

## THE FUTURE OF BEING PRESENT

As mindfulness spreads far and wide, researchers are going deeper to find out how this practice really works and who could benefit most from it

By Kate Rope

MINDFULNESS HAS BECOME THE GOALPOST OF MODern life, the answer to our high-paced, overstretched schedules. Do you know anyone who doesn't want to be "more mindful" in some aspect of their life? Just search for "meditation" in the App Store and you will find a mind-expanding number of apps intended to help you plug into the here and now.

"It's taken a leap forward," says Sharon Salzberg, co-founder of the Insight Meditation Society in Barre, Mass. For one, mindfulness has now become an accepted adjunct therapy for many conditions, especially in the field of mental health. In the past, says Salzberg, "if you were a psychologist or psychiatrist who included mindfulness, you usually didn't disclose that. These days, people tell me they are facing so much pressure to teach mindfulness in psychology training courses. It's a very different kind of acceptance."

And new applications are popping up every day. Digital mindfulness-based interventions to treat opioid addiction are being researched, and mindfulness is being studied in unexpected places, on the front lines in Iraq and as a tool in the battle for racial justice at home.

Meanwhile, researchers are refining our understanding of the power of paying attention in some of life's most important moments.

New understanding, open questions

For all the research showing the benefits of mindfulness in treating such conditions as anxiety, depression and chronic pain, researchers still don't know exactly *how* it works. "That's been the frontier for us, understanding the nuances of the mecha-



vention of a relapse in depression. When his team looked at how often or how much people practiced, they did not find a relationship with decreased depressive symptoms or the chance of another episode. But when participants were taught a specific component of mindfulness known as "decentering," the amount of practice that people engaged in *did* make a difference—more time was associated with fewer symptoms of depression. Decentering involves observing your thinking without getting pulled into its content. "If your practice allows you to build up skills in observing and decentering, then you're going to see benefits in greater well-being down the road," concludes Segal.

At his lab at Carnegie Mellon University in Pittsburgh, associate professor of psychology David Creswell has also been taking apart mindfulness practices, keeping some components and getting

rid of others to try to separate out the stress-relieving effects.

He published a paper in 2017 in the journal *Clinical Psychology Review* showing a similar finding to Segal's work: learning how to sit with unpleasant experiences and thoughts and just explore them with acceptance, interest and nonjudgment may be the key to reducing stress and improving health. Creswell and his team call it "monitor and acceptance theory."

"The capacity to be open and accepting, even if the experience is difficult, seems to be a critical driver of the stress-reduction benefits we see with mindfulness interventions," says Creswell.

Can computers make us more mindful?

It may seem highly ironic, but most people today are learning to be present in the physical world through their devices. "Historically, people learned about mindfulness in person from a teacher," says Michael Mrazek, director of research at the Center for Mindfulness and Human Potential at the University of California, Santa Barbara. "These days, I think the majority of people have their first introductions online through the internet or an app. That's the future, and yet the bulk of the research is still in these intensive in-person interventions."

Clearly, the research needs to catch up. That is why several researchers are beginning to investigate the effectiveness of evidence-based mindfulness interventions delivered through a screen.

Brewer is studying the effectiveness of apps he and his team created to tackle emotional eating and anxiety. "With digital therapeutics, if there's an urge that comes up, like an urge to eat, it walks them through a short practice to become aware of how that feels in their body," says Brewer. "They can see what it feels like to have that craving, instead of being pushed around by it. In one study we found a 40% reduction in craving-related eating." Brewer just won a \$10,000 grant to investigate using the same approach to address opioid addiction in Ohio.

Segal is evaluating whether mindfulness-based cognitive therapy—which has been shown to be

as protective against a future episode of depression as antidepressant medication when it is done face-to-face—can produce a similar result when delivered online.

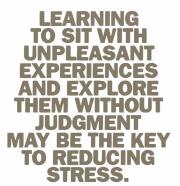
As for the ubiquity of apps, Segal warns that it's "a fairly unregulated space. Anyone who knows how to program can make an app." He recommends evaluating apps based on what you hope to get out of them. "When it comes to mental health, the dimensions of

mindfulness that are incrementally valuable are the ones that allow people to observe their thinking and tolerate distress. If an app promises that, great. If an app promises a state of relaxation, there can be really good apps for that, but they are not the full measure of what mindfulness can do for mental health."

As schools, workplaces and prisons throw together mindfulness programs, Creswell says, researchers are intent on figuring out the most useful ways to design and implement these programs so that they achieve their full potential.

## Helping high school students tame digital-age stress

If you think you're frazzled, consider your kids. During the school year, it turns out, teens are the most





Students meditate during Mindful Studies class at Wilson High School in Portland, Ore. The yearlong course incorporates mindfulness, yoga and meditation into the curriculum.

stressed demographic in the U.S., according to the American Psychological Association's 2014 Stress in America survey. And high school students in particular are under constant pressure. But fortunately, they're also well-suited to comprehend mindfulness and reap the rewards of it, says Mrazek. "They have a quite rich conceptual understanding of the world," he notes. "Their awareness is really increasing, and they can develop a good understanding of their own minds." It's little surprise, then, that a meta-analysis published in 2017 in the journal *Mindfulness* found that compared with other students of varying ages, high schoolers benefited the most from mindfulness interventions.

Mrazek and his team are developing an online program using mindfulness practices to increase academic achievement in high schoolers. "That's a tall order," says Mrazek, "but I think there's a whole series of steps along the way that would be very meaningful to achieve, such as increasing attention spans, reducing stress and even just developing an appreciation for the value of focus." That's something that is missing in the multitasking madness of the modern high schooler who is regularly working on homework with an internet browser open while watching a video in yet another tab. "The students that we spoke to told us it is completely normal," says Mrazek. "They don't recognize the downsides. I think the skill of being present and valuing that as something useful in life is sorely needed."

Two high schools in Illinois are already road testing the program. Mrazek and his team meet with students and teachers to get feedback to improve it. In the fall they will branch out to schools in California and Minnesota with the goal of launching nationwide by the fall of 2019.