

Mindfulness Meditation May Ease Depression, Anxiety, Pain

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Meditation may provide small to moderate improvement in negative aspects of psychological stress, including anxiety, depression, and even pain in some individuals, according to a systematic review and meta-analysis.

"I think people should be aware that the average person going through a mindfulness-based meditation program can expect small to moderate reductions of multiple negative dimensions of psychological stress, as well as of chronic pain," lead author Madhav Goyal, MD, MPH, from Johns Hopkins University School of Medicine, Baltimore, Maryland, told *Medscape Medical News*.

Many people meditate to reduce psychological stress and stress-related health problems, Dr. Goyal said.

"However, it is not known whether meditation has health benefits beyond the placebo effect. Just as people can get placebo effects from taking a placebo pill, people can also get placebo effects from a program that changes their behavior. We didn't know if meditation has effects that go beyond the placebo effect, and this systematic review was done to answer that question," he said.

The study was [published online](#) January 6 in *JAMA Internal Medicine*.

MBSR Most Effective

The investigators reviewed 47 randomized clinical trials that included a total of 3515 participants.



Dr. Madhav Goyal

Most of the trials ranged from 3 weeks to 5.4 years in length, although most of them were short term. The 2 types of meditation in the trials were mantra meditation and mindfulness meditation.

The research showed low evidence of no effect or insufficient evidence of any effect on psychological stress and well-being outcomes for mantra meditation programs.

Mindfulness meditation programs, on the other hand, showed moderate evidence of improved anxiety, with an effect size (ES) of 0.38 (95% confidence interval [CI], 0.12 - 0.64) at 8 weeks, and an ES of 0.22 (95% CI, 0.02 - 0.43) at 3 to 6 months.

In addition, mindfulness meditation improved depression (at 8 weeks: ES, 0.30; 95% CI, 0.00 - 0.59; at 3 to 6 months: ES, 0.23; 95% CI, 0.05 - 0.42) and also pain (ES 0.33, 95% CI, 0.03- 0.62).

The researchers also found that mindfulness meditation showed "low evidence" of improving stress, distress, and mental health–related quality of life, as well as low evidence of no effect or insufficient evidence of an effect on positive mood, attention, sleep, and weight.

There was also insufficient evidence to indicate that meditation programs had an effect on behaviors affected by stress, such as substance use and sleep.

No Harm, Possible Benefit

The researchers also compared meditation programs with other measures, such as exercise, progressive muscle relaxation, and cognitive-behavioral group therapy, and found insufficient evidence to show that meditation was more effective.

"We found no evidence that meditation programs were better than any active treatment, such as drugs, or behavioral therapies," Dr. Goyal said.

At this point, it is unclear how meditation improves psychological well-being, said Dr. Goyal.

"It could be that mindfulness programs teach individuals to reduce the way they react to negative emotions or symptoms, and this may lessen the effect that those negative emotions or symptoms have on them," he said.

Clinicians should be prepared to talk with their patients about the role that meditation programs could have in addressing psychological stress, particularly when symptoms are mild, Dr. Goyal suggested.

"Also relevant for physicians and patients is that there is no known major harm from meditating, and meditation doesn't come with any known side effects. One can also practice meditation along with other treatments one is already receiving," he said.

Meditation programs involve learning skills in self-awareness of the mind and body and developing this awareness in a nonjudgmental way.

"Different mindfulness practices may focus on different aspects of self-awareness, including awareness of the breath, thoughts, bodily sensations, or some combination of these as well as other aspects of awareness," he said.

There are many variations of mindfulness, although not all of them were tested in the randomized trials that were evaluated in this review, Dr. Goyal pointed out.

"The form most tested is called mindfulness-based stress reduction, or MBSR. This is an 8-week course involving 2.5 hours per week of classes, and costs between \$200 to \$500.

"I would recommend that a person get training from an experienced teacher. Self-help books and Web sites are a poor substitute for getting trained from someone with extensive experience. Patients will need to look on the Web for a program near them, and sometimes medical centers also advertise them," he said.

If the clinician has taken a mindfulness course, he or she may have more information to pass on to their patients, he added.

"But even if they have not taken a mindfulness course, clinicians should be able to discuss what mindfulness meditation is, that there are many variations in its teaching, and that overall, despite those variations, there

seems to be a general improvement in the common symptoms of anxiety, depression, and pain from these courses. These courses are also secular, so people from different religious backgrounds should feel comfortable attending," said Dr. Goyal.

Finally, Dr. Goyal said that further studies are needed among people with clinical depression or anxiety "to better characterize the effects of mindfulness in these populations."

Scientific Study of Complementary Medicine

In a [related editorial](#), Allan H. Goroll, MD, from Harvard Medical School and Massachusetts General Hospital, Boston, notes that efforts to promote careful, rigorous scientific study of complementary measures "as exemplified by the work of Goyal and colleagues are to be applauded and their results made more widely available to the public."

"The findings of such research should be the subject of conversations that need to begin in every examination room and extend to engage the media, who play a key role in determining patient attitudes toward healthcare and the demand for services," he added.

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