

Jet Lag and the Traveler

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Living on an island in the Aleutian chain makes air travel a requirement, so jet lag is a common experience for Unalaska residents. The symptoms that result from traveling through three or more time zones are known as jet lag. Those symptoms vary person to person, but usually include daytime sleepiness, difficulty in concentration, fatigue, headache, stomach trouble, and restless sleep. Jet lag occurs when the body's internal clock (the mechanism that synchronizes our internal cycles of sleep and awake periods, as well as hormonal and enzyme release) is subjected to moving through several time zones in a short period. For example, if you boarded a plane in Unalaska, then landed on the East Coast, your internal clock would still be in Unalaska despite the local time. The mismatch between internal circadian rhythm and external stimuli causes the problem. Jet lag can last a day or even several depending on the traveler, the stress of the travel, the number of time zones traveled, and the direction of the flight (with travel from west to east causing more difficulty than travel from east to west).

With air travel so common, many cures have been touted for jet lag. Melatonin is probably one most often used for prevention. Melatonin is a hormone that our pineal gland (a tiny gland residing in the brain) secretes. Melatonin's complete contribution to the body is not known, but it is involved in the circadian rhythm. Melatonin is low during the day, begins to increase during the early evening, and peaks around midnight. Many think taking melatonin during travel can reset the body's clock to fit the time zone it arrives in. Study results of melatonin's effectiveness for jet lag are generally encouraging. There is no agreement, however, in dosages. Common recommendations usually include doses from 0.5mg to 5mg taken between 10pm and midnight upon destination arrival. Remember that melatonin is a hormone the body usually secretes in very small quantities. Medical science does not know the effect of melatonin in large amount for long periods. Melatonin can also cause headache, daytime fatigue, drowsiness, dizziness, and cramping, so side effects may be as bad as the jet lag itself.

Endalart, the trade name for NADH (nicotinamide adenine dinucleotide), has been introduced with the last few years as another possible treatment for jet lag. NADH is produced by the body from NAD, itself a form of vitamin B3. Cells use NADH to generate energy and may cause the body to make the brain chemicals dopamine, serotonin, and norepinephrine. There is an unpublished study of Endalart which shows that using it in any overnight flight from west to east coast improved in measures of alertness. However, there were only 35 people in the study. NADH does not seem to cause side effects in use, but its effectiveness has not been clearly shown.

There are some non-medication things you might try to avoid or minimize jet lag. These include:

- Decide whether to stay on your "home time" or adjust to the new time.
- Arrive at your destination in the early evening local time.

- Anticipate your new time zone by sleeping on the plane if arriving in the morning, or staying awake if arriving in the evening.
- Get plenty of sleep before traveling.
- Start adjusting sleeping and waking times to your new time zone days before leaving home. When traveling east, try going to bed and rising an hour earlier each day for three days before leaving.
- Drink plenty of water during your flight.
- Avoid alcohol and caffeine during the flight.
- Stretch and walk during the flight.
- Eat several small, light meals throughout the days before, during and immediately following your flight.
- Avoid using sleeping pills.
- If you need a nap, nap only in the middle of the afternoon in you new time zone and keep it short, only 10-30 minutes in length.

Here's to your having a good flight with no jet lag!