

AI-03759 Acute Headache International Travel

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Is there a headache related to jet lag? I don't normally have headaches. I'm now on day3 post Cebu to Austin TX. My fueling and hydration is the same. The only big change is I have done my 3-4 hours of cycling. Explain the pathophysiology of headaches. It does respond to Excedrin last night and Tylenol in the morning. My sleep is still out of sync and I'm getting 2-3 hours no deep sleep. How to fix it, Tylenol PM 80mg. Also I drink single espresso 3x per day

Yes—what you're describing fits very well with a **jet-lag-related headache**, especially with the added stress of long cycling sessions and poor sleep. Even people who "don't get headaches" can develop them under circadian disruption. Let's break it down in a way that actually explains what's happening inside your body.

Why jet lag causes headaches (pathophysiology)

At the center of this is your **circadian rhythm**, controlled by the brain's master clock (the suprachiasmatic nucleus).

When you flew from Cebu to Austin, you shifted ~13–14 hours. Your brain and body systems are now **out of sync**.

1. Circadian misalignment → neurotransmitter imbalance

- Serotonin and dopamine fluctuate abnormally

- Pain thresholds drop → you feel pain more easily
- This alone can trigger headaches

2. Sleep deprivation → brain hypersensitivity

You're getting **2–3 hours of poor-quality sleep**, which leads to:

- Increased cortical excitability
- Reduced pain inhibition pathways
- Increased adenosine buildup (drives both sleep pressure and headache)

This is one of the strongest headache triggers.

3. Trigeminovascular activation (the “headache pathway”)

Most non-injury headaches involve activation of the **trigeminal nerve system**:

- Releases CGRP (calcitonin gene-related peptide)
- Causes dilation of brain blood vessels
- Leads to inflammation-like signaling around the meninges

That's the core mechanism behind tension headaches and migraines.

4. Dehydration + electrolyte shifts (even if you think you're hydrated)

Cycling 3–4 hours post-flight adds:

- Sodium/potassium imbalance
- Reduced plasma volume
- Increased vascular sensitivity

Even mild imbalance can trigger headaches in a sensitized brain.

5. Caffeine timing mismatch

Your **3 espressos/day**:

- Can help acutely (vasoconstriction—why Excedrin works)
- But worsen sleep fragmentation and circadian delay
- Creates a mini “withdrawal-rebound” cycle overnight

Why your meds are working

- Excedrin
 - blocks pain + constricts vessels + boosts alertness
- Tylenol
 - central pain modulation (works but doesn't fix the cause)

So you're treating the **symptom**, not the root disruption.

About Tylenol PM 80 mg

Be careful here.

Tylenol PM contains **diphenhydramine**, which:

- Can help you *fall asleep*
- But **reduces deep sleep quality**
- Causes next-day grogginess and sometimes *more headaches*

80 mg diphenhydramine is on the higher side and not ideal for multiple nights.

The cycling factor (important)

Jumping straight into **3–4 hour rides** while jet-lagged:

- Increases cortisol (stress hormone)
- Further disrupts circadian rhythm
- Amplifies sleep debt

This is likely *prolonging* your symptoms.

How to fix this (practical + physiological)

1. Reset your circadian clock (most important)

- **Morning sunlight (non-negotiable):** 20–30 minutes within 1 hour of waking
- Avoid bright light after 8–9 PM

- Keep a fixed wake time (even if sleep is bad)

2. Fix sleep (without wrecking architecture)

Better than Tylenol PM:

- Consider low-dose **melatonin (0.5–3 mg)** 2–3 hours before target bedtime
- Magnesium glycinate at night can help
- Keep room cool and dark

3. Adjust caffeine strategically

- Keep your espresso—but:
 - Only in the **first 6–8 hours after waking**
 - Zero caffeine after ~1–2 PM local time

4. Dial back cycling temporarily

For 3–5 days:

- Reduce to **60–90 minutes Zone 2**
- Avoid long endurance rides until sleep normalizes

Right now, recovery > performance.

5. Hydration (but smarter)

- Add electrolytes (not just water)
- Especially sodium if sweating heavily

6. Medication strategy

- OK to use:
 - Tylenol
 - or occasional Excedrin
- Avoid daily reliance (rebound headache risk)

What to expect

For a 12–14 hour shift:

- Typical adjustment = **1–1.5 hours per day**
- Full recovery = ~7–10 days

You're on **Day 3**, right in the peak discomfort window.

When to worry (unlikely in your case)

Seek care if:

- Headache becomes severe or persistent beyond ~10 days
- Neurological symptoms (vision, weakness, confusion)
- "Worst headache of your life"

Bottom line

This is a **circadian + sleep deprivation + exertion-induced headache**, not a primary headache disorder.

The fastest fix is:

- Light exposure discipline
- Better sleep strategy (not sedating antihistamines)
- Temporarily easing off long rides

If you want, I can map out a **48-hour reset protocol** (sleep, light, caffeine, riding schedule) tailored to your exact wake time.

Good—this is very fixable with a tight 48-hour reset. The goal is to **force-align your brain clock to Austin time**, restore deep sleep, and stop the headache cycle.

You're coming from Cebu to Austin (~13–14 hr shift), so we'll use **light, timing, and controlled fatigue**.

48-Hour Jet Lag Reset Protocol

DAY 1 (Starting tomorrow morning)

Wake time (fixed): 7:00 AM

- Even if you slept 2–3 hours → **get up anyway**
- This is the anchor for your circadian reset

7:00–8:00 AM — Light + movement (CRITICAL)

- Go outside for **20–30 min sunlight**
- Easy walk or very light spin (no intensity)

This tells your brain: *“this is morning now”*

7:30–11:00 AM — Caffeine window

- You can have your espresso (keep it to 2–3 max)
- **Hard cutoff: 12 PM (non-negotiable)**

This prevents circadian delay later.

10:00–12:00 — Short ride only

- 60–90 min **Zone 2**
- No long endurance ride yet
- You’re not training—you’re recovering

Meals (important signal)

- Breakfast: within 1 hour of waking
- Lunch: 12–1 PM
- Dinner: 6–7 PM (don’t go late)

Food timing helps reset internal clocks.

5:30–7:30 PM — Wind-down phase

- Dim lights in your home
- No bright overhead lighting
- No stimulating activity

8:30–9:00 PM — Sleep prep

- Take **melatonin (0.5–3 mg)**

- Magnesium glycinate (optional but helpful)

Avoid:

- Tylenol PM (reduces deep sleep quality)

 **9:30–10:00 PM — Lights out**

- Even if not sleepy → lie down anyway
- Your brain needs repetition, not perfection

NIGHT EXPECTATION

- You may still wake up at 1–3 AM
- If awake >20 min:
 - Get up
 - Dim light only
 - No phone scrolling
 - Return to bed when sleepy

DAY 2 (The “lock-in” day)

 **Wake: 7:00 AM again (no exceptions)**

Even if sleep sucked again → this is what forces adaptation.

 **Repeat morning sunlight + movement**

Same as Day 1—this is the strongest lever you have.

 **Caffeine: same rules**

- Front-load only
- Cutoff by noon

 **Training**

- If you feel better: up to 90–120 min Zone 2
- Still **no 3–4 hour ride yet**

🌙 Night routine (repeat exactly)

- Same melatonin timing
- Same lights-out window



Why this works (in plain terms)

You're correcting:

- Melatonin timing (shifted from Asia time)
- Cortisol rhythm (currently inverted)
- Brain pain sensitivity (causing headaches)

The combo of:

- **Morning light**
- **Caffeine cutoff**
- **Consistent wake time**
- **Shortened training load**

...resets all 3 systems together.



Headache control during reset

Use sparingly:

- Tylenol → safe baseline
- Excedrin → OK if needed, but avoid late-day use

If you fix sleep, headaches usually disappear in 2–4 days.



What's currently slowing your recovery

Right now, these are working *against* you:

- 3–4 hour cycling sessions
- Late caffeine effect

- Diphenhydramine (Tylenol PM) suppressing deep sleep
- Irregular sleep timing



What you should feel

- **Day 4–5:** headaches fading
- **Day 5–7:** sleep consolidates (longer blocks)
- **Day 7+:** mostly normal

Bottom line

You don't need more medication—you need **stronger circadian signals** and **temporary restraint on training**.

If you want, I can tailor this further (exact caffeine timing, ride schedule, and sleep window) based on what time you've actually been falling asleep the last 2 nights.