



FROM THE EXPERTS

Reset Your Internal Clock to Fight Jet Lag

From Harvard Women's Health Watch.

For travelers flying from coast to coast or overseas, recovering from the symptoms of jet lag—fatigue, insomnia, digestive upsets and headaches—can consume a day or two of precious vacation time. According to Dr. Charles A. Czeisler, director of the Division of Sleep Medicine at Harvard Medical School, jet lag is due to a misalignment between the external environment and the internal clock in the brain that drives our daily performance, alertness and ability to sleep.

WHAT IS JET LAG?

An internal master clock—a cluster of 20,000 neurons in our brain—controls our circadian rhythms. In response to light and other cues from the environment, it coordinates the functions of different body systems over a 24-hour period and regulates when we sleep and wake. As the environment changes, our internal clock uses those external cues to gradually reset itself, at an average rate of an hour a day. If you cross several time zones within a matter of hours, there isn't enough time for your internal clock to synchronize your body with the new time zone.

Say you take an 11-hour flight from New York City to Honolulu. Your plane leaves at 6 A.M. and lands at 11 A.M. Honolulu time. You may have gained half a day to spend on the beach, but you may not have the energy to enjoy it. Your body is still on New York time, where it's 5 P.M., so it's beginning

the wind-down to bedtime. It will be five or six days before your body is on Honolulu time.

MINIMIZING THE EFFECTS

If your destination is only a zone or two away, you may need to make only minor adjustments, such as eating meals, going to bed and awakening a little earlier or later than usual. If you're crossing several time zones, you may want to try the following:

Gradually switch to the new time. For several days before you leave, move meal-times and bedtime incrementally closer to the schedule of your destination. Even a partial switch may help.

Stay hydrated. During the flight, drink plenty of fluids, but not caffeine or alcohol. Caffeine and alcohol can dehydrate you, which worsens the symptoms of jet lag. They can also disturb your sleep.

Switch your bedtime as rapidly as possible after arrival. Don't turn in until it is bedtime in the new time zone.

Use the sun to help you readjust. If you need to wake up earlier at your destination, get out in the early morning sun. If you want to rise later than you do at home, wait to go out in the sun until late in the afternoon.

For more information about *Harvard Women's Health Watch*, visit <http://health.harvard.edu>.

Fasting and Flying

A Quick Fix?

IN 2009, DR. CLIFFORD SAPER AND colleagues at Harvard-affiliated Beth Israel Deaconess Medical Center identified a second “master clock” in mice that can regulate circadian rhythms when food is scarce. In essence, the body's circadian rhythms are suspended to conserve energy.

It has been theorized that humans may have a similar mechanism and that a brief fast may trigger a quick reset of circadian rhythms. Dr. Saper has suggested a 12-hour to 16-hour fast the day before and during travel.

For example, if you were to take a flight from New York City to Honolulu, you would refrain from eating for a couple of hours before takeoff and during the flight, but you would have a good meal as soon as convenient after landing. This technique hasn't been tested in clinical trials, but there are many testimonials in the media to its effectiveness.

Before you try this, check with your doctor to see if it's advisable for you. And you will still need to drink water—not caffeinated beverages, juice or alcohol—during your flight.