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MOVEMENT BREAKS & THE BODY ELECTRIC PROJECT

Manoush Zomorodi

Tapping, swiping, scrolling, sitting—it's the rhythm of modern life. And it's the source of our stiff necks, foggy minds, shoulders hiked up to our ears, energy drained, focus depleted, yet unable to sleep.

We tell ourselves this is simply the trade-off for all the connection and convenience. This is just how it is. But our devices are doing more than leading us to sit for hours: They're disrupting the quiet feedback loop between the body and the brain, leaving us exhausted, strangely disembodied, and feeling like crap.

Is this really the price of living in the twenty-first century? Can't we live with our tech without feeling wrecked by it?

For years, I've been investigating how technology shapes us—our attention, our creativity, and our senses of self. My first book, *Bored and Brilliant*, grew out of a citizen science project where tens of thousands of people joined me in exploring how boredom (yes, boredom) could unlock creative breakthroughs. I explained the neuroscience behind why our brains aren't built for all those pings and notifications—and together, we experimented with spending less time on our phones and more time letting our minds wander. The results were small but powerful: better sleep, clearer thinking, and moments of unexpected joy.

Since then, I've carved out my own beat—what I call the **mind-body-tech connection:** how our health is influenced by the tools we use every day, and how we can reclaim our humanity in a world designed to keep us glued to screens.

During the pandemic, millions of us were tethered to our technology for work, school, socializing—everything—and any boundaries between our bodies and our devices completely dissolved. The result was an overwhelming fatigue that gave us new aches and pains, rising anxiety, and yet more trouble sleeping.

As we were emerging back into the world, I came across the work of Keith Diaz, a Columbia University Irving Medical Center researcher studying the physiological effects of sedentary behavior. His straightforward finding grabbed me: Simply getting up for a five-minute walk every thirty minutes reversed many of the negative effects of prolonged sitting. Blood sugar spikes, blood pressure, mood dips, fatigue—all vastly improved in his lab's participants.

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As a physiologist, Keith's job is to figure out how humans can move more effectively to protect their health, and for the past decade, he's been chasing a very specific—and urgent—question: *What's the minimum amount of movement people need to counteract the harms of sitting?* In other words: How little can we get away with so that sitting doesn't kill us?

That question first hooked him back in 2012. While he was working on his doctorate, a new study making waves in his field caught his eye: Researchers had discovered that sitting for long stretches was dangerous, even for people who exercised regularly. It was an unexpected finding—"We were very surprised that even the highest level of exercise did not matter squat for reducing the time spent sitting," Marc Hamilton, PhD, one of the authors, told *Runner's World* at the time. Prior to that, researchers had figured that exercising at any point in the day would counterbalance or cancel out entirely the negative impact of subsequent sitting, and it seemed hard to believe otherwise.

When he came across the information, Keith was floored. "I was like, What? How can this be?" he told me later. Like most physiologists, he'd been taught that exercise was the gold standard for preventing disease—the closest thing we had to a universal cure. The idea that sitting could undermine it seemed absurd.

So, he set out to disprove the finding. He pored over large-scale national datasets, analyzing tracker data from thousands of people. He examined studies from abroad, like one from the Netherlands that compared people who exercised for an hour in the morning and then sat for the rest of the day with those who avoided sitting for long stretches. Again and again, the results pointed in the same direction: An hour of exercise wasn't enough to erase the harms of all-day sitting.

By the end of his deep dive, Keith had no choice but to accept the researchers' conclusion. The more people sat, the more their risks for heart disease, diabetes, certain cancers, and early death climbed, even if they logged regular workouts.

This is where movement breaks come in. They counteract the damage of prolonged sitting, restarting the essential biological processes that keep your blood flowing, your glucose in check, and your brain alert.

Over the past few years, Keith's group at Columbia University Irving Medical Center has been experimenting with different "doses" of movement to figure out how little we can get away with. In 2023, they published their initial findings in a paper—the same one that caught my eye and led me to their lab: "Breaking Up Prolonged Sitting Cardiometabolic Risk: Dose-Response Analysis of a Randomized Crossover Trial."

In it, they shared the conclusion that five minutes of walking every thirty minutes was just enough to wake up the systems in your body that go offline when you sit too long. This dose and cadence of movement reduced blood sugar levels as much as prescription diabetes medication and dropped blood pressure as much as exercising five days a week, thirty minutes a day, for six months. Even the lightest dose they tested—one minute of movement every hour—reduced blood pressure by four to five points (though it had no impact on blood sugar levels). This initial study was small, but the findings so promising, that the lab was preparing to conduct a much larger study to test the effectiveness of various movement dosages.

Keith and his team were proud of their findings. But they also knew the hard truth: No matter how impressive the data, a research paper doesn't usually motivate people to change their habits. And even if it did, there was still a bigger question: Could anyone realistically stick to movement breaks in the chaos of real life? In the lab, someone reminds you to get up and brings your lunch.

Out in the world, people are glued to laptops, juggling deadlines, trying to make a living. Asking them to interrupt their work every thirty minutes sounded like wishful thinking. "That's the thing with lab-based studies," Keith said. "They're not the real world. I can tell you what's optimal, but can anybody actually do it? And if not . . ." He trailed off. "Then it's pointless."

I refused to believe it wasn't feasible. The gap between lab results and daily life was obvious—but why not test Keith's movement prescription "in the wild"? Let's find out if this small, powerful habit could take root in real lives and make people feel better.

I pitched an idea: My team at NPR and I would create a series called Body Electric, inviting tens of thousands of listeners to try movement breaks for themselves in a massive clinical trial.

The plan was simple. After logging a week of baseline activity, each participant would choose one of Keith's movement prescriptions:

1: Be active for 5 minutes for every 30 minutes of sitting

2: Be active for 5 minutes for every 60 minutes of sitting

3: Be active for 5 minutes for every 120 minutes of sitting

In October 2023, Keith and I issued a challenge to NPR's listeners: Try taking movement breaks. See if they improve your mood, concentration, and general health. Would people be willing to upend their sedentary screen-filled lives in the name of science?

The response was overwhelming. Within hours of launching the study, Columbia University's servers crashed. People from all fifty states and seventy-four other countries rushed to sign up. In the end, over 20,000 participants qualified: teachers and professors (539 of them), lawyers and legal professionals (374), physicians and nurses (294), software engineers, consultants, business owners, caregivers, retirees, business owners—the list went on. Most were college educated, were working full-time, and described themselves as high performers with caring colleagues. Nearly 85 percent were women, which didn't surprise Keith; women tended to step up for health behavior studies like this one.

The participants had ambition, supportive workplaces, and the best of intentions—but they were living in a culture that had them glued to screens. Three-quarters of those employed were either hybrid or fully remote. Many admitted to "media multitasking"—typing on laptops while streaming Spotify, glancing at phones, juggling texts. On workdays, they sat an average of 7.6 hours. On their days off ? Even more—9 hours.

These were our test subjects: smart, capable, and exhausted.

Could people really change how they moved—and how they related to their bodies—in a world that demands we live so much of our waking lives through our screens?

The first day of the project, I woke up and thought of the thousands of people across the globe who were trying—really trying—to live differently. I pictured someone in Seattle setting their timer, another person in Paris slipping on sneakers, yet another in Kentucky walking circles around their dining table between Zoom calls. I wanted so badly for this experiment to work. Yet I couldn't shake the nagging question: Were we asking too much? Could people really change how they moved—and how they related to their bodies—in a world that demands we live so much of our waking lives through our screens?

Sure enough, questions and frustrations started rolling in.

By the end of the three-week trial, an impressive 60 percent of the more than twenty thousand participants had completed the study requirements—a remarkable result for a low-touch, self-directed experiment. Keith was shocked. For a self-directed clinical trial, conducted entirely in people's homes, with no coaches, no reminders, and no incentives, that level of follow-through was remarkable.

Participants reported lighter moods, clearer heads, and a surprising boost in energy—fatigue levels dropped by as much as 28 percent on days when they kept moving compared to the days when they didn't move consistently. Many noticed their bodies relaxing, pain easing, and even a few pounds slipping off without trying. For some, it was the mental shift that mattered most: setting down their phones, stepping away from screens, and reengaging with the real world. And contrary to fears that all these interruptions might hurt workflow, people said they returned to their work feeling more focused, creative, and even slightly more productive.

THE 2023 BODY ELECTRIC FINDINGS

MENTAL HEALTH BENEFITS CAME FAST | On days when participants took movement breaks, they reported being in a better mood—more positive emotions, fewer negative ones. Many described the effect as "clearing my head," "adding perspective to the day," and giving them "a better mental outlook on everything" or simply "a mood boost." Fatigue also dropped: Participants reported feeling 21–28 percent less tired on average.

MOVE BREAKS PULLED PEOPLE OFF THEIR SCREENS | The habit did more than get bodies moving: It broke patterns of mindless scrolling and screen fatigue. As one participant put it, move breaks "took me away from the social media and mindless internet reading and time wasting I usually do during breaks." Another said it kept them "from mentally zoning out on my phone for hours," while others found themselves "setting my phone down and stepping away from my computer and engaging with real life."

MAKING TIME WASN'T EASY—BUT IT WAS DOABLE | Taking a movement break every thirty minutes was the hardest to stick with: Only half of this participant group managed it consistently. Top barriers included pressure to stay productive, feeling too busy, and worrying about workplace norms. Even so, participants in this group still averaged eight breaks a day—forty extra minutes of movement they wouldn't have gotten otherwise. Hourly and every-two-hour schedules proved far more manageable. About 70 percent of hourly break participants and 80 percent of everytwo-hour participants kept up their routines and described them as "doable."

THEIR BODIES FELT DIFFERENT–QUICKLY | All kinds of aches eased. Participants reported "less muscle pain and stiffness" and "less of that antsy feeling, with restless legs." One admissions officer wrote, "When I started tuning in to my body and actually feeling better after a few minutes of moving, I was legitimately surprised by that." A professor noticed it almost immediately: "Even during the first steps of my walk, I could feel my body relax."

In the face of personal and professional obligations, packed schedules, and cultural expectations to keep sitting, participants had figured out how to weave these five-minute breaks into their lives.

SOME LOST WEIGHT–WITHOUT EVEN TRYING | The scale shifted for some participants, even without formal exercise. "The longer I did the breaks, the easier they were, and they became just a part of my time. Plus I lost five pounds," someone wrote in. Others shared: "I lost weight and I'm a very active person already who works out five to six days a week for at least an hour," "I actually lost two pounds in the last two weeks," and "I lost four pounds by doing this, no other changes."

WORK PERFORMANCE DIDN'T SUFFER–IN FACT, IT IMPROVED | Instead of breaking their flow, movement breaks seemed to sharpen it. Participants returned to tasks feeling "refreshed," "energized," "relaxed," "focused," "more grounded," and "less stressed." They reported being more engaged at work and even self-reported slight gains–about 4 percent–in both work quantity and quality on days they took breaks. One participant summed it up: "I often had a creative solution when I returned."

THE ACT OF MOVING FELT GRATIFYING IN ITSELF | People described a deep satisfaction in simply knowing they were doing something good for themselves. They appreciated the "simplicity" of Body Electric and celebrated small wins like "getting outside more" or "feeling I was doing something less damaging for my health on the days I have nothing but sitting work to do." As one put it: "By the end of the day, I'd added up an hour or more of movement without even realizing it."

MORE MOVEMENT, MORE BENEFITS | The data showed a clear dose-response relationship: The more breaks people took, the more improvements they reported. "The group that took a movement break every half hour had the best changes in fatigue and mood," Keith said. "Next was the group that moved every hour." Even those who moved every two hours saw measurable change: Their fatigue improved by about 21 percent.

MOST PARTICIPANTS ENJOYED THE EXPERIENCE | Across all groups, 82 percent of people who completed the study said they liked doing it–even those who struggled to hit every scheduled break. "This was encouraging," Keith said. "It showed people could do this. They wanted to do this. And they felt better when they did–less fatigue, better concentration, and no trips to the gym."

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The thing you can do to maximize your experience is find your sweet spot.

If it's been a while since you've moved regularly, start slowly. Try one minute every two hours and build up from there—with support from your physician or physical therapist if needed. If your days are unpredictable, do what you can when you can. Some days, you'll do more. Some days, less. That's normal. Be flexible.

And if you miss a break—because you're driving, in a meeting, or having a lovely conversation—skip the guilt. Just take the next one. That's what matters.

Whatever approach you choose—full-on, easing in, or adapting day by day—the good news is the science supports all of it. Even one break is better than none. Start small. Start tomorrow. Start somewhere.

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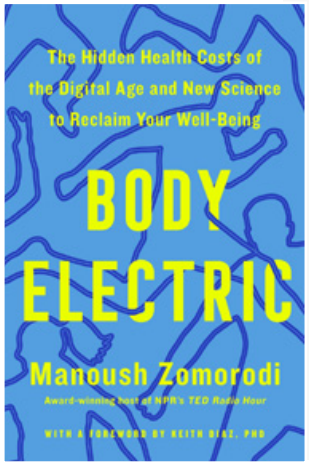

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ABOUT THE AUTHOR

Manoush Zomorodi is an award-winning journalist and host of NPR's *TED Radio Hour*. Her "Body Electric" project was one of the largest public health studies of its kind. She has received two Gracie Awards for Best Radio Host and a Webby Award for Best Podcast Host. Her first book, *Bored and Brilliant* was published in 2017. Manoush lives in Brooklyn with her family, is half Swiss and half Persian, and loves walking her Havanese dog.

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