

Meditation Actually Alleviates Stress

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STORY AT-A-GLANCE

- › People with anxiety disorder who learned mindfulness-based stress reduction techniques did better under stress than those who used other stress reduction methods
- › The mindfulness group said they felt less stressed than did those in the control group
- › Physical measures of stress were also lower in the mindfulness group, including lower levels of the stress hormone ACTH and reduced proinflammatory cytokines, which are markers of inflammation

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Stress is one of the biggest challenges facing U.S. adults, with many reporting that stress has a negative impact on their mental and physical health. The American Psychological Association's (APA) 2015 Stress in America survey further revealed that a sizable portion of adults do not feel they are doing enough to manage their stress.¹

Nearly half of Americans said they engage in stress-management activities just a few times a month or less (and 18% said they never do). Others (nearly 40%) report overeating or eating unhealthy foods as a result of stress, while 46% said they lie awake at night because their stress levels are so high.²

Needless to say, a simple, inexpensive tool to help manage stress would be invaluable for stress-out adults in need of a reprieve – especially one that can be practiced virtually anytime, anywhere. Such tools do exist – they're called meditation and

mindfulness – and now, we have research affirming their significant benefits for stress relief.

Mindfulness Meditation Can Help You Beat Stress

Practicing "mindfulness" means you're actively paying attention to the moment you're in right now. Rather than letting your mind wander, when you're mindful, you're living in the moment and letting distracting thoughts pass through your mind without getting caught up in their emotional implications.

You can add mindfulness to virtually any aspect of your day – even while you're eating, working or doing household chores like washing dishes – simply by paying attention to the sensations you are experiencing in the present moment.

In one study, 70 adults with generalized anxiety disorder (GAD) were randomly assigned to receive either a Mindfulness-Based Stress Reduction (MBSR) class or a stress-management course (the control group) that detailed the importance of diet, exercise, sleep and time management.³

For the MBSR class, participants learned elements of mindfulness meditation, including paying attention to the present moment without judgment, as well as engaged in gentle [yoga](#) and body scan meditation, which focuses on being aware of your body.

Before and after the courses, the participants were subjected to a stressful situation (public speaking and performing mental math in front of an audience) to determine if the stress-management tools affected their anxiety.

Those in the MBSR did better under stress, reporting they felt less stressed than did those in the control group (who actually reported feeling more stressed after the second round of testing).

Physical measures of stress were also lower in the MBSR group, including lower levels of the stress hormone ACTH (adrenocorticotrophic hormone) and reduced proinflammatory cytokines, which are markers of inflammation.

A Viable Alternative to Medication

For people with anxiety who don't want to take medications for their symptoms, mindfulness meditation may prove to be a viable alternative, according to the study's lead author Dr. Elizabeth Hoge, currently a professor and director of the Anxiety Disorders Research Program at Georgetown University Medical Center in Washington, DC.

MBSR courses are popping up in hospitals and other settings across the U.S., but insurance companies are still reluctant to pay for the \$500-plus course. Hoge told Time she hopes insurance companies will recognize the evidence for MBSR in treating anxiety, noting:⁴

"To me, it's obvious that insurance companies would save money in the long run ... We have objective measures in the blood that they did better in a provoked situation ... It really is strong evidence that mindfulness meditation not only makes them feel better, but helps them be more resilient to stress."

In fact, another study also found MBSR to be effective in improving the mental health of medical students.⁵

A six-week meditation and yoga program also reduced stress levels and improved personal well-being in another group of medical students, who are arguably even more stressed than the average population.⁶

How Meditation Helps to Relieve Pain

Meditation can be a powerful pain reliever. Among volunteers who had never meditated before, those who attended four 20-minute classes to learn a meditation technique called focused attention (a form of [mindfulness meditation](#)) experienced significant pain relief — a 40% reduction in pain intensity and a 57% reduction in pain unpleasantness.⁷

How meditation relieves pain has remained more of a mystery. Even though mindfulness meditation activates multiple brain regions that contain a high expression of opioid receptors, researchers noted that it's unknown whether the practice relieves pain via this mechanism.

They devised a study to find out, which entailed teaching a group of people mindfulness meditation and then exposing them to pain via a hot probe on the back of the leg. The group was told to meditate during the pain, and at the same time half of the group was injected with naloxone, which blocks the body's opiate receptors.

Study co-author Fadel Zeidan, Ph.D., an associate professor of anesthesiology at University of California, San Diego (UCSD), explained to Time, "If meditation works through opiates, and we're blocking opiates ... in the body, then the pain-relieving effects of meditation will go away."⁸

This, however, didn't occur. Instead, meditators injected with a saline shot reported 21% less pain compared to their original pain ratings (before learning meditation) while those who received naloxone reported feeling 24% less pain.⁹

If meditation's pain-relieving effects have nothing to do with opiates, then what is responsible for its pain-relief powers? Time reported:¹⁰

"Zeidan's past research has shown that meditation activates higher-order brain regions associated with emotion regulation, focus and cognitive control, while tamping down activity in the thalamus, which transmits painful information from the body."¹¹

That helps prevent painful information from being spread throughout the brain, he explains."

Mindfulness May Regulate Your Body's Physical Stress Response

Other research looking into how mindfulness training affects health revealed that it may reduce stress via stress reduction pathways in your body.¹² As explained via a press

release.¹³

"When an individual experiences stress, activity in the prefrontal cortex – responsible for conscious thinking and planning – decreases, while activity in the amygdala, hypothalamus and anterior cingulate cortex – regions that quickly activate the body's stress response – increases.

Studies have suggested that mindfulness reverses these patterns during stress; it increases prefrontal activity, which can regulate and turn down the biological stress response.

Excessive activation of the biological stress response increases the risk of diseases impacted by stress (like depression, HIV and heart disease). By reducing individuals' experiences of stress, mindfulness may help regulate the physical stress response and ultimately reduce the risk and severity of stress-related diseases."

Meditation May Reduce Stress-Related Medical Costs

Astonishingly, stress-related problems, including [back pain](#), insomnia, [acid reflux](#) and exacerbations to irritable bowel syndrome may account for up to 70% of the average U.S. physician's caseload.¹⁴

Research suggests, however, that such costs could be cut drastically simply by practicing meditation and other methods that help you become more relaxed. Researchers analyzed data from more than 4,400 people who received eight weeks of relaxation-response training.

For about three hours a week, participants focused on relaxation using techniques like meditation, yoga and stress-reduction exercises. They also worked on building resiliency using social support, cognitive skills training and positive psychology.

After the program, the participants' use of medical services dropped by 43% compared to their usage the previous year.¹⁵ The researchers estimated such a change could save

the average patient between \$640 and \$25,500 a year.

Specifically, the relaxation patients reduced their clinical visits by 42%, their lab use by 44% and their use of procedures by 21%. Visits to the emergency room were also reduced, from 3.7 times per patient in the previous year to 1.7 a year after the program.

More Reasons to Give Meditation a Try

Meditation helps you take a deliberate break from the stream of thoughts that are constantly flowing in and out of your mind. Some people use it to promote spiritual growth or find inner peace, while others use it as a powerful relaxation and stress reduction tool.

Beyond mental health, research shows meditation may help [lower blood pressure](#) with just three months of practice, while at the same time decreasing psychological distress and increasing coping ability among young adults.¹⁶

Research from the National Center for Complementary and Alternative Medicine (NCCAM) also supports the notion that meditation acts as a form of "mental exercise" that can help regulate your attention and emotions while improving well-being. It's been found previously that meditation prompts changes in the amygdala, a region of your brain associated with processing emotion.

The research suggests these beneficial brain changes persist even after the meditation session is over, resulting in enduring changes in mental function.¹⁷ As for mindfulness, research has shown mindfulness training even leads to a number of benefits among children and adolescents, including:¹⁸

- Improvements in sleep quality and self-esteem
- Decreased anxiety and distress
- Better cognitive and performance skills in school

How to Practice Mindfulness Meditation

Professionally organized mindfulness training programs may be best for some people, but you can also take steps to become more mindful in your everyday life, then pull up these skills whenever you feel stress starting to take hold.

Ideally, start out your day with a mindfulness "exercise," such as focusing on your breathing for five minutes before you get out of bed. Focus on the flow of your breath and the rise and fall of your belly. This can help you to stay better focused for the rest of the day.

As the day goes on, try to minimize multi-tasking, as this is the opposite of mindfulness. If you find yourself trying to complete five tasks at once, stop yourself and focus your attention back to the task at hand. If emotionally distracting thoughts enter your head, remind yourself that these are only "projections," not reality, and allow them to pass by without stressing you out.

As for meditation, this, too, can be done right at home with very little formal "training" necessary. Simply sit quietly, perhaps with some soothing music, breathe rhythmically, and focus on something such as your **breathing**, a flower, an image, a candle, a mantra or even just being there, fully aware, in the moment.

I also enjoy using Muse, which is a personal meditation assistant that promotes relaxation and even provides real-time feedback on how well you're doing. Personally, I find my best meditation time is in the morning, right after I awaken, as I can get into the deepest states of relaxation at that time. Applying **Buteyko breathing** also really helps to calm the mind and get into deep states of relaxation. Additional tips for being mindful, published in the journal Visions, include:¹⁹

When you're **walking**, tune into how your weight shifts and the sensations in the bottom of your feet. Focus less on where you are headed.

Don't feel that you need to fill up all your time with doing. Take some time to simply be.

When your mind wanders to thinking, gently bring it back to your breath.

Notice how the mind likes to constantly judge. Don't take it seriously. It's not who you are.

Practice listening without making judgments.

Notice where you tend to zone out (i.e., driving, emailing or texting, web surfing, feeding the dog, doing dishes, brushing teeth). Practice bringing more awareness to that activity.

Spend time in nature.

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