

Jet Lag & the Medical Implications of Air Travel

©




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 Chief Medical Officer
 IPN/Kinetic Health




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Who We Are

IPN works in partnership with independent practitioners across Australia. Our doctors work with, not for IPN. We appreciate that "one size doesn't fit all" and endeavor to tailor a business partnership that is mutually beneficial for both you and IPN.



We understand the issues and questions you may have in considering a move to Australia to practice medicine and assure you we will make the transition as smooth as possible for **you** and your family. We have a dedicated team of IMG recruitment professionals who will work with you, before, during and after your move to Australia.



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What We Offer

Just like you, we are passionate about medicine, lifestyle and location. This is reflected in the commitment we make to you as a doctor.


For Our GPs

- Well appointed and maintained consultation and treatment rooms;
- A supportive team of nursing and practice staff;
- Operational and business development support from on the ground business managers
- Access to corporate services including finance, learning and development, marketing, human resources and property management.

For Our IMGs

- Employer sponsored Visas and support with the immigration process;
- Options for relocation and incentive/lump sum payments;
- Assistance with medical board registration;
- Excellent peer support networks for you and your family
- Comprehensive orientation program on your practice, IPN and healthcare in Australia.

"IPN promises you the best experience practicing medicine in Australia has to offer."



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Where We Are



2011/2012 will also see the centres on Mid North Coast NSW as well as South Coast NSW join the IPN network.



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Current Vacancies

NSW

- Penrith x 2 centres
- Upper Mountains, Katoomba
- Liverpool

QLD

- Barkly, Mt Isa
- Deception Bay
- Morayfield
- Mt Isa Minesite
- Brisbane Airport

SA

- Port Augusta
- Fountain Valley, Happy Valley
- Golden Way, Golden Grove

VIC



- Camberwell Road, Hawthorn East

TAS

- Greenpoint, Bridgewater
- Glenorchy
- Queenstown
- Rosebery
- St Helens


WA

- Jindalee
- Newman
- York
- South Hedland
- Karratha





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Topics




- Physiology
- Medical Conditions associated with flight
- Pre-flight screening medical fitness to fly
- Advise on reducing health risks
- Managing chronic medical conditions in flight
- Jet Lag
- Airline Medical Clearance
- Case Studies




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Physiology



- Lowered pO₂
- Lowered Cabin pressure
- Dry cabin air (10-20% rel humidity)
- Dry Skin & Eyes
- Noise & Vibration
- Motion Sickness



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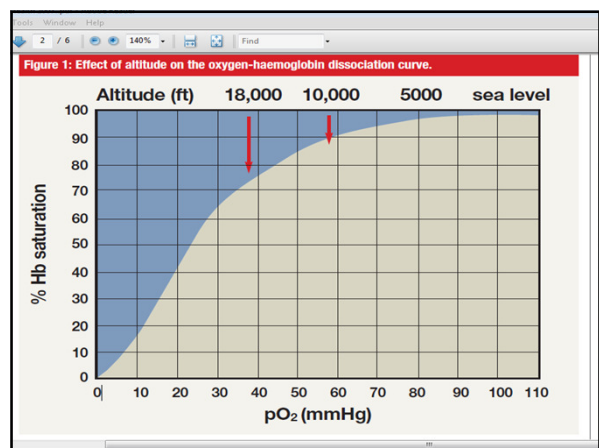
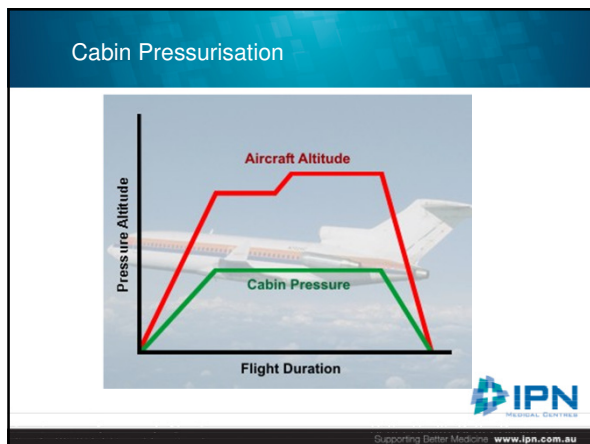


Table 1: General effects of hypoxia at different altitudes

Altitude (feet)	% HbO ₂ sat	Symptoms
0-10,000	98-90	Decrease in night vision, decreased ability to perform complex new tasks
10,000-15,000	90-80	Drowsiness, poor judgment, headache, reduced work capacity, poor co-ordination
15,000-20,000	80-70	Loss of self-criticism, decreased skill levels, impaired vision, loss of peripheral vision, decreased colour perception, poor co-ordination, bad handwriting, decreased short-term memory, marked changes in emotional state (euphoria, belligerence, moroseness). Also, symptoms due to hypercapnia, such as lightheadedness, paresthesiae and tetany
20,000-25,000	70-60	Accentuation of all symptoms, myoclonic jerks, convulsions, circulatory collapse, death

*Reproduced with permission from Edith Cowan University course on aviation physiology.




Cruising Cabin Altitude

Altitude	Po ₂	Hb % Saturation
2500 feet	90	99%
5000 feet	80	97%
7500 feet	70	95%

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Medical Conditions Associated with Flying



- Hypoxia
- Barotrauma
- Decompression Illness – “Bends”
- Cabin Fever - “Aerotoxic Syndrome”
- Jet lag

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Medical Conditions Associated with Decompression



Explosive < 0.5 sec
Environmental effects - Noise, Debris, Wet cold fog
Body - Lung damage < 0.2 sec; Ear/Sinus/Gut barotrauma; Bends; Air embolus



Rapid > 0.5 sec - no lung damage

Subtle




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Time of Useful Consciousness






- 18,000 feet - 20 minutes
- 22,000 feet - 10 minutes
- 25,000 feet - 3 minutes
- 28,000 feet - 2 minutes
- 30,000 feet - 1 minute
- 40,000 feet - 15 seconds
- 50,000 feet - 5 seconds




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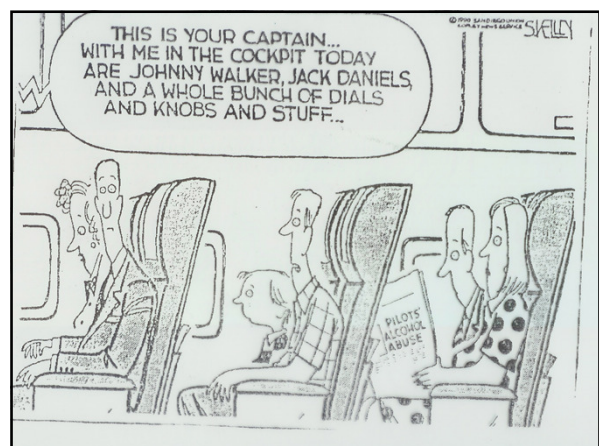
Emergency Oxygen Drill [EOD]


- 5 second mark - reach for Oxygen mask
- 10 second mark - check all oxygen equipment; 100% Oxygen delivery (maximum flow rate)
- 15 second mark - descent to <10,000 ft
- 20 second mark - PAN PAN emergency




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Case 1 – ambitious 30 year old middle manager

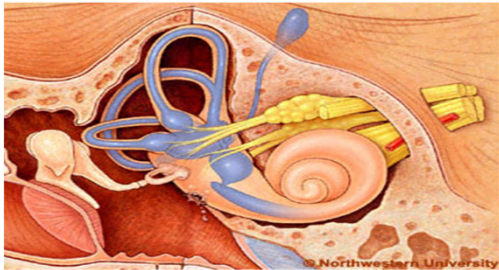



- BNE –PER : PER- BNE : 5 hrs each way
- Flew across for Job Interview
- Mildly unwell on landing
- Successful interview and proceeds to Preemployment Medical next day
- 24 hrs after arrival fever, dull tympanic membranes, rhinopharyngitis and ear drums would not move with valsalva
- Adamant she needed to return home on the 'red eye' that night - advised formally this was risky
- On descent acute left >right ear pain, nausea and dizziness that persisted for several weeks following.
- Referred acute ENT assessment.



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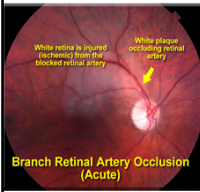
Case 1 – Round Window Rupture


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Table 2: Types of barotrauma — frequency and clinical effects	
ght)	Otic barotrauma/barotitis media <ul style="list-style-type: none"> ■ Common ■ Involves rupture of the ear drum and bleeding into the middle ear ■ A possible complication is round-window rupture, which causes persistent vertigo and a chronic labyrinthine fistula ■ Permanent sensorineural hearing loss is a rare complication after otic barotrauma and is attributed to rupture of either the stapediovestibular ligament or the round window, with the creation of a perilymph fistula
	Sinus barotraumas (aerosinusitis, barosinusitis) <ul style="list-style-type: none"> ■ Uncommon and variable in nature ■ May cause severe pain and haemorrhage into the sinus to relieve pressure. A rare complication is pneumocephalus, which usually presents with headache, nausea, vomiting and vertigo, with the most specific sign being 'bruit hydroaérique' — a splashing sound heard only by the patient on postural change
	Barodontalgia (aerodontalgia) <ul style="list-style-type: none"> ■ Uncommon ■ A specific tooth is painful with descent ■ Often associated with inflammation of the tooth pulp (pulpitis)
	Pulmonary barotrauma/overpressure accidents <ul style="list-style-type: none"> ■ Very uncommon ■ Presents as pneumothorax (shortness of breath and chest pain), surgical emphysema (crepitus beneath the skin of the neck) or cerebral arterial gas embolism (stroke symptoms)

Case 2 – blurred vision after long haul flight

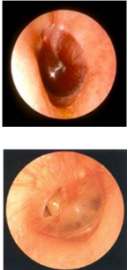


- 25 year old female with Eisenmenger's syndrome NYHA Gd II & 2nd Polycythaemia
- Rx monthly venesections, hydralazine, aspirin
- Haematologist advised venesection to ensure Hct 0.52 2/7 before flight WLG –AUCK-LAX – OHARE & antiembolism stockings
- 24 hrs after arrival in Chicago blurred vision left eye & left CRAO. Rx warfarin with return journey to include flights no longer than 6 hours
- Permanent minor residual visual defect.
- Dehydration was thought to be the most significant modifiable cause



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Otic Barotrauma



Check both ears for easy movement of the ear drum following valsalva or if you have a tympanometer for a normal tympanogram.

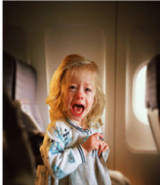
If your patient can equalise without difficulty and can hear the opening pop and/or the ear drum can be seen to move easily with a valsalva they are medically fit to fly.

It is best not to fly with a cold. For pilots and aircrew with a higher level of responsibility it is mandatory that they do not fly or pilot an aircraft if they may endanger the safe operation of the aircraft. You should issue a medical certificate




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Middle Ear Clearing Techniques




- Swallowing, chewing, yawning or forward movement of the lower jaw.
- Infants, feeding or giving a pacifier (dummy) to stimulate swallowing may reduce the symptoms
- Inhaling menthol dropped into tissue or using nasal decongestants such as otrivine may help a little 10 minutes prior to descent of the aircraft. However this should not be recommended as a guaranteed method to combat any risk of barotrauma
- Toynbee or Frenzel manoeuvres




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Pre-flight screening medical fitness to fly




- Detailed air travel history
- Patient expectations of air travel and their concerns e.g. culture shock
- Risks for barotrauma ; Risks & Rx DVT
- Jet lag
- Risks for STI
- Dry skin and eyes
- Travel Vaccinations
- Medication
- Alcohol
- Travel Medical Insurance
- Managing chronic medical conditions in flight
- Airline Medical Clearance




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DVT Risk Factors



Risk category	Relevant risk factors	Suggested prophylaxis
Minimal risk	Age < 40; otherwise fit and healthy	General advice
Low risk	Age > 40; obesity; active inflammation; minor surgery within 3 days	As above ± graduated compression stockings
Moderate risk	Varicose veins; poorly controlled heart failure; MI within 6 wks; oestrogen therapy (including oral contraception); polycythemia; pregnancy/puerperium; lower limb paralysis/trauma within 6 weeks	Consider aspirin if no c/t ± graduated compression stockings
High risk	Previous VTE; known thrombophilia; major surgery within 6 weeks; previous stroke; malignancy; family history VTE	As above but consider LMW heparin in place of aspirin




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DVT Risk Factors


Definition	Recommendations	Quality of evidence*
Low risk Flight time less than 8 h or distance less than 5000 km	Avoid constrictive clothing around waist and lower extremities; avoid dehydration; move about cabin several times or do calf-stretching exercises	Grade 1C
Moderate risk Flight time more than 8 h or distance more than 5000 km, and obesity, large varicose veins, pregnancy, hormone-replacement therapy, tobacco use or oral contraceptives, or relative immobility	Low-risk measures and: wear properly fitted below-knee compression stockings providing 15-30 mm Hg of pressure at the ankle; aisle seating	Grade 1C and grade 2B
High risk Flight time more than 8 h or distance more than 5000 km, and: history of previous venous thromboembolism; hypercoagulable state (eg, factor V Leiden); major surgery 6 weeks before air travel (including hip or knee arthroplasty); known malignancy	Moderate-risk measures and: low-molecular-weight heparin injected before departure in individuals who are not on warfarin	Grade 1C and grade 2B

Data are based on references 38, 40, 41, 51-53, and 57. *Grade 1C is a strong recommendation, but existing evidence is of low quality and benefits clearly outweigh risk or burden. Grade 2B is a weak recommendation derived from


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DVT prophylaxis




- 1/250K passengers > 65 die from flight related PE
- Maintain good hydration
- Best avoid alcohol
- Regular calf exercises
- Exercise during flight & stopovers
- Aisle seat
- Graded compression stockings
- *Low dose aspirin* 2 hours before takeoff and 24 hours later ↓ DVT risk by 1/3
- *Low MW Heparin* e.g. Dalteparin 5000IU sc 2 hours prior takeoff ↓ DVT risk by 2/3 or Enoxaparin 40mg sc


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Diabetes




1. Ensure adequate equipment supplies and medication e.g. testing strips; batteries for glucometer etc.
2. Split insulin vials, if possible, between two different carry on bags in case one is lost or stolen.
3. Insulin should not be carried in stowed baggage as this may be exposed to freezing temperatures which may cause the insulin to denature. The bags may also be lost.
4. Blood glucose monitoring equipment should also be carried in hand luggage for the same reasons as 3 above.
5. Some IDDMs prefer a seat near a toilet for privacy of injections although with pen devices this is often unnecessary.
6. Increasing fluid intake, avoiding alcohol and arranging appropriate meals is important


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Diabetes



7. Diabetic meals are often designed for NIDDMs and may contain insufficient amounts of carbohydrate for IDDMs who may risk hypoglycaemia. The "vegetarian meal" usually contains pasta based or rice dishes which may be more suitable. It is important to have snacks on hand and rapid acting sugar to cover unforeseen circumstances such as delayed meals due to turbulence etc.
8. Oral agents should be taken at the usual times
9. Insulin – diabetics on 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. The traveller then returns to their usual dose the morning after arrival.
10. Blood glucose monitoring should be increased in frequency during travel.
11. Medic Alert bracelet and brief medical summary are invaluable, particularly when travelling alone.

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Diabetes in flight Insulin

Usual Regimen	Day of Departure/Travel (East bound)	First Day at Destination
Multiple injection regimen with pre-meal soluble insulin and overnight intermediate insulin.	Usual premeal soluble insulin. If less than 4 hours between meals this requires a slightly reduced dose of the third soluble injection (by 1/3) and additional carbohydrate (ie. extra large evening snack if one meal missed) and a reduction (1/3) in overnight intermediate insulin to avoid nocturnal hypoglycaemia.	Return to usual insulin regimen if you have overcompensated with the reduction of the evening intermediate insulin. Additional soluble insulin (1/3 of usual morning dose) should be considered if fasting blood glucose > 14 mmol · L ⁻¹ (250 mg · dl ⁻¹).


	Day of Departure	First Morning at Destination	10 hr After Morning Dose	Second Day at Destination
Two-dose schedule	Usual morning and evening doses	2/3 usual morning dose	Usual evening dose plus remaining 1/3 of morning dose if blood sugar over 14 mmol · L ⁻¹ (250 mg · dl ⁻¹)	Usual two doses
Single-dose schedule	Usual Dose	2/3 usual dose	Remaining 1/3 of morning dose if blood sugar over 14 mmol · L ⁻¹	Usual dose

Table 5: Insulin adjustment when travelling East across Multiple Time Zones
(From Aviation, Space and Environmental Medicine Vol 74 No 3 Section II May 2003)




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Jet Lag




- Temporary circadian rhythm disorder associated with long haul flights across time zones
- Desynchronisation between the body clock within the suprachiasmatic nucleus of hypothalamus
- Daytime fatigue, ↓ appetite, constipation, ↓ psychomotor coordination & cognitive skills
- Westward travel lengthens the day and causes phase delay in circadian rhythm
- Eastward travel shortens day and causes phase advance
- Synchronization takes 1/7 for every time zone crossed westward or 1.5 days for every time zone crossed eastward



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Jet Lag treatment



Ramelteon


- New melatonin-receptor agonist with no abuse potential
- Indication for treatment of primary insomnia in individuals of 55 years of age or older
- Untested for circadian-rhythm disturbances

Phototherapy

- Involves intentional exposure or avoidance to bright light to hasten re-entrainment
- Efficacy is questionable
- Often impractical or inconvenient

Pre-flight sleep hygiene

- Westbound: go to sleep 1hr later than usual and be awake 1hr later than usual 3 days before travelling
- Eastbound: go to sleep 1hr earlier than usual and be awake 1hr earlier than usual 3 days before travelling



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Jet Lag treatment

Agomelatine


- New dual melatonin-receptor and serotonin 5-HT2C receptor agonist
- Efficacious for symptoms of depression and sleep-wakefulness disorders
- Not tested for jet lag, but could be more useful for individuals having westward-travel jet lag, who commonly show symptoms of depression

Benzodiazepines

- Some reported efficacy in sleep quality (eg. temazepam)
- Some reported efficacy in other circadian-rhythm or sleep parameters


Caffeine

- Poorly studied
- Slow-release caffeine showed faster re-entrainment (measured physiologically)



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Jet Lag treatment

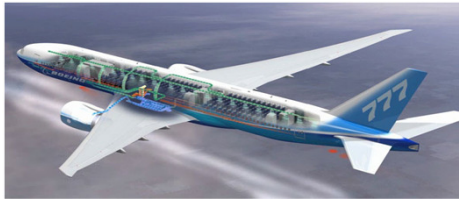


- o Cochrane meta analysis 10 trials concluded:
0.5-5 mg melatonin at the desired destination bedtime is effective for reducing or preventing jet lag
- o Herxheimer A; Petrie KJ Melatonin for preventing and treating jet lag. Cochrane Database Syst Rev 2001:CD001520




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Aerotoxic Syndrome




- o Cabin air is routinely drawn off engines and supplied to aircraft cabins (not so on the Airbus A380).
- o If seals within the engine compartment are not secure, engine oil can leak and the products of this pyrolysis can leak into the cabin air supply.
- o These products include tricesyl phosphate of which the tri ortho isomer is an organophosphate cholinesterase inhibitor capable of inducing a delayed neuropathy




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Aerotoxic Syndrome

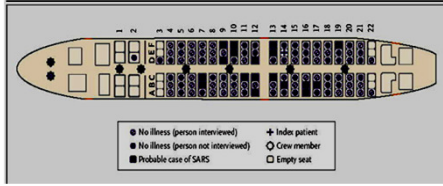


- o Symptoms include odours described as 'dirty socks' or 'musty', headaches, nausea, metallic taste in the mouth, tight chest, dry stinging eyes, dizziness, blurred vision, difficulty concentrating and temporary paralysis (which has been reported in pilots).
- o Longer term reported symptoms include memory loss, chronic fatigue; neurological and respiratory problems.




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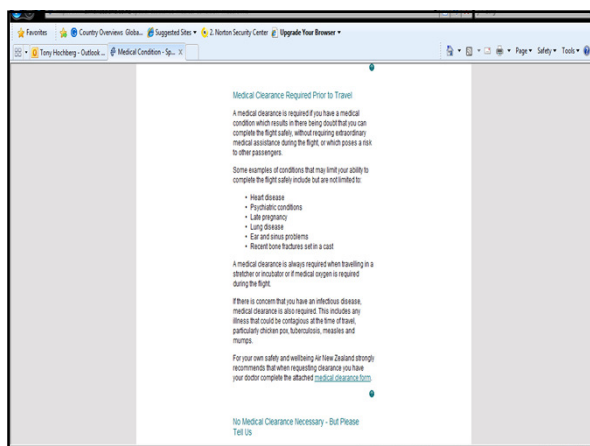
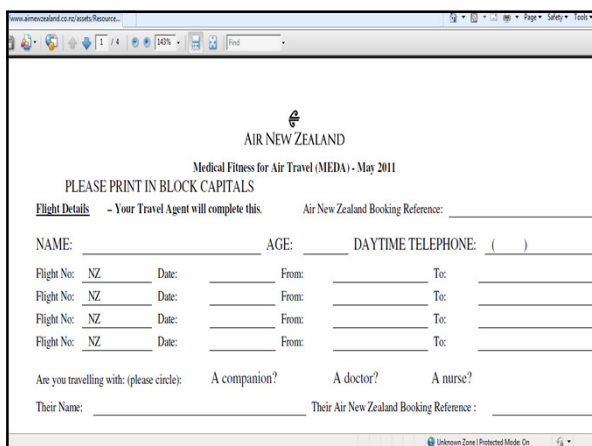
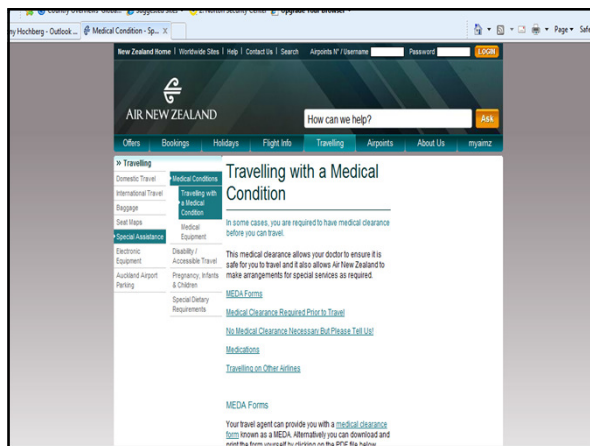
Communicable Diseases



- o H1N1 Swine Flu; H5 N1 Avian influenza; SARS; Multi Drug Resistant Tuberculosis and Polio have all been transmitted inflight



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Code/Medical Condition	Unacceptable for Travel	Medical Clearance Required	Comments
Day of surgery/episode = Day 1			
Category 1 - Cardiovascular and Circulatory Conditions			
(1A) Heart attack (myocardial infarction)	Within 7 days	Within 8-21 days	Unacceptable for travel if supplemental oxygen is required during the clearance period
(1B) Angina	Unstable angina (angina which has recently deteriorated) or angina at rest	Not required if the condition is stable and controlled*	Supplemental oxygen should not be required to control the angina at rest * Controlled = able to walk 50 m on level ground at moderate pace without chest pain or breathlessness
(1C) Significant cardiac arrhythmia	Within 7 days	Within 8-21 days	Does not include arrhythmias considered by the treating medical practitioner to be benign
(1D) Heart failure (congestive cardiac failure)	If uncontrolled, requiring supplemental oxygen at rest or	Not required if the condition is controlled*	* Controlled = able to walk 50 m on level ground at moderate

Category 3 - Respiratory Conditions			
(3A) Pneumothorax (collapsed lung) occurring spontaneously or as a result of chest trauma	Within 6 days of full lung expansion	Within 14 days of full lung expansion	Lung expansion should be assessed by chest X-ray. Does not include pneumothorax resulting from open chest or cardiac surgery, where those provisions apply
(3B) Open chest surgery (non-cardiac)	Within 13 days	Within 14-21 days	Refer (1F)
(3C) Chronic lung diseases (COPD, emphysema, chronic bronchitis)	Where there has been a significant deterioration within 48 hours or if there is cyanosis at rest or if oxygen saturation < 85% while walking	Where supplemental oxygen is required during the flight or if unable to walk 50 metres, at slow pace, without supplemental oxygen	Supplemental oxygen provisions may also apply. Refer (8D) and Note 5

Guests with Anaphylaxis

Virgin Australia is keen to ensure that flying is an enjoyable experience for all of our guests including those with allergies.

If you have a severe allergy or anaphylaxis you must make your booking through our Guest Contact centre (Internet discount fare will be honoured)

A medical clearance form, a letter from a medical practitioner or a management plan signed by a medical practitioner is required if the guest believes they suffer from this condition, and they do not have the appropriate medication.

Failure to carry either appropriate medication, a management plan signed by a medical practitioner, a letter from a medical practitioner or a medical clearance form may result in boarding being denied.

Food sold or served on board the aircraft may contain traces of nut products and other allergens. We are unable to prevent other guests from carrying on board and consuming nut products and other allergens.

Virgin Australia cannot guarantee an allergy free environment onboard our aircraft.

If you have a life threatening allergy you must carry appropriate medication on your flight, have it easily accessible and be able to administer it if required. Your medication should be accompanied by a doctor's certificate to eliminate any difficulties in passing through security.

Under no circumstances will Virgin Australia accept any responsibility for any adverse reactions you may suffer whilst flying.

QANTAS Spirit of Australia

Home Plan Book Fly Frequent Flyer Business Solutions About Qantas Help

Flight Status Baggage Specific Needs Seat Selection Check-in At the Airport The Qantas Club Travel Classes Onboard Qantas A350 The Qantas Difference

Specific Needs

- Children and Infants
- First Time Flyers
- Inflight Assistance
- Medical Assistance
- Travel With An Escort Or Carer
- Mobility Assistance
- Deaf or Hearing Impaired
- Blind or Vision Impaired
- Service Dogs
- Stretchers
- Disability Access
- Facilities Plan

Medical Assistance

Medical Clearance

- Communicable Disease and Infection
- Deep Ven Thrombosis (DVT)
- Scuba Diving & Decompression Sickness
- Insurance

Medical Clearance

If you are ill or injured and are travelling or returning home for treatment or rehabilitation, a medical clearance may be required. A medical clearance helps Qantas to ensure your comfort, health and safety and facilitates the provision of any specialised equipment or assistance that may be necessary.

When is a medical clearance required?

- If you have a medical condition that meets the criteria listed in detail in the [Travel Clearance Form](#).
- If you or your doctor are unsure about your fitness to travel.
- If you require supplemental therapeutic oxygen.
- If you require medical equipment in flight e.g. stretcher, humidors, ventilators, defibrillators, oxygen concentrators etc.

Note: Continuous Positive Airways Pressure (CPAP) devices do NOT need a medical clearance. Arrangements can be made by downloading and completing the [CPAP Clearance](#) form and faxing to +61 (2) 9691 0666. This form also lists the current CPAP devices authorised for use on Qantas aircraft.

Scuba Diving & Decompression Sickness

To minimise the risk of decompression sickness, often known as "the bends", if you who have been scuba diving within 24 hours of your flight departure you will not be permitted to travel.

If you have suffered decompression sickness prior to travel you will require medical clearance for travel commencing within 10 days of completing treatment.

Pregnancy

Flights 4 hours duration or greater

For routine pregnancies, you can travel up to the end of the 36th week for single pregnancies and the end of the 32nd week for multiple pregnancies (e.g. twins).

Medical clearance is required if you are having complications with your pregnancy (that is, if the pregnancy is not routine).

Flights less than 4 hours duration

For routine pregnancies, you can travel up to the end of the 40th week for single pregnancies and the end of the 38th week for multiple pregnancies.

Medical clearance is required if you are having complications with your pregnancy and it is not a routine pregnancy.

Medical Certification

After 28 weeks, you need to carry a certificate or letter from a registered medical practitioner or registered midwife confirming:

- the estimated date of delivery;
- whether it is a single or multiple pregnancy;
- that the pregnancy is a routine pregnancy and that there are no complications with the pregnancy.

The certificate or letter must be available on request and be carried with you at the airport and during the flight in your cabin baggage.

Medical Clearance

Medical clearance is required if the pregnancy is not routine and you are experiencing any complications with your

Medications

If you are taking medications, make sure that you have enough for your trip and carry all medications in your carry on baggage. Before taking any medications overseas, you should:

- contact the embassy of the country/countries you are visiting to ensure the medication is legal in that country;
- carry or enclose with the medication a letter from your doctor, with details of the medication, how much you will be taking with you, and stating that the medication is for your personal use;
- leave the medication in the original packaging so it is clearly labelled identifying the medication, manufacturer's name or pharmaceutical label, along with your name and dosage.

You should note that it is illegal to take Pharmaceutical Benefits Scheme (PBS) subsidised medication out of Australia for reasons other than for personal use. For more information visit the [Australian Border Force](http://www.border.gov.au) website.

Generally, a visitor to Australia may bring up to 3 months supply of their prescribed medication without the need for an import approval or permit. However, some medications are subject to permits or import licence approval. The [Therapeutic Goods Administration \(TGA\)](http://www.border.gov.au) issues import approvals to Australia for drugs which require a permit or import licence or for medications exceeding 3 months supply.

Insulin on board

Qantas is not able to refrigerate insulin or other drugs on board. If your medication requires refrigeration you can carry on board a small cooler. The cabin crew can replenish the cooler with ice as required.

Allergies/Anaphylaxis

Because of the wide variety of possible allergens to which a customer may be sensitive, and the fact that other Qantas customers may bring allergens with them, Qantas cannot guarantee an allergy free environment onboard or in our lounges. For this reason, we recommend that you carry any allergy medication you may need with you, including adrenaline auto injectors, in the cabin of the aircraft. Keep them within easy reach and be ready to administer the medication if necessary. See the [Allergic Assistance](#) page for more information about food allergies and the Qantas Peanut Policy.


Hypodermic Needles

If you are carrying hypodermic needles you will need to declare them at the screening point. Under Australian law (and in accordance with international practice) hypodermic needles are classified as prohibited items within an aircraft cabin unless you can demonstrate a bona fide need to have them in your possession. You are therefore required to carry documentation and identification to confirm that this need exists, and to declare this for a medical condition.

Diagnosis/ Condition	Not suitable for travel	Qantas travel clearance form required Travel will be suitable in most cases if treating doctor clears for travel.	Comments for treating doctor's information
Respiratory Conditions			
Pneumothorax (air in the cavity around the lung due to a puncture wound or spontaneous) Haemo-pneumothorax (Blood and Air around the lung)	7 days or less after full inflation	8 - 21 days after full inflation	Must have no air in chest cavity on chest X ray
Chest surgery	14 days or less	15 - 28 days, experiencing symptoms or complications	e.g. lobectomy, pleurectomy, open lung biopsy
Pneumonia	Acute, with symptoms	With in 7 days of resolution - complications or on going symptoms	Fully resolved or, if X ray signs persist, must be symptom free
COPD, emphysema, pulmonary fibrosis,	Cyanosis on the ground despite supplementary	If unstable or poor exercise tolerance of less	Supplementary oxygen may be required in flight. Altitude

Diagnosis/ Condition	Not suitable for travel	Qantas travel clearance form required Travel will be suitable in most cases if treating doctor clears for travel.	Comments for treating doctor's information
Ear nose and throat			
Otitis media and sinusitis	Acute illness or with loss of Eustachian function		Must be able to clear ears
Middle ear surgery	9 days or less	10 - 14 days	Must be able to clear ears
Tonsillectomy	6 days or less	Only if complications	
Wired jaw	If travelling alone	If wired	Must have escort/carer with wire cutters
Psychiatric			
Acute psychosis (e.g. mania, schizophrenia, drug induced)	If unstable	Within 14 days of unstable episode or hospitalization	Providing stable for 7 days. Travel may be approved with suitable medical escort/carer
Eye conditions			
Penetrating eye injury	6 days or less	7 - 14 days.	Any gas in globe must be reabsorbed
Cataract surgery	Less than 24 hours	1 - 3 days	

Jet Lag & the Medical Implications of Air Travel



Questions?

Presenter: Assoc Prof Dr Tony Hochberg

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kinetic HEALTH Inflight Medical Emergencies

- Vasovagal - 21.5%
- GI -15.4%
- Respiratory -10.2%
- Cardiac - 9.65
- Neurologic - 8.7%

Medaire stats 2002

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kinetic HEALTH Inflight Medical Emergencies

- Researchers determined that over five years, one large Hong Kong-based airline logged 4,068 in-flight medical emergencies among paying passengers. That translated to a rate of about 12 emergencies per "billion revenue passenger kilometers" -- or the rate per paying passenger per billion kilometers traveled.
- Medical emergencies requiring a flight diversion were much less common, at 46 over five years. Thirty passengers ultimately died, with heart attacks and other cardiac complications accounting for two-thirds of those deaths

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- Age was one of the key factors in the likelihood of emergencies leading to flight diversion or resulting in death, the study found. Passengers in their 70s and beyond had the highest risks -- not surprisingly, due to their higher rates of chronic diseases.
- Pregnant women were also at risk, with obstetric complications having the highest rate of flight diversion -- at about 11 percent -- than any other type of medical emergency.

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- That study also tracked the rates of different types of emergencies, finding that syncope (loss of consciousness) accounted for just over half of the incidents. Gastrointestinal ills were the second-most common cause, at 9 percent, followed by heart problems, at 5 percent.
- Overall, 3 percent of all emergencies required a flight diversion, with the most frequent causes of diversions being heart attacks, brain hemorrhages and epileptic seizures.
- Those researchers concluded that while in-flight medical emergencies are "generally rare," they can have significant consequences -- for fellow passengers and flight crew as well.

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