

Health advice for travellers with chronic illness

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SYNOPSIS

Older people and those with chronic illnesses are travelling overseas more than ever before. Basic but important considerations are adequate supplies of medication (carried in the hand luggage), a health summary and medication list. Travel is associated with increased risk of deep venous thrombosis. Exercises can be advised, but evidence is currently lacking on the benefit of aspirin or low molecular weight heparin for prophylaxis. In assessing lung disease and cardiac disease exercise tolerance is a guide to the patient's fitness for air travel. Vaccinations are important but care is needed when giving live vaccines to immunocompromised patients.

Index words: travel, deep venous thrombosis, vaccination.

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Introduction

Increasingly, older people and those with chronic illnesses are among the 3.2 million Australians who travel overseas each year.¹ Doctors, especially general practitioners, are called on to assess fitness for travel and provide travel health advice to these patients.

General advice

Travel, particularly long flights, is a stressful event, especially for older people. Planning the itinerary to minimise jet lag and preparing for the journey by being fit and well-rested beforehand are helpful. The traveller should be provided with a health summary and medication list. A Medic-Alert bracelet can be a good idea especially for those conditions which may cause unconsciousness. Travel insurance is very important, but people with chronic illnesses may need to pay a higher premium for pre-existing conditions and many insurers exclude all psychiatric problems. If medical assistance is needed overseas, the International Association for Medical Assistance to Travellers publishes a directory of English speaking doctors, and advice for travellers (web site www.sentex.net/~iamat/). In urgent situations people can seek help from the Department of Foreign Affairs and Trade 24-hour consular service.*

Immunisation

Vaccination requirements for older travellers are essentially the same as for younger people except that influenza and

pneumococcal vaccinations must also be considered. Influenza vaccine is indicated annually for those over 65 years of age and people with chronic diseases.² People going on trips where they will be in confined spaces with other travellers such as bus trips and cruise ships are at greater risk. Pneumococcal vaccine is indicated every five years for everyone over 65 years of age, people with chronic diseases and post-splenectomy.

Air travel

Mobility is important, as airline cabin staff are not permitted to assist with lifting, feeding, toileting or administering medication to passengers. If the traveller needs help with these functions they must be escorted. They may also need to request a wheelchair and a seat near the toilet. Taking sufficient supplies of medication for the whole trip is important and these should be carried in hand luggage. They are of no use if they are in the hold of the aircraft when needed or get lost with a misplaced suitcase. Increased fluid intake is helpful during the flight as this can lessen hypoxia and the confusion that this can cause, and it counteracts the dehydrating effect of low cabin air humidity. Water is the best fluid as tea, coffee and alcohol all act as diuretics and should be limited. Getting some sleep on long legs of the trip helps to prevent exhaustion. A neck cushion may help but sleeping tablets should be avoided in the elderly as they may worsen confusion.

The airlines have a Passenger Medical Information Form (MEDIF) which is used to provide information about requirements for travellers with medical problems. This form is available from travel agents and the medical departments of airlines. This information may be transmitted between airlines. If there is a concern about fitness to fly then some airlines such as Qantas have a medical department which can provide advice on an individual basis to the patient's doctor. Medical guidelines for air travel have been published by the Aerospace Medical Association.³

Policies on fitness to fly will vary between airlines and travellers need to check with their travel agent or airline. Airlines may be prepared to make special arrangements on an individual basis. Table 1 shows the policies that apply for Qantas for a number of common conditions (based on information supplied by Dr Ion Morrison, Qantas Airlines).

Prevention of deep vein thrombosis

There is an increased risk of deep vein thrombosis (DVT) during travel. A recent case control study⁴ found a history of

* Telephone number from overseas 61 2 6261 3305

recent travel was four times more common in patients admitted with venous thromboembolic disease than patients admitted for other reasons. An increased rate of DVT is evident after travel of four hours or more. Although the risk is higher in those with other risk factors (chronic disease, smoking, obesity, oral contraceptive pill, past DVT), travel related DVT also occurs in those without recognised risk factors. Currently there is a lack of evidence of benefit for prophylaxis with aspirin or low molecular weight heparin. Aspirin may be reasonable for low risk patients and low molecular weight heparin considered for moderate risk travellers.⁵ Airline passengers can be advised to exercise during flight – walk up the aisle every thirty minutes and during stop-overs – and avoid dehydration. Elevating the legs, where seating arrangements make this possible, and doing exercises will reduce dependent oedema. People should not fly after suffering a DVT until at least stabilised on anticoagulants. Airlines may require a longer period of anticoagulation.

Chronic lung disease

When an aircraft is cruising, cabin air has a partial oxygen pressure that is approximately 20–25% less than at sea level. This presents no problem to healthy people who, when breathing cabin air, will have an arterial oxygen (PaO₂) of approximately 70 mmHg and haemoglobin saturation of 90%. However, in some medical conditions this may be sufficient to produce tissue hypoxia.

The patient's exercise tolerance provides a guide to their fitness to fly. Dyspnoea at rest is generally a contraindication. If a person can climb a flight of 15 stairs and walk 50 metres (some authorities say 100 metres) without symptoms they

should not experience problems during the flight. People with poor exercise tolerance need further assessment preferably in consultation with a respiratory physician.

Further assessment involves respiratory function tests and measurement of arterial blood gases. If PaO₂ is more than 70 mmHg then supplementary oxygen is not needed. The arterial carbon dioxide (PaCO₂) is also important as supplemental oxygen may reduce respiratory drive in hypercapnic patients. People with lung disease should not only not smoke, but also avoid alcohol during the flight as this may worsen hypoxia.

Supplementary oxygen

If this is needed the airline must be informed well in advance and the rate of flow and delivery system specified. Most international airlines will insist that they supply the oxygen cylinder and there will be a charge for this. The patient's own cylinder may be acceptable to Australian domestic carriers. If a nebuliser is needed in flight it needs to be approved by the airline in advance.

Diabetes

During travel people with diabetes should increase their fluid intake, avoid alcohol and arrange appropriate meals. Blood glucose monitoring should be increased in frequency during travel. Patients should take oral hypoglycaemic drugs as prescribed according to the local time.

People with diabetes who are taking insulin may need to adjust their dose for east or west trips with time zone changes greater than four hours and consultation with a diabetes specialist may be needed. A detailed itinerary of the trip is helpful for planning the insulin regimen. One regimen suitable for people who are familiar with managing their diabetes is to monitor the pre-meal glucometer reading and dose with short acting insulin accordingly. Longer acting insulin can be added before sleep on long flights. The traveller then returns to their usual dose the morning after arrival.

It is important to have snacks on hand in case of delays to meal times. Travellers should not only carry insulin and other medications in their hand luggage, but also spare insulin in their suitcase or with a travelling companion. Insulin is stable for months at room temperature and should not be given to the airline crew to put in the fridge in case it is mislaid. Informing the travel company and wearing a Medic-Alert bracelet are wise precautions especially if travelling alone.

Cardiovascular disease

The most common cause of Australians dying overseas is coronary heart disease⁶, but it is also one of the most common reasons for dying at home. Most patients with stable cardiovascular disease can travel safely. Again assessment of exercise tolerance is helpful. If the person is asymptomatic during normal activity and can walk 50 metres or climb 15 stairs without symptoms then they should be able to cope with cabin air pressure without difficulty. People with severe angina or congestive cardiac failure who are symptomatic on

Table 1

Recommended medical exclusions from international air travel

Condition	Recommended exclusion
Myocardial infarction	Not within seven days. Medical information form required if travelling within 21 days
Stroke or transient ischaemic attack	Not within three days. Medical information form required if travelling within 10 days
Congestive cardiac failure	Individual assessment – failure needs to be controlled
Arrhythmia	Must be stable
Deep vein thrombosis	Individual assessment – patient needs to be stabilised on anticoagulants
Anaemia	Not fit if Hb <7.5 g/dL. Medical information form for Hb 7.5–10.5 g/dL. Not within 10 days of sickling crisis
Pneumothorax	Not within two weeks following full inflation of lung
After surgery	Not within 5–7 days depending on circumstances <ul style="list-style-type: none"> • appendectomy, five days • angioplasty, not within three days, with stents five days • coronary bypass, not within 10 days

minimal exertion need oxygen supplementation (usually 2 L or 4 L per minute either intermittently or continuously). Referral to a cardiologist for advice and contacting the airline before travel should be considered.

As well as a letter summarising their medical problems and medications, people with cardiac disease should also take a copy of a recent electrocardiograph. Patients with pacemakers should be advised to inform airport staff of its presence as electronic security screening may interfere with programming of the device.

Immunocompromised patients

Travellers who are on short courses of corticosteroids (less than two weeks) should be treated as immunocompetent. Patients with surgical or functional asplenia are at increased risk of malaria and ideally should avoid travel to malaria endemic areas.

HIV infection

People with HIV have both increased susceptibility to infection and an altered response to vaccination. Caution is needed with live vaccines as these may cause progressive infection. Current National Health and Medical Research Council (NHMRC) guidelines² are that yellow fever and live attenuated typhoid vaccination are contraindicated. Inactivated poliomyelitis vaccine (IPV) is preferable to oral polio vaccine. Measles, mumps, rubella vaccine has been used in HIV infected children without evidence of harm, but has caused disease in adults.⁷

Vaccines without live organisms such as hepatitis A, polysaccharide typhoid vaccines and hepatitis B are safe but efficacy may be lessened. Other killed vaccines for travel are also safe. The NHMRC recommendation is to give double the normal dose of hepatitis B vaccine at the normal dosage intervals. As well as vaccination, passive protection against hepatitis A with human immune globulin may be indicated. Annual influenza vaccination is recommended. Response rates in HIV are around 80% and less than 50% in those with AIDS.⁷ Pneumococcal vaccine is also recommended for HIV infected adults and children over two years.

Conclusion

In travellers, as in the rest of the community, respiratory disease, cardiovascular disease and diabetes are common chronic illnesses. The ability to climb a flight of 15 stairs and walk 50 meters without symptoms is an indication that a patient with cardiac or respiratory disease will cope with the relative hypoxia of air travel. Travellers with chronic illness and their doctors need to plan well in advance of their journey. Issues to be considered include the itinerary, travel insurance, fitness for travel, immunisations and medications. Providing the traveller with a health summary and medication list can be helpful.

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Self-test questions

The following statements are either true or false (answers on page 111)

9. At cruising height modern jets are pressurised to ensure the partial oxygen pressure is the same as at sea level.
10. Patients with HIV should not be immunised with vaccines made from killed organisms.

Therapeutic Guidelines: Psychotropic Version 4, 2000

The new edition of Therapeutic Guidelines: Psychotropic has just been published.

All chapters have been completely revised and extensively updated.

The availability of new antidepressant and antipsychotic therapies, as well as the new drugs used in alcohol and drug disorders, has resulted in significant changes in the recommendations in the following sections:

- major depression, including post natal depression
- the acutely disturbed patient
- alcohol and drug disorders
- schizophrenia
- disorders usually first diagnosed in childhood and adolescence.

New sections have been added on informed consent, electroconvulsive therapy, eating disorders and sources of psychotropic information. An appendix of the key references has also been added.

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