do to stop a clot happening during my flight?

There are a number of evidence-based ways to reduce the risk of developing a clot during a flight.

- Move around as much as possible — asking for an aisle seat can make this easier. Walking around the cabin every hour or so, and doing simple seated calf and ankle exercises (flexing your feet, circling your ankles) when you can't walk, both help.
- Avoid becoming dehydrated by drinking plenty of water and limiting alcohol. Low cabin humidity can contribute to dehydration, which may thicken the blood.
- For those with risk factors, properly fitted graduated compression stockings (applying gentle, graduated pressure that's firmest at the ankle) may reduce clot risk. Note: these are not the same as ordinary elastic support hose, which apply even pressure throughout and are not the same product (see information sheet on Graduated Compression Stockings).
- Aspirin is not recommended for preventing travel-related clots — current evidence shows it doesn't meaningfully reduce the risk, despite being a common assumption in the past.
- For people at genuinely high risk (e.g. a recent clot, recent major surgery, active cancer, or multiple strong risk factors together), your doctor may recommend a single dose of blood-thinning medication

given by injection under the skin before a long flight. This is not necessary for most travellers and should only be used if specifically recommended by your doctor.

Should I upgrade my seat to reduce the risk of blood clot?

Clots during flights are not limited to people travelling in economy (the term “economy class syndrome” is a myth) — extra legroom may help a little with comfort, but the main drivers of risk are immobility and individual risk factors, not cabin class. Blood clots have been reported in people travelling in first class and business class as well.

When should I seek medical advice after a flight?

See a doctor promptly if you develop swelling, pain, warmth or redness in a leg (especially one-sided) in the days to weeks after a long flight, or if you experience chest pain, shortness of breath, or coughing up blood — these need urgent assessment, as travel-related clots can occasionally cause symptoms up to several weeks after landing.

References

1. Schreijer AJM, Hoylaerts MF, Meijers JCM, et al; on behalf of the American College of Chest Physicians. Antithrombotic Therapy for VTE Disease: CHEST Guideline and Expert Panel Report — travel-related recommendations. Chest.
2. CDC Yellow Book 2024: Air Travel — Venous Thromboembolism. Centers for Disease Control and Prevention.
3. Kuipers S, Cannegieter SC, Middeldorp S, et al. The absolute risk of venous thrombosis after air travel: a cohort study of 8,755 employees of international organisations. PLoS Medicine. 2007.

Further Questions?

The information presented in this fact sheet is intended as a general guide only.

Patients should seek further advice and information about **Prevention of Clots During Flights** and their individual condition from their treating haematologist or doctor.

For additional information about blood disorders and their treatment, or to contact one of our specialist haematologists, visit the Melbourne Haematology website:

www.melbournehaematology.com.au