

THE HIDDEN LINK

How air travel can worsen chronic illness, and why hyperbaric oxygen is the key

By Jill Neimark

It was a beautiful warm evening in Tucson in early January, and my plane had just landed. I was on assignment to write an article about a horse ranch, and earlier that morning I'd left a freezing New York City behind.

I drove my rental car to the hotel, but I was worried. On the second leg of the stopover flight, I'd begun to suffer the stirrings of a headache that I knew was going to slowly crescendo over the night into terrible pain. I have been struggling with Lyme disease for four years now, and one of the hallmark symptoms are migraine-like headaches that put you in bed for a day or two. I call them "lymegrains."

I used to be clobbered by them once or twice a week, but I hadn't had one since late August—not since I'd been using a home mild hyperbaric chamber a few times a week. It had banished the crushing head pain to a mere memory.



But for some reason the flight had triggered one. I lay in pain all night and barely made it up by ten a.m. that morning, called my host, and told her there'd be a delay. And then I called Lance Brubaker, Director of Bio-Medical Engineering of The Hyperbaric Therapy Center, which treats patients with mild hyperbaric in Cumming, GA. I knew I needed a session, or I wouldn't be able to complete my assignment.

Lance located two professionals, one an M.D. and the other a naturopath, with mild chambers in Tucson, and a few hours later I was blissfully breathing oxygen under pressure and my headache began to melt away. The doctor whose chamber I visited, Jane Orient, M.D., had bought it to treat her own multiple sclerosis, and confirmed that it seemed to be slowing or halting progression of the condition. I stayed in the chamber about 40 minutes, and by the time I was out my headache had diminished, and a few hours later it was gone. I went out to the horse ranch for two days of on-site experience and interviews, and flew home safely.

But the question lingered in my mind: why had the flight triggered a lymegraine? Lance suggested three reasons: 1) When airplanes are up at flying altitude, the pressure inside the cabin is about 8,000 feet. For someone who lives at sea level, that's a high altitude; 2) the air is re-circulated, and as all the passengers breathe out carbon dioxide, over time the oxygen level in the ambient air goes down; 3) stopover flights cause dormant bacteria to replicate. Going up and down twice in one day is harder on the body than a straight flight. In other words, hypoxia, low altitude, and changing pressure several times had overwhelmed my defenses. And just 40 minutes in the chamber reversed that.

Lance explained that the same thing frequently occurred during his bout with Lyme in the early 90's when he flew for business. "Flights greatly exacerbated my Lyme symptoms, especially connecting or stop over flights. I would get off the plane and my body was trembling and sweating. I became hyperactive, disoriented, extremely anxious and would be unable to sleep for days afterward." Lance discovered that both pathogens and the immune function were susceptible to changes to lower oxygen and lower pressure. "A drop in pressure and oxygen will suppress immune function and signal pathogens to proliferate, or grow rapidly. The exposure to such low pressures experienced on an airplane can cause jet lag in a healthy person and a severe relapse for the chronic disease patient.

"Lower pressure can cause a reduction in oxygen dilution into hemoglobin," explains Dr. Rhett Bergeron, M.D., of Cumming, Georgia. "This results in an overall reduction in oxygen. Flying or vacationing at high altitudes may not be a wise choice for the immune compromised or those with chronic conditions. But if these patients do hyperbaric treatments before and after flying, they can protect themselves.

So is there a connection between the relative hypoxia of air flights and the hypoxia common in chronic illness? I turned to Ignacio Fojgel, M.D., Head of the Complimentary and Integrative Medicine Department at Maimonides University School of Medicine in Buenos Aires, a specialist in hyperbaric oxygen treatment who utilizes two mild chambers at his hospital in Buenos Aires. He'd written a research paper on the connection between the two, especially on

neurological conditions like lyme. "The diminished oxygen levels in flight are sufficient for healthy individuals, but not for patients with pre-existing conditions," says Fojgel. "They may show symptoms after as little as two hours of flight." Airplane flight for the chronically ill should therefore be regarded as a kind of potential altitude sickness, and precautions taken. Here are the conditions that can be triggered or worsened by altitude, notes Fojgel:

"A drop in pressure and oxygen will suppress immune function and signal pathogens to proliferate, or grow rapidly."

Hypertension, recent major surgery, valvular disease, diverticulitis, COPD, congestive heart failure, sickle cell trait or disease, unstable angina pectoris, Myocardial infarction, cardiac arrhythmias, congestive heart disease, peripheral arterial insufficiency, thrombophlebitis, osteomyelitis, pneumothorax, pulmonary hypertension, ulcerative colitis, epilepsy, chronic fatigue (CFIDS), lyme disease, and any other chronic illness.

Fojgel believes that a good deal of jetlag is actually a mild form of altitude sickness. "Most in-flight and post-flight disorders, including most so-called "jet-lag" can be traced to the hypoxic event called air travel. If a flight doesn't traverse more than two time zones, any such incident should not be termed jet-lag, but ascribed to hypoxia."

In fact, says Fojgel, "A patient of mine had a stroke after flying from Bangkok. After only 25 mild hyperbaric (mHBO) sessions, there were no signs left of the stroke. The doctors at the best clinic in Buenos Aires were aghast."

So what can you do if you travel frequently by airline, or if you have any kind of chronic illness that could be worsened by air travel? I know what I'm going to do from now on: pre-treat the day before in my chamber, and know ahead of time which practitioners have mild chambers in the city I'm going to, so that I can have a treatment the day after I touch down. For a particularly long flight—one to, say, Brazil, Israel, or New Zealand, I'd also ask my doctor for a prescription for in-flight oxygen. Dr. Fojgel also recommends the following:

- Heavy meals should be avoided prior or during an ascent to altitude, or in air transportation.
- Alcohol promotes dehydration, and is to be avoided.
- Oxygen by mask should be provided to neurological patients flying for more than 2 hours.
- "Super-charging" with several hyperbaric sessions, prior to the flight or ascent can be considered if there is a history of incidents, or if recovering from a recent illness, and/or
- Hyperbaric treatment can be indicated after an altitude episode, as a rapid recovery measure.
- Adequate sleep is recommended, but not onboard. If it is not possible to stay awake, do not lie down, but sleep with the back of the seat in a 45° position. Exercise in your seat every two hours

www.VitaO2.com - info on inexpensive, portable hyperbaric oxygen equipment.

www.HyperTC.com - Hyperbaric Therapy Center offering hyperbaric oxygen therapy treatments.