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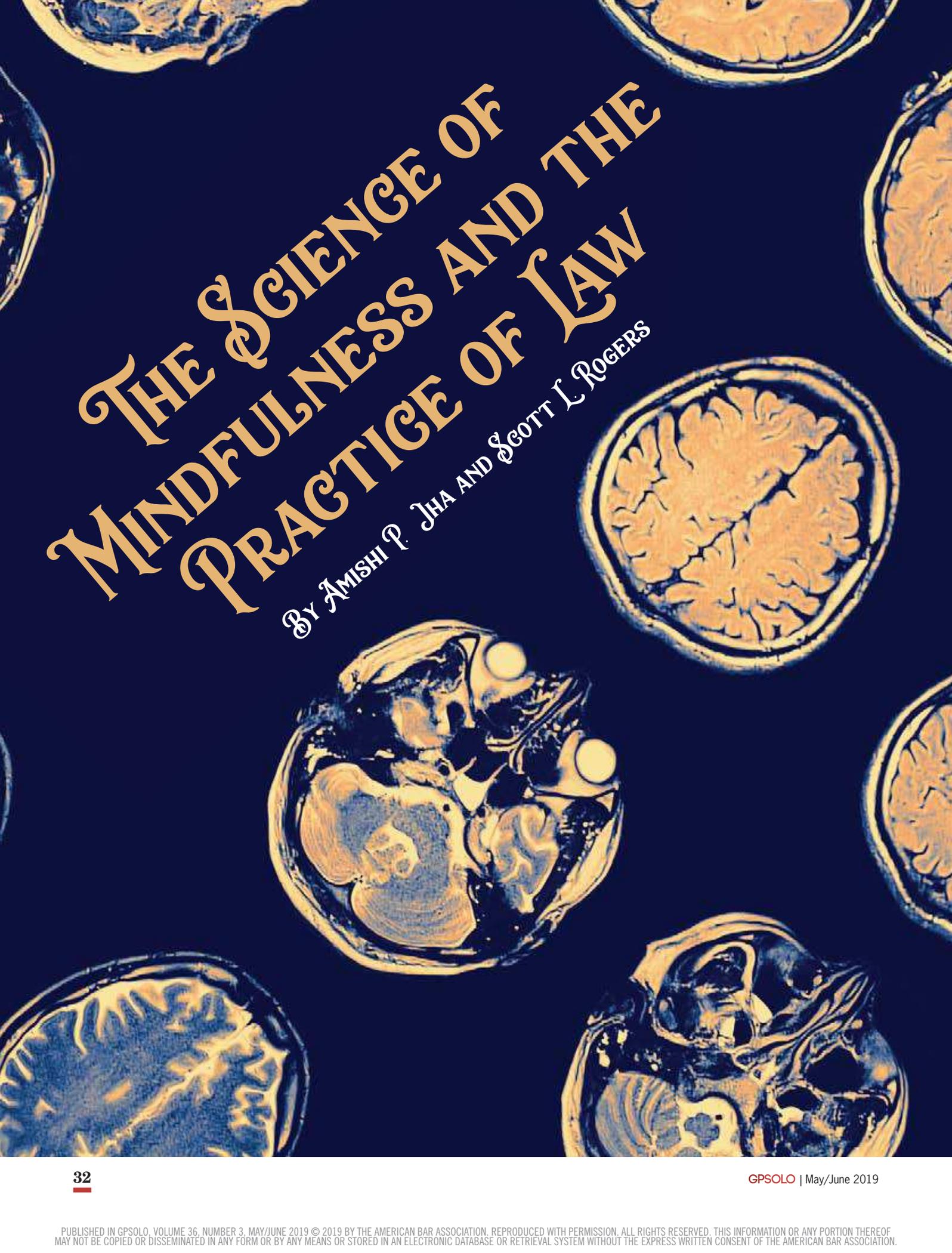
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The Science of Mindfulness and the Practice of Law

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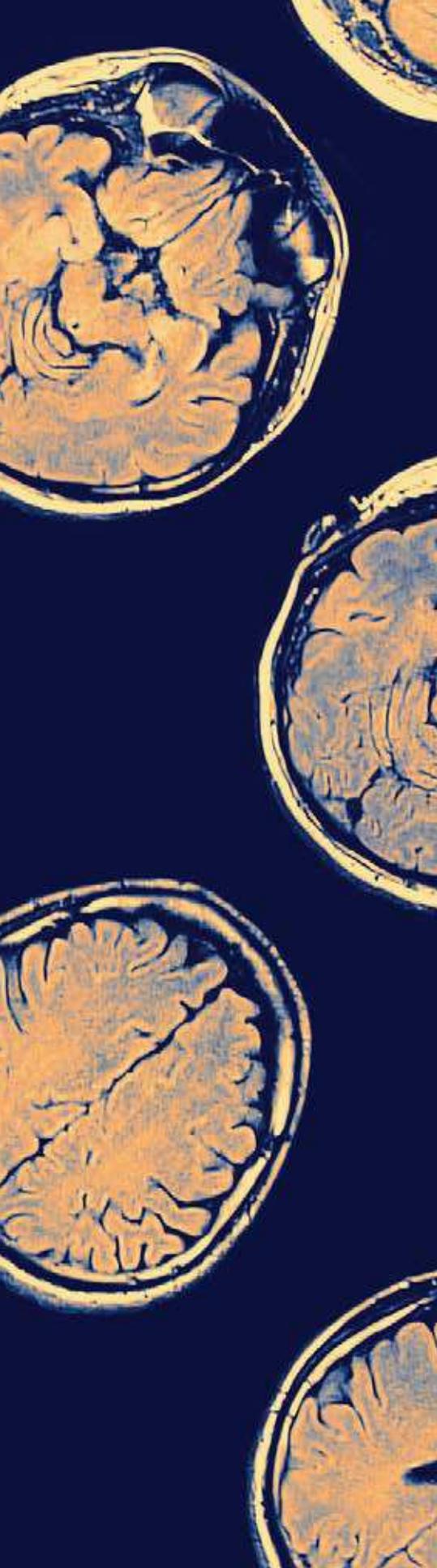
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THE SCIENCE OF MINDFULNESS AND THE PRACTICE OF LAW

By AMISHI P. JHA AND SCOTT L. ROGERS



The legal profession's interest in mindfulness is largely rooted in the role it may play in enhancing performance and well-being. These overlapping concerns can become especially relevant at different stages in life and when confronted with challenging circumstances. So, too, carrying a heavy workload with tight deadlines and high-stakes consequences can lead to chronic stress that takes its toll. The promise of mindfulness is that one might cultivate a greater capacity to relate to the undesirable and unpleasant experiences that are inherent in life with less resistance and a greater openness, patience, and care. In the past several years, the spotlight has focused on the health and well-being of members of the legal profession. The National Task Force on Lawyer Well-Being reported that too many lawyers face mental health and substance abuse disorders, finding that 17 percent of attorneys experienced some level of depression, 14 percent experienced severe anxiety, 23 percent had mild or moderate anxiety, and 6 percent reported serious suicidal thoughts in the past year (*The Path to Lawyer Well-Being: Practical Recommendations for Positive Change*, lawyerwellbeing.net). Among the recommendations of the Task Force to respond to these concerns was mindfulness meditation, in part on the grounds that:

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This research is still in its early stages, and there remains much to learn. To help elucidate the science and role mindfulness practices can play in lawyer well-being, we discuss some of the impediments to wellness, and then review a series of research findings that mindfulness training results in improved cognition, as well as improved physical and psychological health. We then discuss *how* mindfulness training might be able to achieve such myriad benefits and conclude by offering specific practice tips on getting started with mindfulness training in your own lives.

WHAT ABOUT THE MIND?

One hundred years ago, the sight of someone running down the street would have prompted fear of a nearby fire or signaled some other looming danger. Fast-forward to today. Walkers and joggers abound, and neighborhood fun runs fill up community calendars. Why? Over the past century, we have shifted to a cultural understanding that the body requires daily physical activity to be physically healthy. Decades of research, funded by the National Institutes of Health, for example, have repeatedly investigated *how* it is that physical activity may best support physical health. This research has brought to light the myriad ways that physical activity benefits the body, which now allows our public health officials to provide us with precise, evidence-based guidance on what we should be doing every day for our physical health. Whether it's 10,000 steps or couch-to-5K training, there is a strong public health interest in getting people moving. As our bodies become healthier, our sense of wellness improves.

But what about the mind? What tools can be used to improve our mind's wellness, our brain's health? This question is one that has transfixed the field of human

MINDFULNESS IN ACTION

The cultivation of awareness can bring about changes to the structure and function of the brain.

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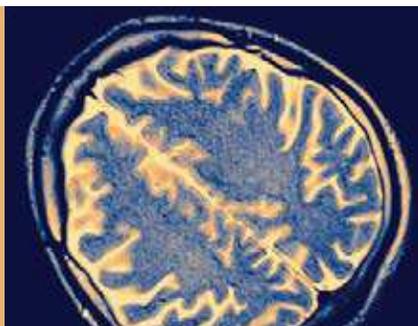
neuroscience for the past two decades. Beyond pharmacologic treatments for psychiatric and neurologic diseases such as anxiety, depression, or Alzheimer's, the U.S. Food and Drug Administration must now grapple with how to regulate the latest gadgets that zap the brain with low-level electrical current and smartphone-delivered "brain games." These products aim to enhance brain function not only in those suffering from disease, but also in those who are psychologically

particular world view (i.e., prescribed philosophical/theological orientation). The overarching aim of mindfulness training is to cultivate greater mindfulness in the practitioner. *Mindfulness is a mental mode characterized by attention to present-moment experience without judgment, conceptual elaboration, or emotional reactivity.* It's a way of showing up in the moment with full attentiveness to the here and now, without a story or strong feeling obscuring a clear read on reality.

struggles that humans have experienced from time immemorial. We all suffer. Mindfulness training was intended to address the challenges of a suffering mind. And we now know that when the mind suffers—especially when it is in the grips of chronic stress and intensive and persistent demands such as those that typify the legal profession—our wellness suffers; the health of our body, mind, and relationships suffers.

In studies of many high-stress groups (including students, athletes, and military servicemembers) that index self-reported well-being, the most consistent results are that self-reported well-being declines over the course of a high-stress period. Whether the interval is the academic semester, preseason athletic training, or military deployment, studies report that by the end of a demanding interval lasting a few to several weeks, negative mood and anxiety are greater. What can we learn from this? What we learn, which is relatively intuitive from our lived experience of high-demand periods in our own lives, is that we feel more depleted, exhausted, and emotionally drained at the end of a high-demand interval than at the beginning. Even worse, the cognitive functions of attention and working memory—essential for focus, planning, and complex problem solving—are degraded during high-demand intervals, according to studies examining these cognitive functions. Consider how this might impact students, for example. Over the semester, their mood and cognitive functions decline, and then at the end of the semester, with the lowest levels of attentional capacity they have had in weeks, they must take their final exams. They are not well-positioned to "do their best" if their minds are not at their best. This grim reality can be extended to the predicament of lawyers who have been prepping a case for several weeks or months. If the demands are high and persistent, it's very likely that well-being and cognitive functions will become compromised. Much like exam day for students, when it's finally time to go to trial, all the preparation will be put to the test. The stakes are at their highest, yet psychological and cognitive capacities are at their lowest. The outcome may not be what is desired.

Cognitive functions become degraded after high-stress intervals.



and neurologically healthy. The field of "augmented cognition" is of interest to many competitive, go-getter types who wish to "up-level" their brain function—or all of us who want to combat an aging brain. Despite the buzz, the results of scientific examinations of the latest cognition-enhancing drugs, devices, and apps have ranged from inconclusive to disconfirming.

Long before the basic principles of chemistry, let alone neurochemistry, electricity, or the notion of the telephone were contemplated, a "technology" was developed that today shows scientific promise for improving many domains of wellness. Mindfulness meditation is an ancient suite of practices borne out of the wisdom traditions of Asia, specifically the Buddhist practices of India from around the fifth century BCE. Many of the insights and principles of this elegantly formulated "psychology of the mind" can be found in the spiritual, religious, and humanistic wisdom traditions across the world. Below we review what is currently known from research studies on mindfulness training programs offered at many medical centers and workplaces. These programs are secular in that they have been designed to require no

It is important to note the difference between mindfulness and mindfulness trainings. As indicated in the above definition of mindfulness, it refers to a state or quality of present-moment engagement that many find to be quite useful. There are many activities in which we can engage to facilitate a more mindful way of living (e.g., sleep, exercise, nutrition, supportive social engagement). Engaging in training programs that offer a suite of mindfulness practices is a very effective route by which to promote greater mindfulness in one's life due to the mental exercise they provide and the qualities of mind that they help cultivate and strengthen. In the same way we may commit to walking or jogging to promote greater health and wellness in our bodies, so too can we commit to engaging in mindfulness practices to support the wellness of our minds.

OBSTACLES TO WELLNESS

Obstacles to wellness may seem situationally unique to our modern-day, 24/7, driven-to-distraction, smartphone-addicted, social-media-saturated world. And they may seem unique to the legal profession. Yet, there is a great equalizer that connects our modern-day distress, dysphoria, and burnout with the

TRAINING THE MIND FOR RESILIENCE

In our work over the past decade, we have been interested in researching if and how mindfulness training might protect against the damaging and depleting effects of high-stress intervals. We ask basic questions regarding how mindfulness training might promote resilience, defined as the capacity to maintain or regain capacities at risk of degradation due to stress and fatigue. Our research has found that, indeed, mindfulness training can protect against decreases in well-being, increases in mind wandering (i.e., having off-task thoughts during an ongoing task or activity), and declines in core cognitive functions such as attention and working memory over high-stress intervals. Over several published research articles, we report that mindfulness training is protective and promotes resilience in students, athletes, and soldiers who experience high-demand intervals.

To best facilitate accessible delivery of mindfulness training to such groups, we developed a mindfulness training program with low time demands and ease of delivery across a variety of high-demand/high-stress groups where performance matters and errors in judgment or lapses in the execution of job-related activities could have devastating consequences, even life-or-death consequences. Groups such as medical students, firefighters, and soldiers have received this training, which is called Mindfulness-Based Attention Training (MBAT). MBAT is an eight-hour program taught over four two-hour sessions by trainers who are familiar with the lived experience of those in the high-demand setting in which the program is offered. Each week, a new mindfulness training practice is introduced to participants by the trainer and then given as homework for participants to engage in 15 minutes each day until the subsequent class meeting. These mindfulness training practices are of two types. One category trains participants to narrow and steady the focus of their attention while becoming aware of the mind's intrinsic propensity to wander away from the task at hand. The other category trains participants to broaden their attention so that they are monitoring ongoing mental activity

without becoming engrossed or caught up in it. Most recently, we conducted a study of 120 U.S. Special Operations military servicemembers and found that MBAT improves attention and working memory and reduces everyday cognitive failures. Strikingly, like physical exercise, the more time servicemembers spent engaging in mindfulness exercises, the more they benefited. Thus, while stress may degrade well-being, mindfulness training protects against this. Importantly, one needs to do the work, or at least the daily workout, to garner the benefits.

**Mindfulness training
can protect against
declines in core
cognitive functions.**

MBAT was designed for maximum efficiency for high-demand, time-pressured groups. The program is borne out of lessons learned by MBAT's co-creators (who are also the co-authors of the article you are now reading in *GPSolo*). For more than 20 years Scott L. Rogers has offered contextualized training to a variety of groups such as lawyers, law students, judges, parents, teachers, and physicians. Simultaneously, in her neuroscience lab, Amishi P. Jha has been engaged in research on the design and delivery features of mindfulness training that maximize benefits for attention, working memory, and mood. In aligning our expertise to create MBAT, we aimed to design a program that was amenable to contextualization and to scalable and accessible delivery, and that could be offered to time-pressured groups in workplace settings over high-demand intervals. This required answering important questions such as how long should MBAT be? What components are critical? Who should deliver the training? And can those who are new to mindfulness learn to deliver MBAT over a relatively short interval?

Answers to all of these questions over a series of studies in a variety of mindfulness training programs led to what is now prescribed in the MBAT program currently used in many settings, including most recently implemented by the New Zealand Defense Force. (For a review of this research, see Anthony P. Zanesco, Ekaterina Denkova, Scott L. Rogers, et al., "Mindfulness Training as Cognitive Training in High-Demand Cohorts: An Initial Study in Elite Military Servicemembers," *Progress in Brain Research*, January 2018 (no. 244), at 323–354.)

There is much material available on mindfulness practices, and you can quickly access them via books, websites, and apps. The following "Focused Attention" instruction, which you may wish to try, is fundamental to many mindfulness practices and a core building block of MBAT. As you begin to practice, see if you can establish an attitude of interest in the activity of your mind, curious about whatever you observe and feel, whether it be pleasant, unpleasant, or neither. Many find it helpful to set a timer, perhaps for five or ten minutes.

1. Sit in an upright, stable posture, hands resting comfortably on your thighs or cradled together.
2. Lower or close your eyes, whichever you prefer.
3. Attend to the sensations of breathing—perhaps the air flowing into and out of your nose or mouth, or of your belly rising and falling with each breath.
4. When you notice your mind wandering, bring your attention back to the sensations of breathing.
5. When a timer goes off or you choose to close the practice, lift your gaze or open your eyes.

The very popular and free smartphone app Insight Timer offers a timer with a selection of different bell sounds and thousands of guided meditations. Some of the meditations are "mindfulness" practices while others fall into a broader "meditation" category, and you may find them relaxing or soothing in relationship to different aspects of your life. All can be easily searched for by subject. The app also connects you to many different

“groups” that you can join, including the “Mindfulness in Law” group, which allows you to practice along with hundreds of other lawyers.

BOLSTERING WELLNESS WITH MINDFULNESS TRAINING

In addition to our own prior efforts in mindfulness training to promote psychological and cognitive resilience in high-stress groups, a robust research literature offers insight into mindfulness training’s power to improve well-being in the body and mind. Biologist Jon Kabat-Zinn of the University of Massachusetts Medical School developed Mindfulness-Based Stress Reduction (MBSR) in 1979. MBSR is now offered at more than 750 medical centers worldwide and is one of the most-researched mindfulness training programs. Like MBAT, MBSR emphasizes two aspects of attention in the mindfulness training practices that it offers: the ability to voluntarily *focus* attention and the ability to *monitor* ongoing thoughts, feelings, and sensations—without getting caught up in them. These two aspects are cultivated and strengthened through a suite of practices introduced over the eight-week, 24-plus-hour program. One of MBSR’s first clinical uses was for the treatment of chronic pain. In 1985 Kabat-Zinn and his colleagues enrolled 90 chronic pain patients in the MBSR program, measuring their levels of pain, negative mood, and anxiety before and after their participation. The researchers saw significant reductions in these negative symptoms after the MBSR program ended but found no beneficial changes in patients who received traditional treatment methods (e.g., nerve blocks, physical therapy, and antidepressants). Strikingly, the benefits from Kabat-Zinn’s exercises were maintained for more than a year after the program’s formal end, and patients reported continuing the exercises on their own. Since that pioneering study, hundreds of studies have been conducted on MBSR and are now being aggregated into “meta-analyses” to compile results from thousands of participants. Reductions in physiological ailments and symptoms

of chronic pain, fibromyalgia, and arthritis have been reported. Thus, there is growing evidence that mindfulness training improves wellness in the body.

Beyond symptom reduction and improved wellness, mindfulness training may promote longevity. In a study published in 2012, psychologist Elissa S. Epel and her colleagues at the University of California, San Francisco, found that people with a greater propensity toward mind wandering also had shorter caps, called telomeres, at the ends of chromosomes than those whose minds were more often in the present. Shorter telomeres are associated with a shorter life

Mindfulness training has been shown to improve wellness in the body.

span for an organism. As a result, Epel suggested in her paper that “A present attentional state may promote a healthy biochemical milieu and, in turn, cell longevity” (Elissa S. Epel, Eli Puterman, Jue Lin, et al., “Wandering Minds and Aging Cells,” *Clinical Psychological Science*, 2013 (1:1), at 75–83). A growing number of studies is now demonstrating that mindfulness training increases telomere length, which signals greater cellular longevity.

Over the past decade, researchers have similarly investigated if mindfulness training can successfully treat a wide variety of psychological illnesses. Mindfulness-Based Cognitive Therapy (MBCT) developed by psychologist Zindel Segal and his colleagues at the University of Toronto is modeled after MBSR. It emphasizes the idea that the negative thoughts that can spark a depressive episode are ephemeral, they emerge and then fade. Their transitory nature means that patients can choose to attend to them or not. In 2016 Willem Kuyken and his colleagues at the University of

Oxford conducted a meta-analysis of published studies with over 1,200 patients with recurrent depression (Willem Kuyken, Fiona C. Warren, Rod S. Taylor, et al., “Efficacy of Mindfulness-Based Cognitive Therapy in Prevention of Depressive Relapse: An Individual Patient Data Meta-Analysis from Randomized Trials,” *JAMA Psychiatry*, June 2016 (73:6), at 565–574). Those patients who received MBCT had reduced risk of depressive relapse within a 60-week follow-up period compared to those receiving usual care and other active treatments, including antidepressants. Mindfulness training in its various forms has similarly helped alleviate suffering from other psychological illnesses such as anxiety, panic disorders, post-traumatic stress disorder, attention deficit hyperactivity disorder, and phobias.

Another program inspired by MBSR has been targeted for those suffering from substance abuse. Mindfulness-Based Relapse Prevention (MBRP) was developed by Alan Marlatt, Sarah Bowen, and their colleagues. MBRP draws on components from well-established relapse prevention programs, such as identifying individual and situational risks for relapse, and blends these components with mindfulness-based practices, such as those comprising MBSR and MBCT. A recent study reported that at 12-month follow-up, MBRP uniquely offered benefit (over standard relapse-prevention programs, for example) in reducing drug use and heavy drinking (Sarah Bowen, Katie Witkiewitz, Seema L. Clifasefi, et al., “Relative Efficacy of Mindfulness-Based Relapse Prevention, Standard Relapse Prevention, and Treatment as Usual for Substance Use Disorders: A Randomized Clinical Trial,” *JAMA Psychiatry*, May 2014 (71:5), at 547–556). MBRP may lead to such long-term benefits by targeting mindfulness practices to specifically support the ability to monitor and cope with the discomfort associated with craving over the long term.

MBSR, MBCT, and MBRP represent a successful sampling of mindfulness-based interventions that are now available for a host of physical and psychological health challenges.

MINDFULNESS PRACTICE TIPS

While the science of mindfulness training continues to grow and show promise, the very good news today is that access to mindfulness training practices is only a hyperlink away. As such, the most useful tip may pertain more to addressing and clarifying *impediments to practice*, rather than to practice itself. All too often, people interested in mindfulness begin to practice with the best of intentions but then stop “training the mind” before their efforts set in motion a regular daily practice and before its potential to meaningfully support their well-being is realized. One of the reasons for this is a series of misconceptions that can result in disappointment and frustration. So, at the outset, we wish to offer guidance on what to expect. You may find practicing mindfulness to be relaxing, and you may not. Whether it is or isn’t really isn’t the point. There are a host of relaxation exercises one can learn to bring about a “quick fix” to feeling stressed or overwhelmed. The point of mindfulness practice is that rather than repeatedly needing a quick fix to feel better, a greater resiliency develops over time so that the same challenging moments are less disruptive to our well-being. As previously noted, the practice of mindfulness helps us to detect mind wandering, and, as you begin to practice, it can be helpful to regard this as the prime directive. As you likely know from your own experience, when your attention is scattered, you are likely to feel agitated, not calm. So, when you begin to tune into the distracted and scattered activity of the mind, you may not feel relaxed—at least not right away. You may even feel more agitated; after all, you are turning toward, not away from, your present-moment experience. But this intentional activity, over time and with practice, cultivates the ability to notice mind wandering and, as a result, to return attention to the object upon which it initially was placed. As this skill develops, you become the recipient of a cascade of beneficial effects, not the least of which is reduced mind wandering, greater capacity to regulate emotional reactivity, and greater focus and concentration. Recall the above definition of mindfulness: *a mental mode*

characterized by attention to present-moment experience without judgment, conceptual elaboration, or emotional reactivity. Imagine for a moment what this might mean to the quality of your professional and personal life.

In terms of practice itself, consider the below as you start or re-engage your mindfulness practice.

1. Practice on a regular basis, daily if possible.
2. Schedule the time for practice in your calendar. It is easy to forget.
3. Select a length of time that is practical for you. Most important is practicing.
4. If on a given day you do not feel/think you have time, sit for even a few breaths. This, in itself, can be a powerful “wedge of awareness” you bring into your day, perhaps when needed most. A useful acronym is “STOP,” which can be practiced in a few breaths: Stop, Take a breath, Observe the mind, Proceed.
5. Don’t seek perfection, and be good to yourself. Like many healthy practices, it can take time to set in motion.
6. Don’t confuse the practice of mindfulness with being more mindfully aware. Even without practice, you already know moments of clarity and connection. And there are likely already many things you do to live a more mindful life. Mindfulness practices happen to go a long way in this regard.



Amishi P. Jha (a.jha@miami.edu), PhD, is an associate professor of psychology and director of contemplative neuroscience for the University of Miami’s Mindfulness Research & Practice Initiative. Her laboratory studies the neural bases of attention and the effects of mindfulness-based training programs on cognition, emotion, and resilience. With grants from the U.S. Department of Defense and private foundations, she is investigating the potential applications of mindfulness training in education, corporate, elite sports, and military contexts.



Scott L. Rogers (srogers@law.miami.edu) is a nationally recognized leader in mindfulness and law, founded the University of Miami’s School of Law’s Mindfulness in Law Program, and co-founded the university’s Mindfulness Research & Practice Initiative. He integrates mindfulness into the curriculum and collaborates on neuroscience research examining the efficacy of mindfulness trainings. He developed one of the nation’s first mindfulness CLE programs and has led workshops since 1998. He is the author of five books and numerous articles in peer-reviewed scientific journals, law reviews, and popular publications.

CONCLUSION

While the range of benefits of mindfulness training are quite broad and may leave one questioning the apparent panacea-like claims made regarding mindfulness training, cognitive neuroscientists are actively seeking to uncover the brain mechanisms by which such a broad range of benefits may arise. As discussed, one core system that seems to play a role is attention. Studies conducted to determine if brain structure and function are altered by mindfulness training report corroborating evidence that there are tractable changes in key nodes of brain networks involved in attention. While the research efforts to understand and advise public policy on how to best exercise the mind for optimum health and wellness are ongoing, the amassing research suggests that mindfulness training may have a significant role to play. The host of benefits to physical and psychological well-being that were discussed herein have been primarily conducted in clinical settings. But now an increasing number of workplaces are adopting mindfulness training as a human resources tool for employee wellness, and research efforts are examining these domains to identify best practices and accessibility, and to help educate. We encourage you to learn more about mindfulness and serve as your own researcher, paying attention, over time, to the beneficial effects that you may notice as you practice and that may ripple more fully in your life and throughout the legal profession. ■