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http://en.wikipedia.org/wiki/Jet_lag

Jump to: [navigation](#), [search](#)

This article is about the syndrome. For other uses, see [Jet lag \(disambiguation\)](#).

Jet lag

Classification and external resources

ICD-10 G47.2

ICD-9 [307.45](#), [780.50](#)
[327.35](#)

MeSH [D021081](#)

Jet lag, also **jetlag** or **jet-lag**, is a [physiological](#) condition which is a consequence of alterations to [circadian rhythms](#); it is classified as one of the [circadian rhythm sleep disorders](#). Jet lag results from rapid long-distance transmeridian (east-west or west-east) travel, as on a [jet plane](#).

The condition of jet lag may last many days, and a recovery rate of "one day per time zone" is often mentioned as a fair [guideline](#).^[*citation needed*]

Contents

[\[hide\]](#)

- [1 Cause](#)
- [2 Symptoms](#)
- [3 Direction of travel](#)
- [4 Remedies](#)
- [5 See also](#)
- [6 References](#)

[\[edit\]](#) Cause

When traveling across a number of [time zones](#), the [body clock](#) will be out of sync with the destination time, as it experiences daylight and darkness contrary to the rhythms to which it has grown accustomed: the body's natural pattern is upset, as the rhythms that dictate times for eating, sleeping, hormone regulation and body temperature variations no longer correspond to the environment nor to each other in some cases. To the degree that the body cannot immediately realign these rhythms, it is jet lagged.

The speed at which the body adjusts to the new schedule depends on the individual; some people may require several days to adjust to a new time zone, while others experience little disruption. Crossing one or two time zones does not typically cause jet lag.

The condition is not linked to the length of flight, but to the transmeridian (east-west) distance traveled. A ten-hour flight from Europe to southern Africa does not cause jet lag, as travel is primarily north-south. A five hour flight from the east to the west coast of the United States may well result in jet lag.

Crossing the [International Date Line](#) does not contribute to jet lag, as the guide for calculating jet lag is the the number of time zones crossed, and the maximum possible disruption is plus or minus twelve hours.

[\[edit\]](#) Symptoms

The symptoms of jet lag can be quite varied and may include the following:[\[1\]](#)

- Loss of [appetite](#), [nausea](#), digestive problems
- Headache, [sinus irritation](#)
- [Fatigue](#), irregular sleep patterns, [insomnia](#)
- [Disorientation](#), grogginess, [irritability](#)
- Mild [depression](#)

[\[edit\]](#) Direction of travel

There seems to be some evidence that traveling west to east is the more disruptive. This may be because most people have a circadian period which is a bit longer than 24 hours, making it easier to stay up later than to get up earlier.[\[2\]](#)

It may also be that flights to the east are more likely to require people to stay awake more than one full night in order to adjust to the local time zone. For example, comparing a typical schedule for a traveler flying to the East vs a traveler flying to the West:

- Westward from London to Los Angeles, VIA BA0279, Jan 29, 2008. Time zone difference 8 hours.

Westward	Biological clock	Los Angeles local time
Departure	JAN 29 - 10:05	JAN 29 - 02:05
Arrival	JAN 29 - 21:10	JAN 29 - 13:10
Bedtime	JAN 30 - 06:00	JAN 29 - 22:00

- Eastward from Los Angeles to London, VIA BA0278, Jan 29, 2008.

Eastward	Biological clock	London local time
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Departure	JAN 29 - 15:59	JAN 29 - 23:59
Arrival	JAN 30 - 02:05	JAN 30 - 10:05
Bedtime	JAN 30 - 14:00	JAN 30 - 22:00

The first scenario is equivalent to staying up all night and going to bed at 6am the next day — 9 hours later than usual. But the second scenario (eastward) is equivalent to staying up all night and going to bed at 2pm the next day — 12 hours after the time one would otherwise have gone to bed.

[\[edit\]](#) Remedies

Since the experience of jet lag varies among individuals, it is difficult to assess the efficacy of any single remedy. Gradual adjustment over the course of several days of the onset of sleep while maintaining its regular length of 7-8 hours can reduce fatigue and prevent depression. When the goal is to catch-up with local time (vs. fallback to), this can be aided by avoiding afternoon naps and eating an early and carbohydrates-rich, low-protein dinner.^{[*[citations needed](#)*]}

Most chemical and herbal remedies, including the hormone [melatonin](#), have not been tested nor approved by official agencies such as the U.S. [Food and Drug Administration](#). Few studies have tested the use of melatonin for jet lag and have given mixed results, likely because the timing of administration needs to be precise and individualized.^{[*[citations needed](#)*]}

A recent study in [hamsters](#) showed that [sildenafil](#) (known commercially as Viagra) aided in a 50% faster recovery from shifts comparable to eastward travel experienced by humans and was effective starting at low doses.^[3] However, this use has not been tested in humans and is considered an [off-label use](#) by the drug's manufacturers.

[\[edit\]](#) See also

- [Chronobiology](#)
- [Light therapy](#)

[\[edit\]](#) References

- [↑] Cunha, John P.; Stöppler, Melissa Conrad. *Jet Lag*. http://www.medicinenet.com/jet_lag/article.htm.
- [↑] Rozell, Ned (1995). *Fly East for Bad Jet Lag*. <http://www.gi.alaska.edu/ScienceForum/ASF12/1261.html>.
- [↑] "[Viagra could aid jetlag recovery](#)", BBC News ([2007-05-22](#)). Retrieved on 22 May 2007.