

Build Stronger Connections

Richard J. Davidson, professor of psychology and psychiatry at the University of Wisconsin–Madison, is among the researchers who have made a discovery that is both shocking and extremely exciting. “It is clear,” he told an audience at Google’s Mountain View, California, campus, “that the intentional deployment of specific mental training strategies can induce plastic changes in the brain, which endure and which can transform our cognitive and emotional styles.”¹

In other words, you can alter the overall makeup of your brain without surgical intervention or the use of pharmaceuticals. Mindfulness has been shown to physically change several regions of the brain in as little as eight weeks.

Mindfulness thickens your frontal cortex and posterior cingulate cortex, which not only increases your abilities for attention but also your memory and processing power.² This enhanced cognitive control allows you to respond more rationally and enables you to more easily deflect inappropriate emotional responses. Meditators have been found to have greater gray matter in the right orbitofrontal cortex, a region of the brain associated with emotional regulation.³

Mindfulness also strengthens the connections to your insula, which is responsible for body awareness.⁴ Body awareness is helpful for intuition and, in turn, for decision making (as we’ll see in chapter 5). You become better at “listening to your body,” catching small signals and picking up subtle warning signs. You don’t get sick as often because you are more likely to notice early on when something is wrong. Additionally, you may be able to exert greater cognitive control over your emotions, a key factor in determining whether a stimulus is distracting.⁵

While the insula is associated with your own body awareness, another region, the temporal parietal junction (TPJ), plays a role in your awareness of others. Like the insula, the TPJ has been shown to gain in gray matter after mindfulness training.⁶ This increase seems to improve social relationships and make people more empathetic.⁷

Not all the changes to the brain are marked by increases. Mindfulness actually leads to a decrease in density in at least one area, the amygdala, the region of the brain most associated with emotional reactivity and fear.

Overall, mindfulness enhances the brain’s capability to dynamically rewire itself, a phenomenon commonly known as neuroplasticity, which, as we’ll see in chapter 6, improves your mental flexibility and your ability to learn.

¹ Davidson, Richard J. “Transform Your Mind, Change Your Brain.” Google TechTalk, September 23, 2009.

² Hölzel, Britta K., et al. “Mindfulness Practice Leads to Increases in Regional Brain Gray Matter Density.” *Psychiatry Research: Neuroimaging* 191, no. 1 (January 2011): 36, doi: 10.1016/j.psychres.2010.08.006.

³ Murakami, Hiroki, et al. “The Structure of Mindful Brain.” *PLOS ONE* 7, no. 9 (September 28, 2012), <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0046377>.

⁴ Konnikova, Maria. “The Power of Concentration.” *New York Times*, December 15, 2012. Massachusetts General Hospital. “Mindfulness Meditation Training Changes Brain Structure in Eight Weeks.” *ScienceDaily*, January 21, 2011, www.sciencedaily.com/releases/2011/01/110121144007.htm.

⁵ Murakami, “Structure of Mindful Brain.”

⁶ Hölzel, “Mindfulness Practice.”

⁷ Konnikova, “Power of Concentration.”