



J. David Creswell Ph.D.

Adapt and Thrive

MEDITATION

What Meditation Retreats Really Do to Your Mind and Body

We've studied meditation retreats, and they are not very relaxing.

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Reviewed by Michelle Quirk



KEY POINTS

- Intensive retreats isolate mindfulness training from rest, support, and other common factors.
- Three days of mindfulness training can change brain networks linked to self-regulation.
- Meditation often feels effortful; difficulty may drive gains in resilience and well-being.

By David Creswell & Yuval Hadash

It was a gloomy, wintry Friday morning when our study participants began arriving at a residential retreat center just outside Pittsburgh. Some looked excited; others nervous. All were unemployed adults enrolled in a three-day residential

As each participant stepped through the front door, they were given a simple instruction: Power down your cell phone and place it in a basket. No phones were allowed for the long weekend. We then walked them to our study nurses for a pre-retreat blood draw.

Being unemployed is already hard on both mind and body. **Decades of research** show that unemployed job-seeking adults face elevated risks for depression, anxiety, suicide, and compromised immune function. After the blood draw, participants were split into two groups and sent to different wings of the retreat center. In one wing, they spent three days learning and practicing mindfulness meditation. In the other, they took part in a carefully matched guided relaxation program without mindfulness training.

This matching was intentional. Meditation research often struggles to isolate what is actually producing change. Is it the mindfulness training itself, or factors like the quiet setting, social support, the teacher's warmth, a break from daily responsibilities, or simply the opportunity to relax?

We designed the retreat study to control for as much as possible. Both groups followed nearly identical schedules, including gentle stretching, guided instruction from a skilled teacher, and the same number of hours in training with a supportive group. The key difference was that the mindfulness group was taught to focus attention in an open, receptive way to present-moment experience, while the relaxation

The three days were long and grueling. For many, it was a shock to be dropped into such a stripped-down environment with few creature comforts. People were tired and sometimes emotionally raw. They were also, quite literally, giving our clinical trial their blood, sweat, and tears.

And yet, something else was happening. Many of these unemployed adults felt isolated, and some struggled to afford regular hot meals. Amid the difficulties on retreat, there was also a growing sense of connection to one another, to the instructors, and to the possibility of a new way to relate to the challenges in their lives.

Why meditation retreats feel different from classes and apps

There are now [thousands of published studies on meditation](#), but most of them do not use intensive retreats. Instead, they explore the impacts of weekly meditation classes or, more recently, [smartphone-based meditation apps](#). Yet, many contemplative scientists and experienced meditators will tell you that the deepest growth does not come from classes or apps, but from going on retreat.

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Meditation retreats have been the backbone of contemplative practice for millennia, from Hindu and Buddhist monastic traditions to modern secular mindfulness training. From a scientific standpoint, however, retreats can be difficult to study, and many studies simply compare people before and after a retreat without a meaningful control group. Without a comparison, it is impossible to know whether changes are due to meditation itself or to common factors like rest, social connection, or the novelty of the experience.

Our study tried to tackle that problem.

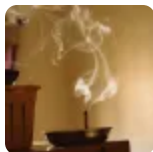
After the three-day retreat, we followed the participants for months. Participants in the mindfulness meditation retreat, but not those in the relaxation retreat, showed changes in brain networks involved in executive control and self-regulation. These neural changes were linked to subsequent reductions in a marker of systemic inflammation. In plain language, three days of intensive mindfulness training altered participants' brains, and those changes were linked to better downstream markers of health. Importantly, both groups reported similar levels of satisfaction, meaning, and perceived benefit. People felt helped in both programs. Only the mindfulness group, however, showed **more resilient brain-body effects**.

in the mindfulness group was struggling and wanted to speak with me.

I went to her room and found her sitting on the bed, crying. She told me she was exhausted, that this was much harder than she had expected, and that she was not sure she could continue.

Many people assume meditation is primarily about calming down, a way to escape stress. In reality, meditation is often mentally demanding work—more like taking your mind to the gym than relaxing. In one of our recent laboratory [studies](#), we asked both novice and highly experienced meditators to meditate for 20 minutes and tracked their mental states. Even advanced meditators reported frequent mind-wandering during guided meditation, and unpleasant experiences like body discomfort or mental agitation outnumbered pleasant ones by nearly six to one. This is not a failure of meditation. It is practice working as intended.

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[Freedom From Things](#)



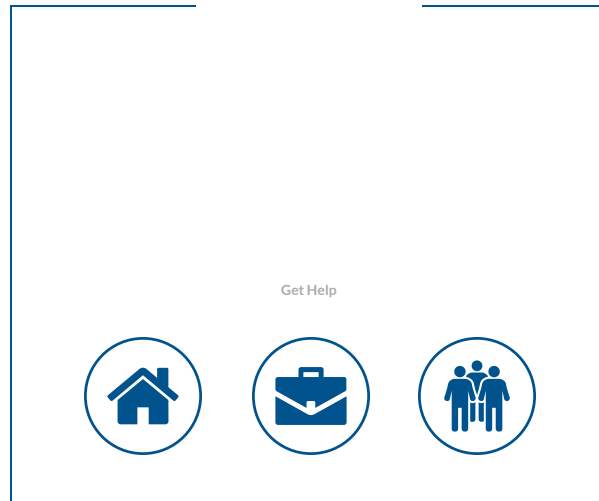
[Our Brains and Bodies on Meditation](#)

Why struggle may be part of how meditation training works

At this point, a skeptic might raise an important question. Could the power of meditation retreats simply reflect a well-known phenomenon in social psychology called effort justification? Decades of research show that when people endure

ple later evaluated the group.

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From this perspective, meditation retreats might appear less like skill-building experiences and more like psychological sleight of hand. People suffer through long days of practice, then rationalize that discomfort by telling themselves that something profound must have happened.

This is precisely why carefully controlled retreat research matters. In our study, both the mindfulness and relaxation groups experienced similar levels of challenge, fatigue, and disruption to daily life, and reported comparable increases in meaning, growth, and perceived benefit.

Yet only the mindfulness group showed measurable changes in brain networks involved in self-regulation, along with downstream reductions in inflammatory markers months later. If retreat benefits were simply a matter of rationalizing hard work, we would not expect to see such specific differences in

Newer retreat research helps explain why this difficulty may matter. In one of our [retreat studies](#) with healthy community adults in Israel, participants who reported moments of high distress during the retreat often also reported that these moments had a positive impact on their lives afterward. This may be because such moments provide opportunities to practice more adaptive responses to distress that people later implement in daily life.

Considering meditation retreats in the age of meditation apps

Millions of people now engage with mindfulness meditation through short, accessible practices delivered on their phones. As scientists who study these tools, we see real value in them. Apps lower barriers, normalize practice, and help people take their first steps in developing new mindfulness skills. What we hope, though, is that these tools become the spark for attending a retreat. For the rising number of young people who are trying to find ways to [spend less time on their phones](#) or rejecting them outright, a retreat offers a special place to unplug from the internet and plug into a new embodied experience.

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Meditation retreats are not for everyone. They require preparation, support, and informed choice. But they also offer something increasingly rare in modern life: sustained attention to inner experience. If meditation retreats feel difficult, that may not be a flaw. It may be the very feature that allows them to change how we meet stress.

When the three-day retreat ended, the weather in Pittsburgh was still cold and gloomy. But as our study participants stepped out of the retreat center, many carried a quiet sense of renewed energy with them.

In a culture that equates well-being with comfort, meditation retreats offer something stranger, and perhaps more valuable: the chance to get better at sitting with what’s hard.

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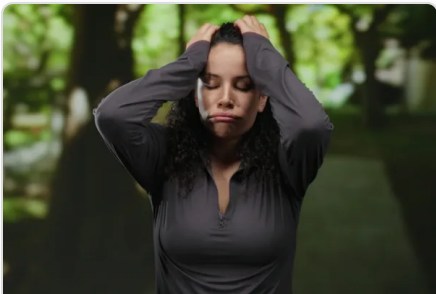
About the Author



J. David Creswell, Ph.D., is the William Dietrich II Chair Professor of Psychology and Neuroscience at Carnegie Mellon University and chief of science at Equa Health.

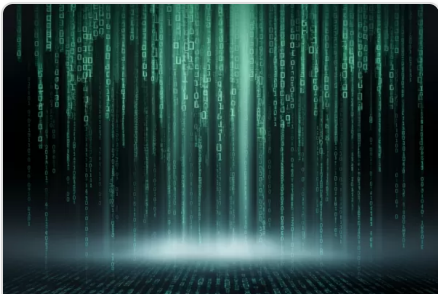
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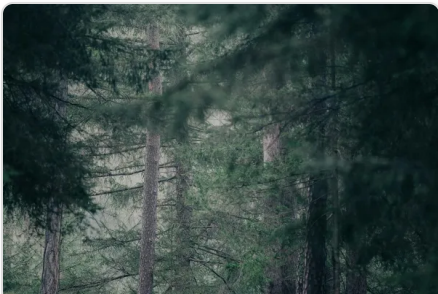


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