

## Jet lag

Jet lag is a combination of fatigue and other symptoms caused by travelling abruptly across different time zones. Another name for jet lag is 'time zone change syndrome'.

The body is synchronised to night and day by the action of sunlight through brain chemicals or neurotransmitters, especially melatonin. Many bodily processes are timed on this 24-hour physiological 'clock'. These include temperature, hormones, digestion, heart rate, blood pressure and brain states. This changing rate of activity over each 24-hour period is called the circadian rhythm ('circadian' means approximately one day).

Travelling to a different time zone disrupts the circadian rhythm. Lack of sleep before and during travelling can also contribute to jet lag. There is no cure for jet lag, but its effects can be reduced with careful planning.

### Symptoms of jet lag

The symptoms of jet lag include:

- Fatigue
- Sleepiness
- Digestive upsets
- Impaired judgement and decision making
- Memory lapses
- Irritability
- Apathy.

### Flying east or west makes a difference to jet lag

Your circadian rhythm (body clock) is less confused if you travel westward. This is because travelling west 'prolongs' the body clock's experience of its normal day-night cycle (the normal tendency of the body clock in most of us is slightly longer than 24 hours). Travelling eastwards, however, runs in direct opposition to the body clock. If you suffer badly from jet lag, it may be worthwhile considering a westerly travel route if possible.

### Strategies to reduce the impact of jet lag

There is no evidence that popular strategies, such as fasting or eating complicated diets, have any effect. Suggestions to reduce the impact of jet lag while travelling include:

- Make sure you have had enough sleep before you leave. Sleep deficit or 'debt' will make jet lag worse.
- If you are flying westward, try to go to sleep as late as possible for two to three days before you leave. This will make it easier to adapt to the new location. For example, if you are flying from Melbourne to London, try to go to sleep at 1–2am for the two to three days before flying out from Melbourne.

During the flight:

- Limit or avoid alcohol and caffeinated drinks.
- Drink plenty of water.
- Try to nap whenever you feel sleepy.
- Eat small meals frequently, choosing lighter foods like fruit and vegetables.

- Wear loose, comfortable clothing.
- Whenever possible, walk around the cabin.
- When you sleep on the plane, try to plan sleep as if the time is that of the destination.
- Wear earplugs.
- Wear an eye mask.
- Maximise comfort with a pillow supporting your neck and head.

## Adjusting to the new time zone

The internal body clock of a jet-lagged traveller is out of synchronisation with the new time zone and is still operating on 'home time'. Different bodily processes adjust to the new time zone at different speeds, which adds to the confusion. Depending on the individual, the body needs anywhere from a few days to a few weeks to acclimatise to the new time zone.

## Sleep and your new time zone

Suggestions on adjusting to your new time zone include:

- Expose yourself to daylight or, if this is not possible, bright light to help 'reset' your body clock. The stimulus to reset the clock is light entering the eyes, especially the blue spectrum of light.
- Drink caffeinated drinks in moderation during the day.
- Avoid alcohol or caffeinated drinks for a few hours prior to sleep at night.
- Try to mimic your usual bedtime routine.
- Use relaxation techniques.

## Alcohol, medications and jet lag

Using medication is controversial and should be discussed with your doctor. There have been reports of some benefits from either melatonin or very short-acting sedatives. The use of melatonin has been shown to help some people adjust faster to changes in time zone.

It is not recommended that you use sleeping tablets during your flight in case of an emergency. Some travellers use alcohol to help them get to sleep, but this actually disrupts the normal sleep cycles and can prolong jet lag.

## Where to get help

- Your doctor

## Things to remember

- Jet lag is a type of fatigue caused by travelling across different time zones.
- The body needs anywhere from a few days to a few weeks to acclimatise to the new time zone – approximately one day for each hour of time zone changes.
- Strategies include maximising your exposure to daylight to 'reset' your body clock and napping briefly during the day when sleepy.

**This page has been produced in consultation with, and approved by:**

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