



FLYING & ITP



The ITP Support Association has often been asked whether it is safe to fly whilst suffering from ITP. Howard Anderson, ITP volunteer and pilot, supplies some aviation facts.

THE ENVIRONMENT IN AN AIRCRAFT

Aircraft pressurisation and hypoxia

As an aircraft climbs after take-off, the air pressure outside falls rapidly, if nothing were done, the reduced oxygen available results in hypoxia. At altitudes over about 10,000' the effect on humans becomes marked. Should one climb to the height of Everest, 29,000', severe health problems may occur, even death. Aircraft regularly cruise far higher than that, at altitudes at which humans cannot survive, and for this reason aircraft are pressurised to simulate a lower altitude. This is not sea-level air pressure because technical problems with the airframe become too high, so a compromise is reached, the air pressure inside the aircraft is kept at an equivalent altitude of between 5,000' and 8,000'. It is a myth that a pressurised aircraft has a higher pressure than sea-level air pressure, it is always lower than that in flight.

Rate of change of air pressure

As an aircraft climbs or descends, the rate at which the pressure changes is fairly slow, but some people may notice the change, especially if they have blocked sinuses. This mild discomfort can usually be reduced by blowing or swallowing. If the descent (or increase in air pressure) is too fast, it may cause discomfort at various sites in the face. This fades when the pressure becomes more constant. Some people experience this during a descent in a lift in high building, it is not unusual for a lift to descend at 1000 feet per minute, about the same speed as descending in an aircraft.

Sudden depressurisation

If an aircraft is at cruise altitude and some unexpected event results in the cabin pressure falling, the aircraft will immediately descend to a safe altitude. If this loss of pressurisation is sudden or rapid, the situation is serious but the emergency oxygen masks will come down giving enough oxygen to allow descent to a safe altitude. Thankfully this is a very rare event and should not normally be a factor in deciding whether to fly or not. It would not be a pleasant experience, some passengers may even become unconscious, but the effect is temporary as the aircrew will achieve a lower altitude very quickly.

Humidity

The humidity in an aircraft may be lower than that on the ground, often 20% humidity or less. Many people live in low humidity areas, especially arctic and sub-arctic regions, these people are also not advised to live in more humid areas for the sake of their ITP nor are those who work in low humidity air-conditioned offices encouraged to work elsewhere.

Altitude and pressure changes

Many populated areas of the world are at or above the apparent cabin altitude and in those populations are people with ITP. These people are not advised to live at lower altitudes for the sake of their ITP nor are people advised to avoid visiting these locations on holiday or business. Counting only those in large cities, there are at least 45 million people worldwide living at an altitude of 2000m (6560 feet) or more. It maybe they are acclimatised to that altitude but visiting those cities and being in an air-conditioned building would be no different from the environment in an aircraft. Another consideration is the rate at which the pressure changes on-board an aircraft, but the Association have found no records of people with ITP suffering from a bleeding event during a flight owing to that rate of change in pressure.

ADVICE FROM ITP SPECIALISTS

The ITP Support Association regularly receive reports which indicate that some GP's and hospital clinicians are over cautious about the prospect of their ITP patients flying if they have a low platelet count. As long ago as 2004 Dr. Paula Bolton-Maggs, (then a leading childhood ITP specialist at The Manchester Royal Infirmary) commented as follows:

'I am frequently consulted over the issue of whether it is safe for children with ITP and low platelet counts (e.g. under 10) to go on holiday by air travel. I have consulted with other experts on ITP on this subject (Professor Sir John Lilleyman, Professor Adrian Newland, and colleagues in the USA) and we know of no evidence that there is any increased risk of bleeding relating to air travel.

This is acknowledged in our national ITP guidelines approved by the British Committee for Standards in Hæmatology (published in the British Journal of Hæmatology 2003; 120: 574–596) which contain the following statement: 'There is no evidence that air travel predisposes to bleeding in patients with ITP; there is no indication to treat the count prior to holidays other than to cover activities' (page 585 in the pædiatric section).

I have cared for several children who have gone abroad on holiday without any specific cover (unless they plan vigorous activities), including long haul flights and platelet counts less than 10-20. A holiday does not need to be cancelled for this reason. The risk of severe bleeding in children with ITP and low counts is low, and intracranial haemorrhage is very rare indeed (less than 1 in 500)'

ITP patients and parents can continue to be reassured by Dr Bolton-Maggs statement. Much of the overreaction to a low platelet count amongst health professionals or medical insurers seems to be due to inexperience of the condition. However, if you are prone to nose or mouth bleeds that require medical intervention you should consider whether you could cope with this mid-air.

OFFICIAL GUIDANCE ON ITP

In a document called *Joint Aviation Requirements, JAR–FCL 3, Flight Crew Licensing (Medical)* issued in 1997, it says "An applicant with idiopathic thrombocytopenic purpura (ITP) previously treated by splenectomy and with stable platelet counts for six months after therapy has been discontinued, may be considered." That is considered for certification as a pilot.

ITP does not merit a mention in any of the following:

The Civil Aviation Authority *Guidance for Health Professionals* (regarding fitness to fly).

The FAQ list from the CAA Aviation Health Unit

The *IATA Medical Manual* (of the International Air Transport Association).

The WHO document *International Travel and Health*

The Association makes no claim that flying with ITP is or is not "safe", but we have failed completely to find any evidence that it is not safe. We have not been able to point to any evidence specific to ITP and flying that indicates a risk. If any such evidence should exist, we have not found it.

CABIN AIR QUALITY

The Civil Aviation Authority publishes a guide called "*Cabin Air Quality - What is the quality of air on board an aircraft?*"

Cranfield University has carried out some independent research on cabin air quality. Their main conclusion was that there was no evidence of pollutants occurring in cabin air at levels exceeding available health and safety standards and guidelines. Levels observed in the flights that formed part of the study were comparable to those typically experienced in domestic settings.

OTHER MEDICAL CONDITIONS

There are medical conditions or considerations that do require advice before flying, these include:-

- Cardiovascular disease
- Deep vein thrombosis
- Respiratory disease
- Pregnancy
- Anaemia
- Ear, nose and throat conditions
- Post-surgical problems
- The effect of a condition on the comfort or safety of the other passengers
- Trauma/orthopaedics
- Neurological/psychiatric illness
- Contagious infectious disease
- Diabetes mellitus
- Alcohol or drug abuse
- Timing of regular medication

Most airlines will provide health advice where required. British Airways offer a service from their *Passenger Medical Clearance Unit*.

TRAVEL INSURANCE

Some travel insurance companies cover ITP without restriction but to make the policy valid, full details of the patient's ITP must be provided before the date of travel. The ITP Support Association publishes a Holiday Guide that includes a list of insurance companies recommended by its members.

CAN JETLAG BE PREVENTED?

(General advice given by Dr. David Roberts in his surgery newsletter and quoted with permission)

Jetlag is likely after any long haul flight that crosses more than four or five time zones. Jetlag causes reduced physical and mental performance, daytime fatigue, gastrointestinal problems and generalised malaise. The more time zones crossed the more severe is the jetlag.

- Exposure to bright light and eating at the correct time for your destination can help, as can doing interesting things until dark when you should try and go to sleep.
- The hormone melatonin has been reliably shown to prevent or reduce jetlag, and should be taken about 30 minutes before target bedtime on the day of arrival and for 2-4 more days.
- Some sleeping tablets which are short acting (Zolpidem) have been shown in trials to improve jetlag symptoms but at a price. (Side effects can include headache, dizziness, nausea, confusion and hangover.)
- Meals should be of modest size and plenty of fluid should be taken but try to avoid alcohol and caffeine as these dehydrate the body. This is likely to hinder adapting to your new time zone.

Advice from a BA airline pilot

If you are so tired you need to sleep during the day while adjusting to your new time zone limit your nap to no more than 90 mins. (Use your mobile phone or alarm clock to wake yourself up)

Editor's note

Only one melatonin product, Circadin, is licensed in the UK and to be used in people aged over 55 with sleep disorders. Other melatonin products are available from specialist stores and over the internet. To be sure of product purity always buy it from a large reputable chain store.

As Dr Roberts was giving general advice not aimed specifically at the ITP community we asked Professor Adrian Newland whether it was safe for people with ITP to take Zolpidem or Melatonin. He replied that although he had no first hand experience of Zolpidem he was not aware of any contraindication for ITP patients. Melatonin should not be a problem to ITP sufferers either, but if buying over the internet its safety would depend on the source, and from that point of view (rather than ITP) should be used with caution.