

## Prevention of Clots during Flights

### Why are clots in flights a problem?

During long flights (greater than 8 hours in length) some people experience swelling in the legs. The swelling in the legs is due in part to the blood not circulating through the legs normally because people are sitting for long periods of time. Sometimes clots can form in the veins in the legs because of the blood not circulating normally. Blood clots that occur in the leg can grow and sometimes break off and travel to the lungs causing problems with breathing.

### How often do clots develop in the people on flights?

The exact number of people who develop clots during flights is not known. Sometimes these clots are symptomless (i.e. the person with the clot does not know they have a clot) until many days or even weeks after the flight. One study showed that blood clots develop in around 1 in 30 people who travel. Most of these people did not know they had clots but this still places these people at risk of the complications of blood clots including the risk of a blood clot traveling to the lungs. The vast majority of people who travel on airplanes will not develop a clot but there are some people who are particularly at risk.

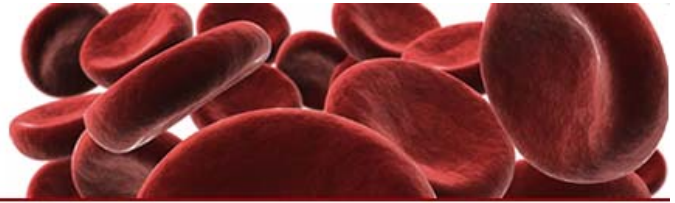
### What makes a person at risk of developing a clot during a flight?

Generally, if you or a close relative has had a clot (particularly if the clot occurred without any reason) you may be at risk of developing a clot during a flight. The exact risk is difficult to guess in any one person.

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

There are a number of ways you can reduce the risk of developing a clot during a flight.

- The first is to make sure you move around as much as possible – this is sometimes difficult but asking for a seat on the aisle can make it a bit easier to move around. Walking around the cabin once every waking hour is a reasonable thing to try.
- The second is to avoid becoming dehydrated by drinking lots of water and avoiding too much coffee or alcohol. Becoming dehydrated causes the blood to become a bit thicker and increases the risk of developing a clot. Most airplane cabins have air that is low in humidity which can contribute to dehydration and so it is important to continue to drink plenty of water during a flight.
- The third way to reduce the risk of a clot developing is to use specially designed stockings (compression stockings) which reduce the swelling in the leg by applying gentle pressure to



the ankle. This gentle pressure at the ankle promotes the circulation and decreases the risk of a blood clot. There have been a number of large medical research studies involving many thousands of people which show the risk of developing a clot can be decreased by the correct use of compression stockings (**See information sheet on Graduated Compression Stockings**). There are a number of different compression stockings available. Note; compression stockings are not the same as elastic support hose. Elastic support hose provide support (compression) all along the calf and may actually be harmful. If your stockings are not tighter at the ankle than at the top of the calf, they are not right stockings.

- Some people who are at a major risk of developing a blood clot may go on blood thinning medication around the time of the flight. This is not usually necessary but may be appropriate for people who have had a recent blood clot, have problems with excessive weight, have problems with large varicose veins, have cancer or who have had recent surgery. Generally a single dose of a blood thinning medication (as well as the other measures above) given by a small needle under the skin 2 – 4 hours before a long flight is recommended in these patients.

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

Unfortunately, clots during flights are not limited to people traveling in economy (the term economy class syndrome is incorrect). Blood clots have been reported in people traveling in first class and business class.

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## Resources used to produce this information sheet

- Venous thrombosis from air travel: the LONFLIT3 study--prevention with aspirin vs low-molecular-weight heparin (LMWH) in high-risk subjects: a randomized trial. *Angiology* 2002(Jan-Feb):1-6.
- Prophylaxis for travel-related thrombosis? No.[see comment][comment]. *Journal of Thrombosis and Haemostasis* 2004(Dec):2092-3.
- Prevention of venous thrombosis with elastic stockings during long-haul flights: the LONFLIT 5 JAP study. *Angiology* 2003;Jul:197-201.
- Prophylaxis for travel-related thrombosis? Yes.[see comment][comment]. *Journal of Thrombosis and Haemostasis* 2004(Dec):2089-91.
- Compression stockings for preventing deep vein thrombosis in airline passengers. *Cochrane Database of Systematic Reviews* 2006(Issue 4).