

WESTJETMAGAZINE

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AVOIDING JET LAG

Research done by NASA to assist astronauts can also help you arrive refreshed at your destination.



W

hen you are an astronaut onboard the *International Space Station*, you get to

experience a sunrise every 90 minutes. It's a memorable sight, but it can also be one of many factors—including motion sickness and zero-gravity conditions—playing havoc with your sleeping patterns.

Ensuring astronauts get quality rest is a challenge for NASA, since, for some, poor sleep can worsen performance and increase mistakes. That's why NASA works with researchers associated with Harvard Medical School's Division of Sleep Medicine, including Dr. Elizabeth Klerman, to offer some insight into sleep.

Turns out, their research can also help us here on Earth when it comes to learning how to avoid jet lag while travelling.



Set your pacemaker

"Your body tracks time using an internal pacemaker," says Klerman, who works in the Division of Sleep and Circadian Disorders at Brigham and Women's Hospital in Boston, Mass. "The body clock sets itself to approximately 24 hours. If you fly to a different time zone, you need to [reset] your body clock to local time." She says your body uses light—not the actual time on a clock—to do that. As a member of the International Space Station Flexible Lighting Team, Klerman helped develop an LED lighting system for the space station to help astronauts improve their sleep, since different frequencies of light have different effects on our body clock.



Blue-green light

Multiple researchers have found that blue-green light is most effective at switching the body's pacemaker, while red light is not as efficient. The International Space Station Flexible Lighting Team created a system that adjusts the colour depending on whether astronauts want to be alert or sleepy. Airlines have considered adopting a similar lighting system on planes, but, because passengers may start and finish their journeys in different time zones, a plane-wide system could worsen jet lag for some. Instead, each guest should use light—from outside, from their hotel room or from a phone app—to train their body clock to the new time zone, Klerman says.



Direction matters

Klerman says it's easier to adjust to east-to-west travel because light's effect depends on when we see it. Until about 1 or 2 a.m., the body clock interprets light as belonging to the present day, while, starting around 4 a.m., it interprets light as signalling a new day. If you leave Toronto at 6 p.m. and arrive in London at 6 a.m., it is still 1 a.m. in Toronto. Your body sees the morning London light and thinks it must still be the same day. To overcome this, fly as late as possible, shift your sleep and light schedules to European time a few days before your trip, and try to sleep as soon as you board your flight. When you arrive, try to stay awake as long as possible. —Scott McKinney