

Jetlag

Jetlag is a disruption of the biorhythms that occurs with rapid travel across time zones. Jetlag can exact significant psychological and physical costs and can take several weeks to resynchronize. It is therefore worth doing everything to minimize it. The following are some general guidelines to help, based where possible on research studies.

GENERAL PRINCIPLES FOR FLYING

Avoid Dehydration: Drink lots of nonalcoholic fluids. Airplanes have a remarkably low air humidity, worse than the Gobi Desert, literally, and dehydration happens very easily. Alcohol can exacerbate fluid loss.

Set your watch to the arrival time zone as soon as you get on the plane.

Use melatonin. The optimal dose is a low one of 0.5 -1.0 mg. This is less than the doses usually sold, but there are significant advantages to lower dose. Paradoxically, they are more effective in modifying diurnal rhythm, and they also produce less grogginess. However, it is crucial that melatonin be taken at the appropriate time.

Sleep Medication. If you want to use a sleep medication consider ambien. This is a short acting (half life-4 hrs) tranquillizer which produces little hangover because of its short half life. Usual dosage is 5-10 mg.

NADH to Reduce Cognitive Costs of Jetlag.

Studies suggest that taking NADH when you are feeling jetlagged can reduce the cognitive deficits. Interestingly, people performed better on psychological tests after using NADH even though they did not feel better. The dose used in experiments was 20 mg.

Make Use of Zeitgebers

Zeitgebers are environmental stimuli which entrain biological rhythms. Research indicates that two—sunlight and meals-- are especially effective. Therefore, on arrival in the new time zone:

 adopt the new meal schedule and
 expose yourself to sunlight (in the morning if traveling east and in the evening if going west). However, if you have done a very long international flight across 6 or more time zones, don't expose yourself to sunlight very early or very late in the day)

Light Entrainment: If you're a frequent flier, you may wish to invest in a new device called Litebook Elite, a 5 inch square portable light source which you can use to tailor and time your light exposure. Price is around \$200 from www.litebook.com. The website also provides purchasers with customized schedules for using the Litebook.

Exercise: Whatever direction you're flying, exercise after arrival may help with recovery

Drugs to help if you must stay awake: If you need drugs to help you stay awake then the two major choices are:

- that old favorite, caffeine
- the prescription drug Provigil (modafanil) or its newer more expensive analogue Nuvigil. Note that these have long half lives and should only be taken if you need to be up all day, and should be taken in the morning. Of course, consult your physician about the suitability of the drug and possible side effects.

TRAVELING EAST

Sleep. It is helpful to go to bed early for one or more days beforehand to begin the rhythm resetting.

- E.g., three days before your trip, go to bed an hour early,
- Two days before, 2 hours early
- One day before, 3 hours early

On the plane go to sleep early.

Melatonin. Take melatonin in the mid afternoon, beginning a day or so before departure and the day of departure, then near bedtime in your new time zone for one or more days after arriving.

For example, suppose you were flying to London from San Francisco with an eight hour time difference and wanted to go to bed at 11:00 in the London time zone. You would take melatonin at around 3:00 pm in San Francisco the day before departure and on the plane, and in London before going to bed for one or more days.

Sunlight: for days before you leave, avoid late afternoon sunlight or wear dark glasses when outdoors

A Medication, Tasimelteon Aids When Travelling East

Two 2018 studies have found that the prescription drug tasimelteon (trade name Hetlioz) significantly improved sleep and next day alertness in people travelling East. The usual dose is 20mg taken 30 minutes before bedtime.

TRAVELING WEST

Sleep. Stay up later for 1 or more days before your trip. Stay up on the plane if you will have enough time to sleep adequately before landing.

Melatonin. Take melatonin immediately when you wake up on the day of your departure (and perhaps the day before) and take further doses as soon as you wake up for one or more days after arrival in the new time zone.

Sunlight: avoid early morning sunlight for a few days before travelling

BRIEF STAYS

If you'll only be visiting a place for a brief stay such as 1-3 days, you may want to consider staying on your home zone schedule, e.g., going to bed and getting up at home zone times. If you do this, then the jet lag on the return trip will be minimized.

Good luck for your travels and have a great trip.

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