

What is jet lag?

Jet lag is a condition often experienced by travelers following a long flight through several time zones. One or all of the following symptoms may be experienced:

Fatigue

Feeling worn-out and tired for days after arriving is generally accompanied by a lack of concentration and motivation, especially for any activity that requires effort or skill, such as driving, reading or discussing a business deal. Even simple daily activities can become harder, and the capacity to truly enjoy a holiday is significantly reduced.

Disorientation, fuzziness

Having to return to check three times to see if a hotel room was left locked or unlocked is a typical symptom reported by people experiencing jet lag.

Becoming irrational or unreasonable

"Losing it" is a symptom reported by aircrew, which explains why long-haul flights get very tedious near the end and why going through customs and immigration and getting to the hotel often seems like a real drama.

Broken sleep after arrival

Crossing time zones can cause you to wake during the night and then want to fall asleep during the day. Your circadian rhythms have been disturbed and it can take many days for your body to readjust to the new time zone. NASA estimates that you need one day for every time zone crossed to regain normal rhythm and energy levels, so a five-hour time difference means you will require five days to get back to normal.

Diarrhea

A report from the World Health Organization directly links jet lag with problems of diarrhea caused by microbiological contamination of water or food, which it says affects about 50 per cent of long-haul travelers. Factors such as travel fatigue, jet lag, a change in diet, a different climate and a lower level of immunity may aggravate the problem by reducing travelers' resistance and making them more susceptible to this type of infection or poisoning.

In addition to the above symptoms of jet lag, the syndrome is made worse by some common physical problems caused by being confined in an airliner for hours:

Dehydration

This can cause headaches, dry skin and nasal irritation and make you more susceptible to any colds, coughs, sore throats and flu that are floating around in the aircraft.

Discomfort of legs and feet

Limbs swelling while flying can be extremely uncomfortable and, in some cases, may prevent travelers from wearing their normal shoes for up to 24 hours after arrival.

What causes jet lag?

Crossing time zones

The main, but not the only, cause of jet lag is crossing time zones. Usually going east is worse than going west. Children under three don't seem to suffer jet lag badly, as they are more adaptive and less set in their ways. Adults who adjust readily to changes of routine also seem less susceptible to jet lag. Those who are slaves to a fixed daily routine are often the worst sufferers.

Your pre-flight condition

If you are over-tired, excited, stressed, nervous or hung-over before the flight, you are setting yourself up for a good dose of jet lag. How many times have you heard travelers say "Don't worry, I'll catch up on my sleep on the flight". The truth is that most people do not sleep soundly on an aircraft. The wise traveler who wants to get the most out of a trip has a good night's sleep prior to departure.

Dry atmosphere

The air aboard passenger jet aircraft is dry. To people who normally live in more humid conditions, the change can be striking. Dryness can cause headaches, dry skin and dry nasal and throat membranes, creating the conditions for catching colds, coughs, sore throats or the flu. Drinking plenty of water helps and some frequent flyers take a bottle of water with them. Some airlines supply water frequently to passengers, but others only have a small water fountain near the toilets. Coffee, tea, alcoholic drinks and fruit juices are not recommended; water is what your body wants.

Cabin pressure

At a cruising altitude of near 30,000 feet, the aircraft is pressurized to near 8,000 feet. Unless you live near 8,000 feet and are acclimatized to this pressure, you may suffer from swelling, tiredness and lethargy.

Stale air

Providing a constant supply of fresh air in the cabin costs the airlines money and some airlines are more willing to oblige than others. The air supply in business and first class is often better than in economy class. A lack of good air makes you tired and irritable and can cause headaches. Sometimes if you ask the flight attendants to turn up the fresh air, they will do so.

Alcohol

The impact of alcohol on the body is two to three times more potent when you're flying. One glass of in-flight wine has the effect of two to three glasses on the ground. Add this to the other problems mentioned here and you can get off the plane with a huge hang-over that simply compounds the effects of jet lag.

Food and drink

Airline coffee and tea not only tend to taste awful, they have higher-than-usual caffeine content and are abrasive on the stomach. Orange juice is also abrasive if you are not used to it. If you do not normally drink strong coffee, tea or orange juice, do not try it while flying. Go easy on the frequent meals served in-flight; you don't need them and sitting in a cramped position puts extra pressure on your stomach. Beware of risky foods served on some airlines in certain parts of the world, including salads and cold meat and fish. According to the World Health Organization, 50 per cent of international travelers experience stomach problems, so dietary care is important while flying.

Lack of exercise

Lack of exercise is one of the worst aspects of long-haul flying. It makes the flight uncomfortable and sets you up for a longer period of jet lag afterwards. Do stretching exercises in your seat, especially for the legs, and, if possible, go for walks up and down the aisle. If you have a spare seat next to you, try to get your feet up. Get off the plane whenever possible at stop-overs and do some exercises (do not worry what others think). If there is an opportunity during a ground stop, take a shower; it freshens you, tones the muscles and gets the blood moving again.

Techniques for reducing jet lag

Pre-flight

This is one of the most important aspects of combating jet lag. Before departing, make sure you have all your affairs, business and personal, in order. Ensure you are not stressed by excitement or worry and not tired or hung-over from a function the night before. Get plenty of exercise in the days prior to departure and try to avoid sickness such as the flu, colds and so on. If you have a cold, flying will probably make it worse; ideally you should delay the trip. Get a good night's sleep just prior to departure.

East or west?

There is much debate about whether it is better to fly eastward or westward. It may be largely a matter of personal preference, but there is some evidence that flying westward causes less jet lag than flying eastward.

Night or day flight?

It is largely a matter of personal preference based on experience. Most travelers think daytime flights cause less jet lag. More daytime long-haul flights are being added by major airlines.

Drinking fluids

The dry air in aircraft causes dehydration. Drinking plenty of non-alcoholic fluids counters this. Water is better than coffee, tea and fruit juices. Alcohol is not only useless to combat dehydration, but has a markedly greater intoxicating effect when drunk in the rarefied atmosphere of an airliner than it does at ground level.

Sleeping aids

Blindfolds, ear plugs, neck rests and blow-up pillows are all useful in helping you get quality sleep while flying. Kick off your shoes to ease pressure on the feet. Some airlines provide soft sock-like slippers and many experienced travelers carry their own.

Exercise

Get as much exercise as you can. Walking up and down the aisle, standing and doing small twisting and stretching exercises in your seat all help to reduce discomfort, especially swelling of the legs and feet. Get off the plane if possible at stop-overs and do some exercises or take a walk. Exercise also helps to reduce the possibility of blood clots and associated traumas.

Showers

During extended stop-overs on a long-haul flight, showers are sometimes available. A shower not only freshens you but tones the muscles and increases circulation, which will make you feel much better for the rest of the flight.

The Jet-Lag Diet

What you eat and drink in the three days before a flight can help to beat jet lag. Jetlag is the most common ailment of long-haul travelers. About 90 per cent of passengers on flights lasting more than three hours have some symptoms which include extreme fatigue, insomnia, irritability, stomach problems and general aches and pains which can ruin the start of a holiday or business trip. But there are ways to minimize its effects.

The key factor in jet lag is the number of time zones crossed during a flight. Changing the schedule of daylight and darkness confuses the pineal gland in the brain, which produces sleep hormones such as melatonin. Until the gland catches up with alterations to the circadian rhythm - which sometimes takes several days - people can feel sleepy when awake or find it impossible to sleep.

Most travelers find that jet lag is worse when traveling east, as the days get shorter. "They seem to adjust more easily to a lengthening day when flying west", says Farrol Kahn, director of the Aviation Health Institute (AHI) charity.

He adds that as well as these disruptions to the body clock, a lack of oxygen in pressurized cabins (20-25 per cent less than at sea level) compounds feelings of tiredness.

Changing your watch to destination time as soon as you board the plane, and getting as much natural light as possible on arrival, can help to synchronize the biological clock. But what you eat and drink will also have an effect.

Researchers at the University of Chicago Argonne National Laboratory who developed the anti-jet-lag diet have shown that travelers following their three-day program of "feasting and fasting" are seven times less likely to suffer jet lag when traveling east and 16 times less likely in journeys west.

Results of a study confirming the diet's benefits were published recently in the medical journal *Military Medicine*. The US Army and the Canadian swimming team are among those who swear by it.

Based on the theory that meals are “times cues” for your body, the diet involves rescheduling the amount and type of foods eaten in the three days before a long-haul flight. On days one and three you eat high-protein meals of dairy products and meat for breakfast and lunch. This, say the Chicago scientists, “helps the body to produce chemicals normally produced when it is waking up”. A high-carbohydrate evening meal triggers production of serotonin, a hormone which promotes sleepiness. Day two is a “fasting” day with an intake of 700 calories or less, which is repeated on flight day - but with lots of coffee in the evening to trigger earlier waking the next morning. On arrival, the advice is to “eat a high-protein meal at local breakfast time” and to “keep as active as possible”.

The principles of the diet appear sound, says Kahn, though he adds: “It seems a bit extreme and you could probably get similar benefits from skipping meals during the flight so that you arrive feeling hungry. Bananas are a great stopgap if you need an energy boost when you get there.”

Avoiding alcohol but drinking water, to reduce the increased risk of dehydration when flying, will also help.

Meanwhile, a study in the *Journal of Applied Physiology* has confirmed that caffeine can help to ward off jet lag. Subjects took either a 300mg dose of caffeine or 5mg of melatonin (available as a food supplement in the US, though not yet approved by the US Food and Drug Administration) the morning before a flight. Both drugs taken separately prevented many of jet lag's adverse effects.

Most jet-lag “cures” sold in airport shops have only a placebo effect, says Kahn, although AHI tests on product called Jetskins, a molded compression garment worn on the lower body for long-haul flights, showed that it can reduce muscle soreness and improve co-ordination (it costs ?59).

Whichever approach you choose, do not take a nap when you arrive says Kahn, as this will reset your body clock to “home time” and undo the good work. “Simple, old-fashioned methods involving time cues, stress-free flying and sensible eating are still the best,” he says. “Jet lag is half psychological - if you think you are going to suffer, you will.”

By Peta Bee

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