Mindfulness meditation: A research-proven way to reduce stress

Mindfulness meditation can improve both mental and physical health.

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People have been meditating for thousands of years, often as part of a spiritual practice. But in more recent years, mindfulness has become a popular way to help people manage their stress and improve their overall well-being — and a wealth of research shows it’s effective. Psychologists have found that mindfulness meditation changes our brain and biology in positive ways, improving mental and physical health.

What is mindfulness meditation?

Meditation can be defined in many ways. But a simple way to think of it is [training your attention](https://psycnet.apa.org/record/2006-03947-004) to achieve a mental state of calm concentration and positive emotions.

Mindfulness is one of the most popular meditation techniques. It has two main parts: attention and acceptance.

The **attention** piece is about tuning into your experiences to focus on what's happening in the present moment. It typically involves directing your awareness to your breath, your thoughts, the physical sensations in your body and the feelings you are experiencing. The **acceptance** piece involves observing those feelings and sensations without judgment. Instead of responding or reacting to those thoughts or feelings, you aim to note them and let them go.

Mindfulness classes and mindfulness-based therapies provide the tools to put those concepts into practice. Such programs might include breathing exercises, yoga and guided lessons to help you become aware of your body sensations, thoughts and feelings.

Much of the research on mindfulness has focused on two types of interventions:

* **Mindfulness-based stress reduction (MBSR)** is a therapeutic intervention that involves weekly group classes and daily mindfulness exercises to practice at home, over an 8-week period. MBSR teaches people how to increase mindfulness through yoga and meditation.
* **Mindfulness-based cognitive therapy (MBCT)** is a therapeutic intervention that combines elements of MBSR and cognitive behavioral therapy (CBT) to treat people with depression.

Researchers reviewed more than 200 studies of mindfulness among healthy people and found mindfulness-based therapy was especially effective for [reducing stress, anxiety and depression](https://www.sciencedirect.com/science/article/pii/S0272735813000731?via=ihub). Mindfulness can also help treat people with specific problems including: [depression, pain, smoking and addiction](https://www.sciencedirect.com/science/article/pii/S0272735817303847?via%3Dihub). Some of the most promising research has looked at people with depression. Several studies have found, for example, that [MBCT can significantly reduce relapse in people who have had previous episodes of major depression](https://www.annualreviews.org/doi/abs/10.1146/annurev-psych-042716-051139). What's more, mindfulness-based interventions can [improve physical health](https://journals.lww.com/psychosomaticmedicine/Abstract/2019/04000/Mindfulness_Training_and_Physical_Health_.2.aspx), too. For example, mindfulness may [reduce pain, fatigue and stress in people with chronic pain](https://psycnet.apa.org/record/2014-45101-001). Other studies have found preliminary evidence that mindfulness might [boost the immune system](https://nyaspubs.onlinelibrary.wiley.com/doi/abs/10.1111/nyas.12998) and [help people recover more quickly from cold or flu.](http://www.annfammed.org/content/10/4/337.long)

How mindfulness works

How could simply tuning into your thoughts and feelings lead to so many positive outcomes throughout the body? Researchers believe the benefits of mindfulness are related to its ability to dial down the body's response to stress.

Chronic stress can impair the body's immune system and make many other health problems worse. By lowering the stress response, mindfulness may have downstream effects throughout the body.

Psychological scientists have found that mindfulness influences [two different stress pathways in the brain](https://journals.lww.com/psychosomaticmedicine/Abstract/2019/04000/Mindfulness_Training_and_Physical_Health_.2.aspx), changing brain structures and activity in regions associated with [attention and emotion regulation](https://www.nature.com/articles/nrn3916). Scientists are also beginning to understand which elements of mindfulness are responsible for its beneficial effects. In a review of meditation studies, psychology researchers found strong evidence that people who received MBCT were less [likely to react with negative thoughts or unhelpful emotional reactions in times of stress](https://www.sciencedirect.com/science/article/pii/S0272735815000197). They also found moderate evidence that people who participated in MBCT or MBSR were better able to focus on the present and less likely to worry and to think about a negative thought or experience over and over.

How to get started

Ready to give it a try? Learning mindfulness is easier than ever. Mindfulness classes and interventions are widely available in settings including yoga centers, athletic clubs, hospitals and clinics, though the classes can vary in their approach. Find a therapist trained in MBSR or MBCT — interventions that have the most evidence of benefits.

A number of mindfulness-based interventions are now available online or through smartphone apps as well, although more long-term research is needed to explore how they affect the body and the brain. Still, early studies have found that [online mindfulness-based interventions can have a positive effect on mental health](https://www.sciencedirect.com/science/article/pii/S0272735815300623).

It can take a little while for mindfulness meditation to feel natural and to become a part of your regular routine. But with practice, you may discover a powerful tool for relieving stress and improving well-being.

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References

[The Meeting of Meditative Disciplines and Western Psychology: A Mutually Enriching Dialogue](https://psycnet.apa.org/record/2006-03947-004) Walsh, et. al., *American Psychologist* 2006

[Mindfulness-Based Therapy: A Comprehensive Meta-Analysis](https://www.sciencedirect.com/science/article/pii/S0272735813000731?via%3Dihub) Khoury, B., et. al. *Clinical Psychology Review,* 2013

[Mindfulness-Based Interventions for Psychiatric Disorders: A Systematic Review and Meta-Analysis](https://www.sciencedirect.com/science/article/pii/S0272735817303847?via%3Dihub) Goldberg, S.B., et. al. *Clinical Psychology Review,* 2018

[Mindfulness Interventions](https://www.annualreviews.org/doi/abs/10.1146/annurev-psych-042716-051139) Creswell, J.D., *Annual Review of Psychology,* 2017

[Mindfulness Training and Physical Health: Mechanisms and Outcomes](https://journals.lww.com/psychosomaticmedicine/Abstract/2019/04000/Mindfulness_Training_and_Physical_Health_.2.aspx) Creswell, J.D., et. al.,  *Psychosomatic Medicine,* 2019

[Mindfulness and Cognitive–Behavioral Interventions for Chronic Pain: Differential Effects on Daily Pain Reactivity and Stress Reactivity](https://psycnet.apa.org/record/2014-45101-001) Davis, M.C., et. al., *Journal of Consulting and Clinical Psychology,* 2015

[Mindfulness Meditation and The Immune System: A Systematic Review of Randomized Controlled Trials](https://nyaspubs.onlinelibrary.wiley.com/doi/abs/10.1111/nyas.12998) Black, D.S., et. al. *Annals of the New York Academy of Sciences,* 2016

[Meditation or Exercise for Preventing Acute Respiratory Infection: A Randomized Controlled Trial](http://www.annfammed.org/content/10/4/337.long) Barrett, B., et. al., *Annals of Family Medicine,* 2012

[The Neuroscience of Mindfulness Meditation](https://www.nature.com/articles/nrn3916) Tan, Y.-Y., et. al., *Nature Reviews Neuroscience,* 2015

[How Do Mindfulness-Based Cognitive Therapy and Mindfulness-Based Stress Reduction Improve Mental Health and Wellbeing? A Systematic Review and Meta-Analysis of Mediation Studies](https://www.sciencedirect.com/science/article/pii/S0272735815000197) Gu, J., et. al. *Clinical Psychology Review,* 2015

[Effectiveness of Online Mindfulness-Based Interventions in Improving Mental Health: A Review and Meta-Analysis of Randomised Controlled Trials](https://www.sciencedirect.com/science/article/pii/S0272735815300623) Spijkerman, M.P.J., et. al., *Clinical Psychology Review,* 2016