INTRODUCTION

Before We Begin

Frequent flyers get sick more than they should. Not because they're unlucky, but because the conditions of modern air travel are genuinely hostile to immune function: recycled and filtered air at reduced humidity, cabin pressure equivalent to an altitude of 2,000 metres, prolonged close proximity to other people, disrupted sleep, elevated cortisol, and radical changes in time zone and local microbial environment.

None of these factors alone would significantly compromise a healthy immune system. Together, repeated across weeks and months of frequent travel, they create a cumulative immune debt that most frequent travellers know as the "post-trip crash": the cold, the fatigue, or the digestive disruption that arrives reliably in the days after a demanding trip.

This guide is a modular recovery and immunity kit designed around the specific physiological stressors of transit. It covers the supplements that have the strongest evidence behind them for the traveller context, and the non-supplement protocols that underpin them.

A note before we begin: this guide is educational and does not constitute medical advice. If you have specific health conditions or take prescription medication, consult your doctor before adding any supplements to your routine.

PART ONE

What Travel Actually Does to Your Body

To build an effective recovery kit, it helps to understand exactly what you're recovering from. The physiological stressors of transit are specific and well-documented, which means the interventions can be targeted rather than speculative.

CABIN PRESSURE & ALTITUDE	Commercial aircraft are pressurised to the equivalent of 1,800 to 2,400 metres above sea level. At this altitude, blood oxygen saturation drops by around 4%. This is sufficient to increase fatigue, reduce cognitive performance, and modestly suppress immune activity. It also causes gas in the gut to expand by roughly 25%, contributing to the bloating many travellers experience.
RECYCLED AIR & HUMIDITY	Cabin relative humidity is typically 10 to 20%, compared to a comfortable 40 to 60% on the ground. This dries the mucous membranes of the nose, throat, and lungs, which are the first line of immune defence against airborne pathogens. A dry mucous membrane is a significantly less effective filter.
CORTISOL & STRESS RESPONSE	Travel is physiologically stressful: disrupted routines, time pressure, sleep loss, and environmental novelty all elevate cortisol. Chronically elevated cortisol suppresses immune function, disrupts sleep architecture, impairs gut motility, and increases inflammatory markers. The business traveller who is perpetually stressed is perpetually immunocompromised.

GUT MICROBIOME DISRUPTION	Changes in diet, water, local food bacteria, and eating schedules alter the composition of the gut microbiome within days. Since around 70% of immune function is located in or adjacent to the gut, microbiome disruption is a direct immune threat. Traveller's constipation, loose stools, and bloating are all manifestations of this disruption.
SLEEP ARCHITECTURE DAMAGE	Deep sleep (slow-wave sleep) is when the immune system is most active, producing cytokines, repairing tissue, and consolidating immune memory. Jet lag, unfamiliar environments, and hotel room conditions all fragment sleep and reduce time in deep sleep. Fewer than six hours of sleep reduces natural killer cell activity by more than 70%.

PART TWO

The Core Supplement Kit

The following supplements are selected based on three criteria: strong evidence of effectiveness for the specific travel stressors identified in Part One, safety at standard doses for healthy adults, and practicality for travel (available in compact forms, not requiring refrigeration).

The kit is modular. Start with the Core Three if you want a minimal approach. Add the Gut Layer if digestive disruption is a frequent issue. Add the Sleep Layer if sleep quality on trips is your primary challenge.

The Core Three: Flight Day and Beyond

Vitamin D3

2,000-4,000 IU daily with food

The most evidence-backed immune supplement available. Most frequent flyers are deficient due to indoor lifestyles and limited sun exposure. Deficiency directly impairs the innate immune response. Take with K2 (100mcg) to support proper calcium metabolism.

Zinc

15-25mg on flight days, 10mg maintenance

Directly inhibits viral replication in the upper respiratory tract. Most effective when taken at the first sign of a cold or proactively on flight days. Use zinc picolinate or bisglycinate for best absorption. Do not exceed 40mg/day; long-term high dosing depletes copper.

Vitamin C

500-1,000mg on flight and arrival days

Supports neutrophil function and mucosal immunity. Evidence is strongest for reducing duration and severity of illness rather than prevention per se. Buffered or liposomal forms are gentler on the stomach. Time-releasing formulations maintain consistent blood levels.

The Gut Layer: For Digestive Disruption

Magnesium Glycinate
300-400mg before bed

The highest-priority supplement for frequent travellers. Supports bowel motility (countering travel constipation), promotes deep sleep, reduces cortisol and muscle tension, and replenishes a mineral depleted by stress. Glycinate form is best absorbed and least likely to cause loose stools.

Probiotic
10-50 billion CFU daily from 3 days before travel

Supports gut microbiome stability during dietary changes and new microbial environments. Look for multi-strain formulas including Lactobacillus acidophilus and Bifidobacterium longum. Shelf-stable, travel-friendly capsules are widely available and do not require refrigeration.

L-Glutamine
5g in water on long-haul days

The primary fuel source for enterocytes (gut lining cells). Long-haul flights and high cortisol increase intestinal permeability (leaky gut), which degrades immune function. L-glutamine helps maintain gut wall integrity during physiologically stressful transit days.

The Sleep Layer: For Recovery Quality

Magnesium L-Threonate
1,500-2,000mg before bed

The only form of magnesium clinically demonstrated to cross the blood-brain barrier. Supports GABA activity, which reduces the mental hyperactivation that prevents sleep onset in unfamiliar environments. A useful upgrade from glycinate if sleep onset is the primary challenge.

Ashwagandha (KSM-66)
300-600mg in the evening

An adaptogen with strong clinical evidence for reducing cortisol by 15 to 30% with consistent use. Particularly relevant for the chronic stress load of frequent travel. Effects are cumulative; begin 5 to 7 days before a demanding trip for best results. Avoid if pregnant or on thyroid medication.

Melatonin
0.5mg, 90 mins before local bedtime

See the Circadian Alignment guide for full protocol. Reminder: 0.5mg is the effective dose for clock-shifting. Higher doses produce sedation without the circadian benefit and often cause next-day grogginess. Use for 2 to 3 nights on arrival, not indefinitely.

On supplement quality: the supplement industry is largely unregulated. Look for products with third-party testing certifications (NSF, Informed Sport, or USP). Cheaper own-brand supplements frequently contain lower doses than labelled or inferior forms with poor absorption. The form of the mineral matters: magnesium oxide is poorly absorbed; glycinate and threonate are not.

PART THREE

Magnesium: The Traveller's Most Underused Tool

If there is one supplement that over-indexes on value for the frequent traveller, it is magnesium. Not because it is the most potent immune intervention available, but because it addresses several of the most common and debilitating travel complaints simultaneously: constipation, poor sleep, muscle tension, and elevated cortisol.

Magnesium is involved in over 300 enzymatic processes in the body. It is also chronically depleted by stress, sweating, alcohol, and caffeine. All of which feature prominently in the frequent traveller's lifestyle.

Most frequent travellers are functionally magnesium-depleted. Replenishing it is less a supplement intervention and more a correction of a near-universal deficiency.

Magnesium for Travel Constipation

Traveller's constipation is one of the most common and least discussed aspects of frequent travel. The causes are multiple: dehydration, reduced fibre intake, suppressed gut motility from elevated cortisol, circadian disruption of gut rhythms, and reduced physical activity.

Magnesium citrate (a slightly different form to the glycinate used for sleep) draws water into the bowel through osmosis, softening the stool and promoting motility. This is the mechanism behind most over-the-counter laxatives, but magnesium citrate is gentler and provides a functional mineral alongside the digestive benefit.

FOR CONSTIPATION Magnesium Citrate	200-400mg taken with a large glass of water before bed. Effect is usually felt within 8 to 12 hours. Start at the lower dose and adjust. This form draws water into the bowel and should be paired with adequate hydration throughout the day.
FOR SLEEP & TENSION Magnesium Glycinate	300-400mg taken 30 to 60 minutes before bed. The glycinate form binds magnesium to the amino acid glycine, which has its own calming properties. This form does not have the same osmotic laxative effect, making it suitable for daily use without digestive side effects.
FOR COGNITIVE CALM Magnesium L-Threonate	1,500-2,000mg taken in the evening. More expensive than other forms but uniquely able to cross the blood-brain barrier. The most effective form for reducing the mental restlessness and background anxiety that makes sleep onset difficult in unfamiliar hotel rooms.

Vitamin D and Zinc on Flight Days

The combination of Vitamin D and Zinc is the most evidence-backed pair of supplements for protecting immune function specifically on and around flight days, when pathogen exposure is highest and immune reserves are most compromised.

Both nutrients are required for the production and activation of immune cells. Both are commonly deficient in frequent travellers. And both have a synergistic relationship: Vitamin D enhances the immune function that zinc supports.

The flight day protocol:

1. Take Vitamin D3 (2,000-4,000 IU) with your first meal of the day, ideally with some dietary fat to aid absorption.
2. Take Zinc (15-25mg as picolinate or bisglycinate) with food at the same time, or separately at a later meal.
3. If you feel early symptoms of a cold developing, zinc lozenges (not capsules) directly in the throat have the strongest evidence for reducing severity. Use within 24 hours of symptom onset.
4. Maintain Vitamin D at 2,000 IU daily throughout the trip. Single large doses are less effective than consistent daily supplementation.

PART FOUR

The Digital Detox Ritual

The hotel room at night is one of the most physiologically hostile sleep environments available to the modern professional. Unfamiliar sounds. Light pollution from the city or corridor. An unknown temperature baseline. A device full of unread messages sitting on the bedside table.

The result is a sleep environment that keeps the sympathetic nervous system (the alert, threat-scanning mode) partially active when it should be handing over to the parasympathetic system (the rest and recover mode). The cortisol stays elevated. The melatonin is suppressed. Sleep onset is delayed and sleep quality is fragmented.

The Digital Detox Ritual is not about digital abstinence. It's a 20-minute pre-sleep protocol that systematically lowers cortisol, removes arousal stimuli, and creates the physiological conditions for deep, restorative sleep in an unfamiliar environment.

The 20-Minute Pre-Sleep Protocol

Begin this sequence 30 minutes before your target local bedtime. Do it in the same order every night on a trip. The predictability itself is part of the mechanism: the brain learns that this sequence precedes sleep, and begins the biological transition before you've even finished.

T-30 MINS Device Quarantine	Put all devices (phone, tablet, laptop) face-down or in a drawer. Set a morning alarm, then leave the phone across the room or in the drawer. The key is removing the pull of the notification, not just the light. A device within arm's reach elevates vigilance even when it's silent.
T-25 MINS Room Optimisation	Lower the temperature to 17-19 degrees Celsius if possible (the ideal sleep temperature for most adults). Use blackout curtains or an eye mask. Put the Do Not Disturb sign on the door. Eliminate any standby lights (tape over the TV LED if needed). These physical interventions take two minutes and meaningfully improve sleep architecture.
T-20 MINS Supplement Timing	Take your evening supplements now: magnesium glycinate or threonate, ashwagandha if using it, and melatonin (0.5mg) if using it for circadian alignment. Wash them down with a full glass of water. Hydration before sleep reduces the chance of waking with thirst at 3am.
T-15 MINS Physiological Sigh	Lie down and perform five physiological sighs: a double inhale through the nose (inhale, then a sharp secondary inhale to fully inflate the lungs), followed by a long, slow exhale through the mouth. This is the fastest known method for reducing physiological arousal and activating the parasympathetic nervous system. Five cycles takes under two minutes.
T-10 MINS Body Scan or Non-Sleep Deep Rest	A simple progressive body scan: starting at the feet, mentally relax each body part moving upward to the head. This occupies the cognitive mind with a non-stimulating task, prevents ruminative thinking (the common hotel room 3am spiral), and promotes muscular relaxation. For those who find this difficult, a NSDR (non-sleep deep rest) audio track achieves the same result passively.
T-0 Sleep Anchor	At your target local bedtime, lights off. If sleep does not come within 20 minutes, do not lie awake in the dark becoming anxious about not sleeping. Get up, do another five physiological sighs in a chair with low light, and return to bed. The brain associates the bed with sleep; lying awake fighting it reverses that association.

Managing the 3am Wake

Waking at 3am on a trip is extremely common, particularly after eastward travel. The body is partially aligned to home time and may interpret 3am local as a normal waking hour.

The worst response is reaching for your phone. Even two minutes of screen exposure at 3am suppresses melatonin for the remainder of the night and can prevent return to sleep entirely.

> **The 3am protocol:** do not check the time. Do not check your phone. Perform five physiological sighs. If awake after 10 minutes, get up, sit in a chair in complete darkness or very low warm light, and breathe slowly for five minutes. Return to bed. In most cases, sleep returns within 20 minutes using this approach.

PART FIVE

The Recovery Day Protocol

After an intensive travel period, a structured recovery day produces significantly better long-term outcomes than simply getting back to normal. The body needs a deliberate reset, not just a pause.

The recovery day is not a rest day in the passive sense. It is an active, strategic investment in the systems that travel has depleted: immune function, gut health, sleep quality, and stress hormones.

SLEEP	Prioritise one night of full, uninterrupted sleep within 48 hours of returning. Use the Digital Detox Ritual. Take magnesium and 0.5mg melatonin at your home bedtime. This single night of quality sleep restores natural killer cell activity and immune memory consolidation more than any supplement combination.
HYDRATION	Aim for 3 litres of water across the recovery day. Add a single electrolyte sachet to the first litre to restore sodium, potassium, and magnesium lost during transit. Avoid alcohol entirely for at least 24 hours post-trip; it directly suppresses immune function and fragments sleep.
GUT RESET	Eat simply: vegetables, lean protein, legumes, and fermented foods (yogurt, kefir, kimchi, sauerkraut). These feed the beneficial gut bacteria disrupted by travel. Avoid ultra-processed foods, excess sugar, and restaurant food if possible. The gut microbiome begins restoring itself within 48 to 72 hours of returning to a stable, fibre-rich diet.
MOVEMENT	A 20 to 30-minute low-intensity outdoor walk is the ideal recovery day movement. It combines light exposure (circadian realignment), lymphatic stimulation (immune function), and parasympathetic activation (cortisol reduction) without the stress of a full workout. Avoid high-intensity training for the first 24 hours post-long-haul.
SUNLIGHT	Morning sunlight exposure within the first hour of waking on your recovery day is the single most effective circadian realignment tool. Combine with your walk. Twenty minutes of outdoor light without sunglasses anchors the circadian clock to home time and accelerates the return to normal cortisol and melatonin rhythms.

QUICK REFERENCE

The Traveler's Immunity Cheat Sheet

CORE THREE (FLIGHT DAYS)

- Vitamin D3: 2,000-4,000 IU with food
- Zinc: 15-25mg with food (picolinate or bisglycinate)
- Vitamin C: 500-1,000mg on flight and arrival days

GUT LAYER

- Magnesium citrate: 200-400mg + water before bed (constipation)
- Magnesium glycinate: 300-400mg before bed (sleep + tension)
- Probiotic: 10-50bn CFU, start 3 days before travel
- L-Glutamine: 5g in water on long-haul days

SLEEP LAYER

- Magnesium L-threonate: 1,500-2,000mg (sleep onset)
- Ashwagandha KSM-66: 300-600mg evenings, start 5-7 days before
- Melatonin: 0.5mg, 90 mins before local bedtime, 2-3 nights only

THE DIGITAL DETOX RITUAL

- T-30: Devices face-down or in a drawer, alarm set
- T-25: Room cool (17-19C), blackout, DND sign on door
- T-20: Take evening supplements with a full glass of water
- T-15: 5 physiological sighs (double inhale, long exhale)
- T-10: Progressive body scan from feet upward
- 3am wake: no phone, 5 sighs, sit in darkness, return to bed

RECOVERY DAY

- One full uninterrupted sleep within 48 hrs of return
- 3L water + electrolyte sachet in the first litre
- No alcohol for 24 hrs post-trip
- Gut reset: veg, lean protein, fermented foods
- 20-30 min low-intensity outdoor walk
- Morning sunlight within first hour of waking

FINAL WORD

The Body Keeps the Score

The immune debt of frequent travel is real, but it is not inevitable. The difference between the traveller who gets sick every third trip and the one who stays consistently healthy is not genetics or luck. It is the accumulated effect of small, deliberate daily choices that keep the immune system adequately resourced.

None of the protocols in this guide are demanding. A handful of supplements, a 20-minute pre-sleep routine, one recovery day after intensive periods. The investment is modest. The return, measured in avoided sick days, consistent energy, and years of sustainable high performance, is significant.

CORE KIT	D3, Zinc, Vitamin C on flight days. The immune foundation.
GUT LAYER	Magnesium, probiotics, L-glutamine. Digestion and gut immunity.
SLEEP LAYER	Threonate, ashwagandha, melatonin. The recovery amplifiers.
DETOX RITUAL	20 minutes. Devices away. Sighs. Scan. Lights off.
RECOVERY DAY	Sleep, water, sunlight, movement, real food. Let the body rebuild.

Your immune system is not separate from your performance. It is the infrastructure your performance runs on. Protect it accordingly.