



FLORIDA BAR NEWS

THE MINDFUL LAWYER: THE SCIENCE OF MINDFULNESS

By Scott Rogers ▶ Special to the News ▶ Columns

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One of the reasons for the rapid growth of interest in mindfulness is the science supporting its efficacy. Over the past 15 years, a growing body of medical, psychological, and neuroscience research has reported a variety of cognitive, emotional, and physical benefits associated with mindfulness practice. I posed this week's question to Dr. Amishi P. Jha, a cognitive neuroscientist and one of the world's most highly respected scientists studying mindfulness. Dr. Jha is a colleague and professor at the University of Miami, where she heads the Jha Lab.

Angela inquires:

I have read that the practice of mindfulness helps not only in the moment but also results in longer-term benefits, such as positive changes to the brain or brain structure. Based on research, what typically changes in the brain, what are the benefits of those changes, and how often would a person need to practice mindfulness to experience those benefits? If a person stops practicing mindfulness or meditating on a regular basis, does the brain revert to its prior state?

Dr. Jha replies:

This is a terrific question, Angela. Yes, one of the key questions for neuroscientists is to determine if engaging in any specific mental exercise with regularity over days, weeks, and months changes brain structure and function. This process of "experience" changing the brain is referred to as neuroplasticity. Some of the earliest studies of neuroplasticity looked at people who had specific professional pursuits which required them to repeatedly do the same type of mental workout day in and day out. For example, London taxi drivers make mental maps of the circuitous and gridless city streets of London every day, for hours on end, as part of their jobs. Researchers asked if taxi drivers' brains (specifically a brain structure called the hippocampus, which is involved in memory), may be different than the typical person who doesn't have to do this type of mapping. The answer is, yes! The cab drivers of London have larger

hippocampi than non-cab drivers, and the size of this region was larger in those with more years of driving history. The same goes for musicians, dancers, and jugglers — the longer they have been engaging in their specific brain workouts, the more pronounced specific nodes in their brains are. So, the brain responds to regular mental (and physical) exercise by targeted alterations in brain networks that support the engagement in the exercise.

As it relates to mindfulness, we neuroscientists first need to get clear on what the specific brain ‘workout’ of mindfulness practice is. We can think of it not so much map-making, but awareness-making. A mindfulness workout known as breath awareness, for example, is to pay attention to the breath, maintain focus there, notice when it has wandered away from the breath and redirect it. Using cutting-edge technologies, we can look within brain areas and networks that support the activities of focus, sustaining attention, noticing, and mind wandering. These brain processes require engagement of specific brain networks, such as executive attention.

With regard to what we are finding, let me begin by saying that there are still very few studies on brain changes with mindfulness training and that the field of contemplative neuroscience is just beginning to build a solid evidence base. Nonetheless, there is support that these networks are impacted by mindfulness training such that the structure and function of the brain, within specific nodes of these networks, look healthier. A “healthier” brain means that the gray matter is more dense and that brain cells are more tightly connected. Most of these studies have been done in long term mindfulness practitioners — people who have been practicing for years. So, more research is needed to determine how long it takes novice practitioners to benefit, but there is evidence that their brains do benefit with as little as eight weeks of training.

And, much more evidence supports that mindfulness training improves performance on tasks that require focus, sustaining attention, and controlling mind-wandering. As to your second question, we don’t know if there is a ‘wash out’ effect with regard to brain changes if people stop practicing. Most practitioners probably wouldn’t sign up for such a study if their daily practice helps them! But you are on the correct track to think that this is what would happen if they stopped practicing. Neuroplasticity is about changing the brain to efficiently support what the brain is doing with regularity. If you aren’t using the muscle of mindful attention, it makes sense that you will ‘lose it.’

I am grateful to Dr. Jha for her thoughtful response, and to Angela for posing such an interesting question. As Dr. Jha notes, there is more research to be done. Because mindfulness practice is a subjective process, we each have the opportunity to assess the benefits directly. In a very real sense, we are both experimenter and subject. You can learn more about Dr. Jha by visiting her lab's website, found at, and you can listen to her interview on the TED Radio Hour.

If you have a question about integrating mindfulness into the practice of law that you would like answered in this column, send it to srogers@law.miami.edu.



*Scott Rogers, M.S., J.D., is a nationally recognized leader in the area of mindfulness in law and founded and directs the University of Miami School of Law's Mindfulness in Law Program where he teaches mindful ethics, mindful leadership, mindfulness and negotiation, and mindfulness in law. He is the creator of Jurisight, one of the first CLE programs in the country to integrate mindfulness and neuroscience and conducts workshops and presentations on the role of mindfulness in legal education and across the legal profession. He is author of the recently released, "**The Mindful Law Student: A Mindfulness in Law Practice Guide**," written for all audiences.*