﻿

Prone to Motion Sickness?

By Melinda Wenner Moyer

Road trips are never easy, but they are far more unpleasant when your child repeatedly vomits in the back seat because they’re carsick. I know, because that’s what happens whenever I drive more than an hour with my 8-year-old. She’s now had enough practice to neatly throw up into a plastic bag, but I feel for her every time it happens and wonder what I can do to ease her misery.

This summer, we took multiple road trips, and we tried many remedies: moving her position inside the car, acupressure [wristbands](https://www.sea-band.com/), bizarre-looking [anti-motion sickness glasses](https://www.smithsonianmag.com/innovation/could-these-glasses-cure-your-motion-sickness-180969722/), Dramamine. Some things worked better than others, and during each experiment I wondered why motion sickness — nausea and vomiting induced by riding in cars, boats, planes or using virtual reality devices — occurs in the first place. Why are some people more susceptible than others? Are there research-backed cures, or is trial-and-error really the best approach? I interviewed four motion sickness experts to get answers.

**The causes aren’t clear, but motion sickness may have evolved for a reason.**

Most experts believe that people feel motion sick when the parts of their brain responsible for maintaining balance receive conflicting sensory information, often due to a difference between what they’re feeling and what they’re seeing. Usually, when you turn your head, take a step or initiate any kind of motion, your brain receives signals from your inner ear about what that should feel like. When you’re sitting inside a car or boat but still feel a sense of motion from the vehicle, your brain notices a sensory conflict and you start to feel sick. (Similarly, virtual reality devices cause motion sickness because your eyes receive motion signals that your body doesn’t feel.) Other experts, including Thomas Stoffregen, a psychologist at the University of Minnesota, argue that the body’s inability to stabilize itself while in motion plays a role.

Some researchers speculate that motion sickness evolved to protect us from poisoning. When our perceptual experiences don’t line up with what is expected, “the brain goes, ‘aha, maybe I’ve been poisoned,’” said John Golding, an applied psychologist at the University of Westminster in Britain. We then feel nauseated and start vomiting, ostensibly to eliminate these potential poisons from the body.

Kids do not typically start experiencing motion sickness until the age of 4 or 5, if they ever do, because their bodies have to first build an internal model of what various motions should feel like, Dr. Golding explained. The peak age for motion sickness is around 8 — this explains my daughter — and susceptibility decreases over the tween years as kids’ bodies start to naturally habituate to and resolve these sensory conflicts. But of course, many adults experience motion sickness, too.

**Prevention is the best cure.**

One key tidbit I learned from my interviews is that it’s hard to alleviate motion sickness once it fully sets in on a given trip, so it’s far better to try to prevent it from happening or to take steps to alleviate it when it’s starting.

The best way to prevent motion sickness is to look out at the horizon when you’re moving in a car, boat or plane — this helps to eliminate the sensory mismatch, because your eyes see that you’re moving, Dr. Golding said. (You don’t, however, want to focus on the ground or trees rushing by, because that movement is too fast to provide you with a sense of stability.) When we shifted my daughter’s booster seat from the side of the back seat, where her view was of my headrest, to the middle, where she looked out the front windshield and saw the car moving, she was much less likely to feel sick. Dr. Golding also suggested trying to keep your head fairly still, but added that it’s always a bad idea to read or look at devices, because you’re focusing your eyes on something that isn’t moving.

Some medications can help prevent motion sickness, such as those containing dimenhydrinate, meclizine or scopolamine. (All of these drugs cause drowsiness, and scopolamine can also cause blurred vision and problems urinating.) Dr. Golding emphasized that the medications work best when given 45 minutes to an hour before a trip starts, and that they don’t work as well — if at all — once motion sickness has set in. That’s in part because, once you feel sick, your digestion slows and the drugs are less likely to get into your system, Dr. Golding said. (Also, if you vomit, you’ll throw the drugs right up.)

He added that there is some research suggesting that [focusing on your breathing](https://pubmed.ncbi.nlm.nih.gov/10596772/) can prevent motion sickness, too. Before a trip, he suggested practicing breathing in deeply and keeping your breaths slow and steady, and to try to do this while you’re traveling, too.

Also, be on the lookout for early motion sickness symptoms, which include yawning and fatigue, said Charles Oman, an aerospace engineer at the Massachusetts Institute of Technology, who studies motion sickness. If you or a family member is starting to feel tired or sick and you’re in a car and have the time, it may help to make a pit stop until everyone feels better, he said. If possible, then wait an additional 10 to 15 minutes before starting to drive again. If you’re starting to feel sick and you’re able to lie down (something you probably can’t do in a car, but perhaps in a boat), that may also help, he said.

**Some alternative treatments work better than others.**

I have succumbed to motion sickness from time to time — especially on boats — and I swear by the acupressure wristbands that push on a point three finger-widths above the wrist joint on the forearm. According to traditional Chinese medicine, this pressure point [plays a role in regulating nausea](https://www.sciencedirect.com/topics/nursing-and-health-professions/nei-guan). But research suggests these wristbands typically don’t work any better than a placebo, said Andrea Bubka, a psychologist at Saint Peter’s University in New Jersey. That said, the placebo effect can be strong, and Dr. Golding emphasized that if these treatments work for you or a family member, you might as well keep using them. (I certainly will, although they haven’t worked for my daughter.)

As for the weird anti-motion sickness glasses that were recommended to me by a friend, there isn’t yet scientific evidence on how well they work, but Dr. Bubka said she’s heard anecdotally that they ease motion sickness symptoms because their circular rims contain liquid that moves as your body moves, providing an artificial horizon. However, when my daughter wore them while watching her iPad on a car trip, she still felt sick, so I’m not convinced (but perhaps we should try them while she’s not on her iPad).

When it comes to the effects of ginger, experts disagree. Dr. Stoffregen said that eating ginger snaps or ginger candies before a trip [can help](https://pubmed.ncbi.nlm.nih.gov/3277342/) prevent motion sickness, as can sipping ginger ale, as long as it contains real ginger and not artificial flavoring. But Dr. Bubka said she hasn’t seen good research supporting ginger’s benefits.

Three days ago, my family had the opportunity to put many of these suggestions to the test when we embarked on an ‌eight-hour car journey home from Maine. Hoping to minimize the chance that my daughter got sick — and wanting to let her watch her iPad on the long drive — I gave her dimenhydrinate (Dramamine) 45 minutes before we started off. I also sat her in the middle of the back seat and told her to look at the horizon if she started to feel woozy. It was a success: One of our first vomit-free, whine-free family travel experiences in years.