

What is JET lag??????????

Jet Lag

A constellation of symptoms (insomnia and daytime sleepiness, dysphoric mood, diminished cognitive and physical performance, and gastrointestinal disturbances) following *rapid transmeridian* travel.

30 x 10⁶ American travelers fly \geq 5 time zones per year

Jet (Travel) Fatigue

A similar constellation of symptoms but secondary to prolonged immobility, cramped seating, irregular mealtimes, dehydration, and stress.

Unlike jet fatigue,

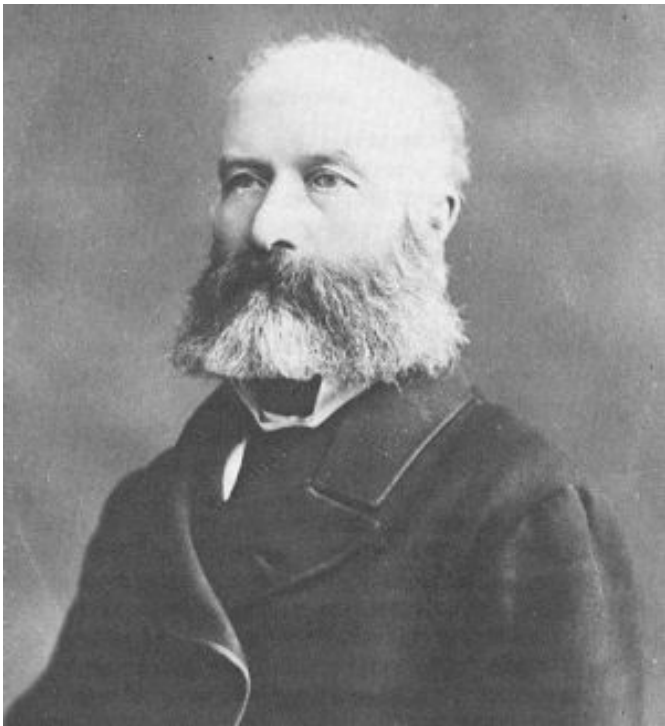
- Jet lag is not relieved after a short recuperation
- Jet lag can be simulated by time-zone transition in the laboratory
- Jet lag does not follow north-south long-haul flights

World Time Zones



24 zones, each zone 15 meridians wide
(i.e., the distance the earth rotates in one hour)

World Time Zones



Sir Sandford Fleming (1827 – 1915)
Scottish-Canadian railway planner and engineer



The International Meridian Conference
Washington, D.C., 1884

First Transatlantic Flight, 16 hr 27 min



John Alcock and Arthur Brown, 1919



Newfoundland, 13:45



Ireland, 08:40

The Age of Long-Haul Passenger Jet Service



de Havilland Comet

first commercial jet service, May 2, 1952
BOAC, London to Johannesburg



Boeing 707

first non-stop transatlantic service, London to
New York : August 26, 1959 Pan American,

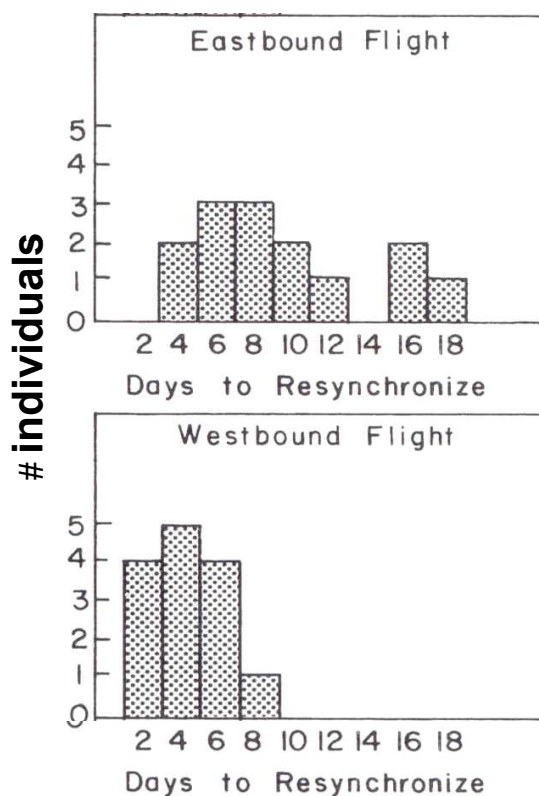
“If you’re going to be a member of the Jet Set and fly off to Katmandu for coffee with King Mahendra, you can count on contracting Jet Lag, a debility not unakin to a hangover. Jet Lag derives from the simple fact that jets travel so fast they leave your body rhythms behind.”

Horace Sutton, *Los Angeles Times*, February 13, 1966

Jet Lag Features

Severity increases with the number of time zones crossed, age, and travel direction

Shift of 6 time zones



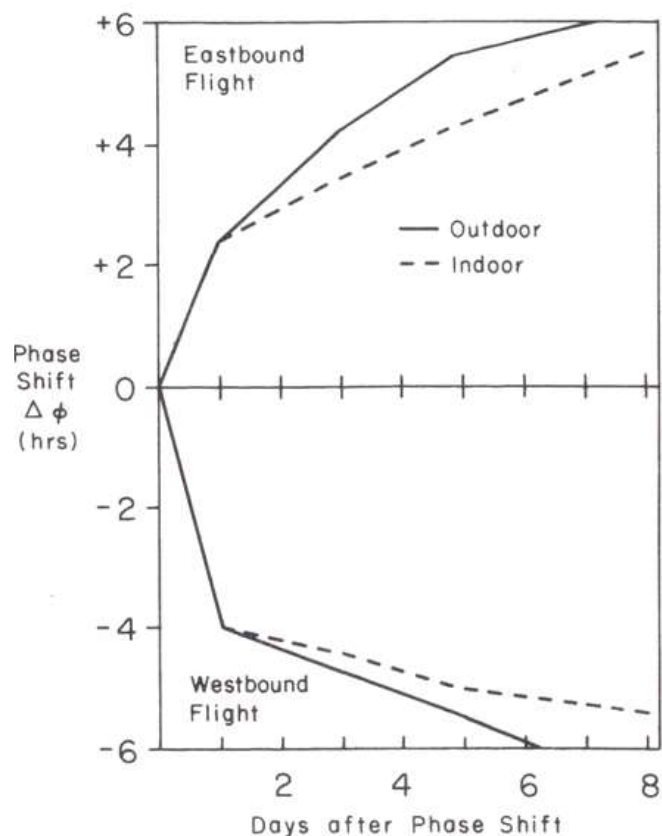
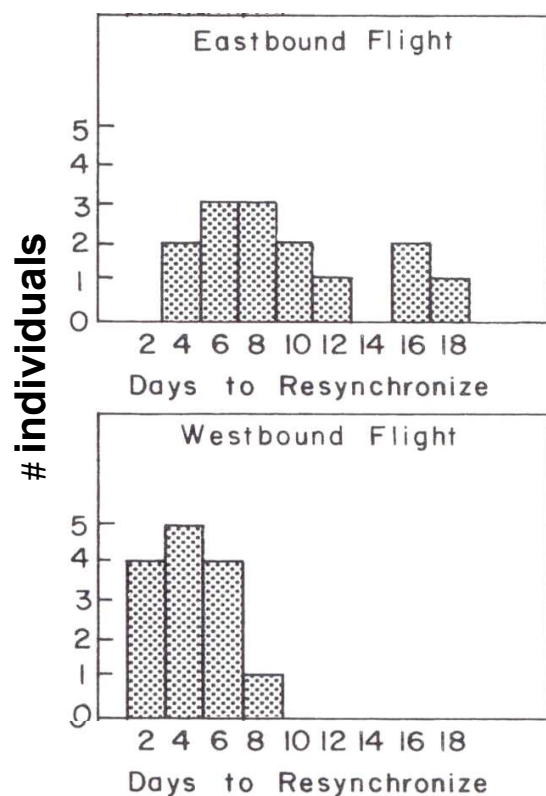
Resynchronization rate:

- 60 min/day eastbound
- 90 min/day westbound

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