

# The Science of Using Yoga to Heal from Trauma

by [Mika Doyle](#)

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For some people, yoga is a sport or a spiritual practice. But researchers are studying how it helps people heal from trauma. Photo by [Liz West](#).

When I agreed to participate in a scientific study on the effects practicing yoga has on post-traumatic stress disorder symptoms, I wasn't just skeptical. I thought the idea was ludicrous. I'd done yoga at the gym before, and while it's good exercise, it did nothing for my PTSD symptoms. Actually, practicing yoga at the gym made me feel nauseated and even more fatigued than I already was. So when my therapist asked me to practice yoga for an hour a week for eight weeks as part of a study for a local psychology professor, I said yes because it was a way to get free yoga classes for two months. And, my therapist pointed out, I could help people in the process. What the hell, right? I didn't think it would actually change anything about my life.

It turns out I was totally wrong.

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When the research started, I wasn't completely convinced I had post-traumatic stress disorder. I mean, PTSD happens to people who've experienced serious trauma, and I wasn't ready to admit anything traumatic had actually happened to me. I was sexually assaulted as a teenager, but at age 30, I had myself convinced my symptoms were due to anything other than PTSD. Maybe it was diabetes. Polycystic ovary syndrome. Fibromyalgia. Anything other than PTSD.

When I arrived at my first class for the study at a small yoga studio on the second floor of an old downtown building, I was feeling so guarded it was like I'd erected my own psychic Fort Knox around myself. Being there felt like admitting that assault had really happened all those years ago. I didn't want to admit to myself that I belonged in this group. I felt like maybe the other people in the room had PTSD, but I wasn't like them. So I unrolled my mat in the back corner of the room, and I sat down and made myself as small as possible. There were 12 or so participants packed into that room, and I avoided eye contact with every one of them, forcing myself not to glare at the instructor when she spoke to me directly to introduce me to the class. I wasn't there to make friends. I was just there to help the study organizer get data. When the class was over, I went home and had a massive headache for several days. I vowed I wasn't going back.

But my parents didn't raise a quitter, so I did go back. Every week for eight weeks. The researchers tested my brain and body in a couple key ways before and after the weeks of yoga. I wasn't sure that my body felt any different by the end of those eight weeks, but I couldn't deny my post-yoga results were revealing. One thing the researchers measured was skin conductance, which gauges the reactivity of my autonomic nervous system (the system responsible for the fight-or-flight response). My pre-yoga test showed I never completely relaxed while the test was being conducted. When presented with a "startle sound" during the test, my stress levels remained elevated for a long time—I never returned to my baseline level of stress. However, after eight weeks of yoga, my baseline level of stress was significantly lower. After I heard the sharp noise, I relaxed more quickly, too: I was able to bring my stress level back down gradually after hearing the startle sound. The study included other tests, but it was the skin conductance test that convinced me that, as much as I tried not to face it, I do actually have PTSD as a result of being sexually assaulted, and practicing yoga for an hour a week for eight weeks helped me decrease the severity of my PTSD symptoms. I guess it wasn't so ludicrous after all.

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Photo by [Liz West](#).

If you're as skeptical as I am of holistic medicine, you're probably calling bullshit right about now, but there's a wealth of research that supports these results. According to David Emerson, director of yoga services at the Trauma Center at Justice Resource Institute in Massachusetts, chronic interrelational trauma (think childhood sexual abuse or domestic violence situations) actually changes the brain by decreasing the activity in the interoceptive regions of the brain, or the parts of the brain that connect physical experiences in the body to awareness of those experiences. "You have a body sensation and then an emotion and then an action," says Emerson. "I feel hunger. I want less of that, so I know what to do. In between [the body sensation and action], there's an emotional valence. Trauma heightens the emotional dynamics because the material around the emotion and body experiences is so intense and fraught. Surviving trauma is protecting ourselves to exposure to feelings and our bodies."

This means the brains of people who've experienced complex interrelational trauma aren't getting clear information from their bodies, causing dysregulated body experiences, or a disconnect between what the body experiences and how the brain interprets those experiences. Dysregulated body experiences essentially hinder a person's ability to regulate their physical and emotional responses to the world around them. This is what causes trauma survivors to experience hyperarousal (being easily startled, having angry outbursts, feeling tense or anxious), avoidance (avoiding thoughts and feelings related to the trauma or avoiding things that remind them of the trauma), and reexperiencing symptoms (flashbacks, nightmares, intrusive thoughts). Erin Fisher, who has a doctorate in psychology and was the organizer of the study I participated

in, likens this to a light switch that has been flipped on. “It appears that in some people, trauma causes the brain to remain in something similar to the fight-or-flight state, like a light switch has been turned on,” says Fisher. “The key to getting better is in getting that light switch turned off or at least turned into a dimmer switch. While having victims talk about their trauma and helping them consolidate the memories is important, it doesn’t do much good if their brain is still on fire.”

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Research conducted by Bessel van der Kolk, founder and medical director of the Trauma Center at JRI, in collaboration with Emerson shows that a yoga model designed specifically for survivors of complex interrelational trauma increases activity in the interoceptive regions of the brain, resulting in decreased PTSD symptoms in participants. The yoga practice focuses on helping participants feel what’s happening in their bodies when they flex and extend their muscles in the hopes of rebuilding or rewiring the interoceptive regions of the brain. From this research, Emerson and his colleagues have developed what is now known as trauma-sensitive yoga.

Trauma-sensitive yoga isn’t your typical gym yoga. There are no physical assists or corrections, the language is invitational rather than directional, and the focus is on noticing what you feel in your body rather than on creating correct yoga forms. The yoga instructor also participates fully alongside participants rather than walking around the classroom. According to Emerson, each of these elements is “very trauma informed.”

“Power dynamics are key,” says Emerson. “The kind of trauma we’re treating [with trauma-sensitive yoga] is interrelational abuse of power. The [yoga] facilitator has an obligation to understand power dynamics, and invitational language is an expression of that. We’re not inviting you to do anything we’re not doing ourselves. We’re in this together. Trauma does things to relationships where it really splits actor and acted upon in all different ways. It is about really manipulating power. Participating together is an antidote for that.”

This explains why gym yoga made me feel sick. As Emerson puts it, the focus of my gym yoga class was an exteroception response—what does the instructor want from me? Am I doing this form right? They want me to hold this pose for how long? Although the yoga classes I attended for the study were not official trauma-sensitive yoga classes, they were taught by an instructor whose philosophies aligned more closely with Emerson’s research.

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Photo by [Augusto Mia Battaglia](#).

“Everything we did [in the study] was very basic. Very gentle,” says Tamara Bogard, the yoga instructor for the study I participated in. “If yoga resembles exercise, it could excite the sympathetic nervous system [part of the autonomic nervous system responsible for the fight-or-flight response] because exercise in general does excite the sympathetic nervous system. Gentle yoga is not going to do that. It’s going to calm it. It’s going to bolster the parasympathetic nervous system [part of the autonomic nervous system responsible for the rest-and-digest response]. It’s going to encourage rest and digest instead of fight or flight.”

Fisher agrees with Bogard’s assessment. “Yoga is a fantastic tool for calming the autonomic nervous system. It gets you in touch with your breathing, teaches you how to control it, and you become more in tune with the changes in your body in reaction to stress.”

Jill Shockley participated in the same study I did to help her heal from an abusive childhood. Although she’d been in therapy for more than eight years and had tried medication, she was still experiencing anxiety and depression. She’d only done a few yoga videos at home before the study, but now she goes to yoga classes at Bogard’s studio once a week. “I wasn’t really aware of how much [yoga] makes you aware of your body and physically and mentally being present,” says Shockley. “[After the study ended], I feel like my anxiety is a lot less. I feel a lot more energized. I feel less tension. I definitely have less tension headaches.”

Shockley recommends other people who have experienced trauma give yoga a try. “I think a lot of people who have experienced trauma are scared to get in tune with their bodies. As women, a



lot of people have experienced sexual assault and that sort of thing, and it's kind of intimidating to be that aware of your body, but I think it's a good experience, and it's nothing to be afraid of. I never leave yoga class wishing I hadn't come."

Andrea Holm wasn't a part of the study, but she practices yoga at Bogard's studio as a part of her self-care plan, which also includes therapy, domestic violence support groups, reading, and meditation. Holm developed PTSD as a result of being in an abusive marriage for 28 years. Among the many symptoms she has had to navigate over the years, she has experienced a racing heart, blurry vision, tension, fear responses, headaches, teeth grinding, stomach pain, and tension in her neck. She originally turned to yoga while she was still married to find a place of peace in an otherwise chaotic life. It soon became her safe space where she was able to take back her power. Within the calm and quiet of the yoga studio, Holm was able to replace her abuser's voice with her own, and she gradually began to regain her sense of self. After the marriage ended, Holm says yoga helped her better manage her PTSD triggers through deep breathing and self-talk exercises.

"You're more powerful now. You're a different person. He can't hurt you," says Holm of her self-talk strategy. "Yoga made that possible for me. I don't know if I would've been able to get to that space without yoga, therapy, and medication."

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Trauma is a complex condition, and there is still much we don't know. But Emerson says regardless of the duration or origin of trauma, early intervention is key. "We seem to be learning that if we have interrelational trauma with abusive power, like campus rape, we should get to it as soon as we can with trauma-informed interventions like [trauma-sensitive yoga]," says Emerson. "[PTSD] symptoms start seeping in over time, and it'll get worse and worse over time, and impacts will deepen. The earlier-life trauma has a broader, more intense impact over time, but what about someone who has one sexual assault? [We need to] get to that as soon as we can so [the impact of the trauma] doesn't become chronic."

It's important to recognize that yoga is not the solution for everyone. You should always consult with your healthcare provider before trying any treatment method, whether it's a new medication, a different type of therapy, or a change in activity. Also, please keep in mind that practicing yoga isn't actually a medical treatment and should never be treated as such. It is a spiritual practice that has existed for thousands of years, and there are far too many yoga studios in the United States that culturally appropriate this practice. Everyday Feminism has published some informative articles on how to tell [if a yoga practice is culturally appropriate](#) as well as some ways you can [practice yoga without participating in neocolonialism](#). If you decide to start practicing yoga, please do so with the respect this practice deserves.

If you're interested in trying yoga as a trauma intervention, [Emerson's website](#) has a list of yoga instructors who are certified in trauma-sensitive yoga. If there aren't any on that list near where you live, Emerson, Bogard, and Holm all recommend interviewing a potential yoga instructor before taking a class to ensure their teaching style and philosophy match your needs. They may not be certified in trauma-sensitive yoga, but you may still see benefits from regular yoga practice. According to Janet Zinn, Licensed Clinical Social Worker and a New York-based

therapist, many New Yorkers practiced yoga as a way to heal from the tragedy of 9/11, and this was before Emerson began his pilot study at the Trauma Center.

“Many [New York] studios just started offering free yoga classes, including first responder programs,” says Zinn. “Employee assistance programs would bring in yoga to help the employees adjust, and it started to become a part of the recommendations that most trauma workers were using.” Zinn says practicing yoga gave people a way to grieve and to soothe and calm themselves during a time when there weren’t a lot of tools to deal with something that “turned their lives upside down.”

So don’t give up if you can’t find a yoga instructor who’s certified in trauma-sensitive yoga. Just be discerning when choosing where you practice. Me? I still practice at Bogard’s studio. She’s not certified in trauma-sensitive yoga, but she’s an incredibly empathetic and intuitive yoga instructor who has had a tremendous impact on my own healing process. She’s created a safe space for me—and that’s more powerful than I could have imagined.