
Jet Lag/Shift Work Protocol

Re-Ignite Coaching

By Sam Guest

Similar to the types of sleep problems caused by shift work, jet lag is a “chronobiological” issue that occurs when you travel across many time zones. Your body clock isn’t in sync with the destination time because you’ve experienced daylight and darkness that are contrary to the rhythms to which you’ve grown accustomed.

This upsets your body’s natural rhythm, and the problem becomes compounded because the times for eating, sleeping, hormone regulation, and body-temperature variations no longer correspond to what you’re used to.

Not much beats airplane travel for radiation exposure, full-body inflammation, production of free radicals, wrenches in your recovery process, and an inhibition of important biological processes, from muscle-building protein synthesis to muscle-repairing circadian rhythm.

It doesn’t matter how fancy your compression socks are or how many bodyweight squats and calf raises you do in the back of the airplane. When you’re on that plane, you’re inside a tiny metal tube bombarded by solar radiation and completely disconnected from the Earth’s natural magnetic field.

This is compounded by Wi-Fi signals bouncing around the cabin (which are often available during the entire flight), people talking on their phones and checking e-mail inside that metal tube (which happens for the entire gate-to-takeoff and landing-to-gate phases), dehydration from altitude, extremely dry filtered air, toxin-laden airplane food, bad water, germs and airborne pathogens in tight spaces, and—if you’re traveling across multiple time zones—a disruption of the natural circadian rhythm.

Quick Airplane Sleep Tips

Request a window seat.

It’s far easier to sleep when you can lean your head against the side of the airplane wall. Use a J-hook travel pillow. These inflatable pillows are amazing, and the top-ranked travel pillow on Amazon. They work especially well for side sleepers in combination with the window seat trick but also work when you’re stuck in an aisle or centre seat.

Use Sony or Bose noise blocking headphones

Use a full wraparound sleep mask

Prior to putting on headphones, sleep mask and pillow, consume a few teaspoons of Reishi extract (I recommend the FourSigmatic blend), which allows you to sleep without waking up drowsy, combined with a good CBD source (20-40mg does the trick).

Fix #1: Grounding or Earthing

Grounding (also known as earthing) involves exposing your body to the natural magnetic frequencies released by the Earth. At no time does grounding become a more effective destination strategy than when you’re traveling in an airplane, since hurtling through space in a metal tube 40,000 feet above the planet is about as disconnected from the Earth as you can get.

The basic idea is that you aren't able to discharge all the positive ions that build up via cellular metabolism, you aren't able to absorb the negative ions you'd normally get if you were touching the ground, and this ion imbalance decreases the natural electrochemical gradient across your cell membranes, so you get disrupted cellular metabolism and inflammation.

So how do you actually earth or ground? As soon as I land at my destination, I make it a point to either (1) put on a pair of special shoes called Pluggz or sandals called Earth Runners, both of which have carbon plugs in them that allow for grounding without being barefoot or (2) go outside in my bare feet (yes, I'm the guy in spandex or a Speedo doing barefoot yoga in the grassy lot behind the hotel).

There is also a device you can use called the Flexpulse or the Earthpulse, which can be placed underneath the mattress or on the body to ground during sleep.

Fix #2: Exercise

Multiple studies have shown that exercise can regulate circadian rhythms. So as lousy and miserable as you may feel training after a long day of travel or a long few days of international travel, the sooner you can vigorously move after arriving at your final destination, the sooner you'll bounce back from jet lag and normalise your circadian rhythm and sleep. But this doesn't mean you have to do a killer WOD or an epic run when you get to your destination.

My top three choices, if I'm feeling a bit blah after travel, are walking (barefoot if possible) in the sunshine or on a beach, swimming (preferably in relatively cool water, as you'll learn about later), and, as mentioned in Fix #1, outdoor barefoot yoga. Finally, for each hour that I'm sedentary on an airplane, I do fifty air squats near the back of the plane or in any other open space I can find.

Fix #3: Avoid Caffeine

Now I know you're rolling your eyes at this one! And I know it's a relatively common recommendation for managing jet lag to discourage the consumption of caffeine, alcohol, and other stimulants, and because of their overstimulation of the central nervous system and their potential for disrupting circadian rhythm even more.

I absolutely agree and simply do not go near caffeine or any other central nervous system stimulant while en route to my final destination.

Fix #4: Melatonin

For travel across more than three time zones, I consume 60-80mg (yep, that's a lot!) of melatonin prior to bed for rebooting my circadian rhythm upon arrival at my final destination. Melatonin is also a natural anti-inflammatory, which will help decrease inflammation that builds up during air travel. This is admittedly a huge amount of melatonin, and I wouldn't suggest you start anywhere near that level, start at 5mg and build up as you see fit.

Fix #5: Water

You've no doubt heard that you lose more water due to the dehydration that occurs while flying in the dry air at altitude—so you obviously need to drink more water to stay hydrated and beat jet lag. But I've been going beyond the normal recommendations and experimenting with very high water intake—and finding that it helps out quite a bit compared with the standard disappointingly tiny cup of water handed to me by the flight attendant every couple of hours.

Instead, I've been drinking closer to 12–16 ounces of water (nearly a full bottle) each hour and feeling a distinct difference in sleep, mood, and energy upon landing. Just make sure to book an aisle seat or, if you're in a window seat, make sure that your aisle-based airline partner is spry and willing to move every time you need to pee—or just politely ask to switch spots.

Fix #6: Cold Showers

Cold showers decrease inflammatory cytokines, assist with the activation of brown adipose tissue for fat burning, and cause a rebound hormone response in the form of a release of adrenaline. I've been going so far as to actually go into an airline lounge in the airport for a ten - to fifteen-minute cold shower if I have a long layover. I also take a two - to five-minute cold shower in the hotel when I arrive at my final destination.

Splashing lots of cold water in your face is OK, but not quite as effective as cold water immersion or showering. Cold showers also have very good blood-vessel-expanding properties because they release more nitric oxide into your blood vessels, and the subsequent increase in glucose and oxygen uptake can dramatically reduce jet lag.

Fix #7: Curcumin

Curcumin—which is found in turmeric and curries—is a powerful antioxidant that helps tremendously when taken on an empty stomach both before and after flying. Because of its ability to cross the blood-brain barrier and shut down inflammatory cytokines in neural tissue, it is a potent brain anti-inflammatory and may also boost testosterone and growth hormone. I've used about 1,000 milligrams of curcumin from a highly absorbable source, such as “Meriva” form, which is found in many supplements, including the Thorne multivitamin.

Fix #8: Sulfur

Sulfur-containing foods are very good antioxidant precursors, especially for the type of inflammation that can occur when you're on an airplane. These include foods like broccoli, cauliflower, garlic, onions, and Brussels sprouts. Supplements containing glutathione, N-acetylcysteine, MSM, or DMSO are also effective but can induce nausea, so be careful with them—I don't recommend more than a teaspoon.

Of course, if you opt for the preflight sautéed garlic and onions, you may need to brush your teeth afterward (unless you plan on creating enemies on the plane). But if you squeeze in a few meals containing these foods in the days leading up to the flight, you'll feel much better when you land.

Fix #9: Oxytocin

Oxytocin is an extremely powerful hormone that acts to lift your mood and also acts as a potent antioxidant, antidepressant, and anti-inflammatory. Although it's most commonly known as a hormone that is released after sex in adults and during breastfeeding in babies, you can get your oxytocin hormone fix anywhere and at any time—including while you're traveling. All you need to do is hug someone or (slightly less effective) warmly shake another person's hand.

The simple act of bodily contact will cause your brain to release low levels of anti-inflammatory, mood-boosting oxytocin. So find the first person who's OK with it when you get to your destination and give her a big, loving bear hug. Or do some partner carries up the stairs at the hotel (incidentally, that's a great travel workout). Just brush your teeth first if you used the garlic trick.

Fix #10: Clothing

Cover up when you're on the flight. Airline seats are covered in potent fire resistant chemicals, which are easily absorbed through your skin and the air is circulating neuro toxins, bacteria and these same chemicals. By covering up as much skin as possible you prevent as much of this landing on your skin and thus entering into your bloodstream as possible.

Likewise by arriving at your destination and instantly taking a (preferably cold) shower and changing your clothes you ensure you're not walking around with these same chemicals and toxins on your body for the rest of the day.

Fix #11 Avoid Junk Light

Your body uses light like a nutrient, and getting the right kinds of light can upgrade your performance a lot. Sunlight, for example, is responsible for most of your vitamin D synthesis, and your mitochondria use red light to create more energy.

On the other hand, the wrong light will screw up your biology in a major way. Most airplanes use fluorescent bulbs, which are the light equivalent of junk food. Fluorescent bulbs take away all the biologically useful light spectrums and replace them with unnaturally concentrated blue light — much more than your body has evolved to handle. That's why airplane lighting can feel so harsh.

Excessive blue light damages your mitochondria, which impairs your ability to make energy for your cells. If you're taking an evening flight or a red-eye, fluorescent bulbs are even worse: bright blue light tells your body what time it is, and nighttime exposure scrambles your sleep schedule by interfering with your melatonin production. That's one reason why flying messes with your sleep-wake cycle.

Wearing blue blocking sunglasses (like True Dark or Blue Blocker Glasses) on the flight will massively reduce your exposure to junk light and mean you arrive with more energy and less stress. You'll also look like a rockstar on the plane!

Fix #12 Compression Garments

You may have heard that you should wear compression socks when you fly. That's because air travel has all the perfect ingredients to impair your blood flow: low air pressure, dehydration, minimal movement, and hours of sitting all contribute to decreased circulation. Flying causes a 100-200 percent increase in your risk of deep vein thrombosis — blood clots in your legs that are potentially fatal. Compression socks improve circulation in your legs and prevent blood clots from forming.

I started out just wearing compression socks. Then I tried full compression gear — socks, pants, and a top — and found I was much less puffy and inflamed after flying. If you don't want to do full-body compression, at least pick up some compression socks. Fatal blood clots are not good for your performance.

Fix #13 Get Outside

Natural sunlight is one of the biggest signallers to our body as to how and when it sets its circadian rhythm. The most important time of day to get this sunlight to set the singling up correcting is first thing in the morning.

By exposing your body and especially your eyes (without sunglasses) to 5 - 20 minutes of light first thing in the morning at your new destination you can really assist your body in resetting its rhythm to local time.

Fix #14 Don't Eat On The Plane

Not only is airplane food full of salt it's also almost universally terrible in terms of nutrient value and toxic load. If you have to eat on the flight, bring your own food. Even better...

Fix #15 Don't Eat At All

Fasting makes your cells more resilient in general, and new research shows it controls your internal clock as much as light exposure does.

When you eat, your brain makes a tight link between your sleep and light-dark cycles. Fasting activates a part of your brain called the dorsomedial nucleus that makes you less rigid with your sleep schedule. In a fasted state, you're more able to reset your sleep schedule to match your environment, meaning you can adjust to time differences and jet lag with ease.

Fix #16 Once You Land Eat In Local Time

Just like sunlight is a huge signal to the body of circadian rhythm timing, so is the timing of your meals. Once you arrive at your destination ensure you eat the correct meals at your normal time of day LOCAL TIME.

This will give the body even more signals to adapt to its new time zone faster.

Fix #17 Apple Cider Vinegar

Your gut bacteria suffer when you travel a lot. We don't know exactly why this is but we do know if you jump on a long haul flight by the time you get off the other end your bacteria will have shifted in a negative way. By taking Apple Cider Vinegar before and after your flight you are providing nutrients for the positive bacteria and allowing them to proliferate meaning the harmful effects of the flight are mitigated.

Jet Lag Check List

Pre Flight

Ensure you're wearing clothes that cover as much skin as possible.
If you're going to eat on the plane, prepare any food.
Ensure you have your compression garments handy.
Ensure you have your blue light blocking glasses handy
Start taking Curcumin/Turmeric and ensure you have it packed in your hand luggage for access during the flight.
Eat sulphurous vegetables for several days before.
Ensure Melatonin is packed.
Ensure your barefoot shoes are packed (if your not going to walk around hippy style!)

On Flight/Just Before Flight

Take Curcumin/Turmeric
Drink a bottle of water an hour
When ever you go to the toilet (which will be a lot if your drinking the recommended amount of water!) or at least once an hour, do 50 squats.
Wear blue light blocking glasses.
Put on compression garments.
Ideally fast or eat only your own prepared food.
Avoid Caffeine

Post Flight

Ground yourself.
Cold shower and wash and change clothing worn on the flight.
Exercise
Eat in local time.
Find someone to hug!
Morning sunlight exposure.
Take Melatonin before bed.