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6728 Old McLean Village Dr • McLean, VA 22101 • 703-556-9222 • FAX 703-556-8729 • email: info@psychosomatic.org • www.psychosomatic.org • @connectAPS

Contact: Sara Lazar, Ph.D.
Email SLazar@mgh.harvard.edu
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Meditation: The Brain Reveals That Different Types May Have Some Different Benefits

As meditation programs aimed at lowering stress continue to surge in popularity, there are still open questions about how they work and why certain types work better for some people than others. But there is no question that meditation is a powerful technique. Many studies show that it can reduce symptoms of serious conditions such as depression, anxiety, pain, insomnia and addiction.

Now a unique study that uses brain-imaging to compare two types of meditation offers some preliminary answers from what is still a frontier scientific field. The article appears in the June issue of *Psychosomatic Medicine*, journal of the American Psychosomatic Society.

The study compared Mindfulness Based Stress Reduction (commonly known as MBSR) with the Relaxation Response (RR). In MBSR courses, students are taught to pay close attention to the present moment and their reactions without judging, just merely observing. RR, on the other hand, emphasizes relaxing all parts of the body to ease stress.

The researchers randomly selected 34 healthy adults with high stress levels for eight-week courses in one of the two types of meditation. None were already meditators, and participants in both groups started out equally stressed. The two meditation-based methods have never been directly compared in a single study, says Sara Lazar, Ph.D., Associate Professor and Research Scientist, senior author of the study with Postdoctoral Fellow Gunes Sevinc at Massachusetts General Hospital.

After the course, participants in both groups reported about an equal decrease in stress, and they'd increased about the same in "mindfulness," awareness and focus on the present moment. But only the MBSR students were significantly less likely to ruminate, repeatedly mulling over past experiences and emotions; also, only the people in this group became more compassionate with themselves. Studies have linked too much rumination with depression, and self-compassion is thought to foster good mental health.

Participants then underwent functional Magnetic Resonance Imaging (fMRI) to find out what brain areas were engaged during a relaxation exercise used in both meditation

techniques. During the scan, meditators from both groups showed increased activity in brain areas linked to present moment awareness and attention to the body.

But two main differences showed up. Those in the RR group had increased activity in the part of the brain involved with willful control, the decision to make things happen. On the other hand, those taught mindful meditation had stronger brain activity in a part of the brain linked to sharper perceptions of what's happening in the body. So, for example, if a looming deadline creates stress, in using the RR technique a person would try to relax every part of the body. "It's taking control, a top-down effort," says Lazar. In contrast, the MBSR student would try to remain acutely aware of all the tension and, by sharply observing it, gain more tolerance and so lower stress.

When it comes to meditation, "Yes, it's all good, but it's not all the same," says Lazar. Since they engage some different brain regions, these two types of meditations work through different means, and also seem to have some different psychological effects. "This suggests some types of meditation may be better for certain people than others," she adds. Lazar compares it to cardio exercise and weight-training. Both share certain benefits, "but they also work in unique ways and have unique benefits."

Larger studies in the future hopefully will lead to matching people with the type of meditation likely to work best for them, says Lazar. "It's definitely not 'one size fits all.'"

Study Link:

https://journals.lww.com/psychosomaticmedicine/Fulltext/2018/06000/Common_and_Dissociable_Neural_Activity_After.6.aspx

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