

What happens when you meditate

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The benefits of meditation have long been touted: relief from stress and anxiety, and an increased ability to focus.

Stanford looks at how [meditation](#) prompts our body and brain to make these adjustments.

What happens in the brain?

"Meditation is an intentional practice to cultivate awareness using concentration," says Angela Lumba-Brown, a clinical associate professor of emergency medicine and co-director of the Stanford Brain Performance Center.

That concentration can affect neurotransmitters in our brains. Each of our billions of neurons can send five to 50 neurochemical signals per second, she says, allowing our brains to rapidly communicate with our body. Levels of dopamine (the neurotransmitter of pleasure), serotonin (the neurotransmitter of happiness), and GABA (the neurotransmitter of calmness) all rise in response to meditation.

And in people who practice on a daily basis, they send signals more routinely. But it's not one big, er, brain dump. "It's more that there are overall changes in these combinations of neurotransmitters that reflect a more positive, relaxed, and even contented direction," Lumba-Brown says.

Meditation can also alter electrical impulses, or [brain waves](#). Faster brain waves are linked to high-energy intensity, stress, and hypervigilance, Lumba-Brown says. Meditation can prompt the brain to shift from those high-alert waves to the slower, more relaxed waves that are linked to states of calm, deep focus, and sleep.

Which areas of the brain are switched on and off during meditation?

Matt Dixon, a research scholar in Stanford's psychology department, says meditation affects two main pathway changes in the brain. One is in the [default mode network](#), the brain region involved in rumination and construction of thoughts about the past and future. (Hello, anxiety!) That network becomes less active in people who practice meditation.

On the flip side, a part of the [brain](#) called the insula (responsible for body awareness, among other things) becomes more active in those who meditate, leading to increased awareness of their emotions and bodily sensations. "If you're doing it right, you're not thinking about yourself so much or judging yourself," Dixon says. "You're becoming more into the [present moment](#)."

Can one person's meditation practice affect other people?

Becoming more attuned to ourselves, Dixon says, ultimately can have an uplifting effect on others. Meditation might help us have improved attention at work, more patience with family members, or a greater capacity to be present when spending time with friends. "You can learn the piano, and that's wonderful," he says.

But that skill "doesn't necessarily change how you deal with work situations or relationship problems." Learning to be more present with our experiences, and to let go of thoughts that make us feel bad about ourselves, can naturally improve how we function in our daily lives, he says. "We'll be more attuned to our own needs and the needs of other people."

Meditation might also help us deal with our increasingly challenging world. Dixon says that playing witness to our experiences without judgment helps us portray negative emotions and hardships as temporary

events, rather than allowing them to become all-consuming. "It's not that 'I am my anxiety' or 'I am the depression,'" he says. "By observing them as just an experience that comes and goes, they lose their concreteness."

How to get started:

Make use of guided meditations

Guided meditations may be the simplest way to begin a journey of meditation and mindfulness. They provide external support to help you achieve beneficial meditation, Lumba-Brown says. "There is a progressive letting go of typical thoughts."

An endless stream of guided beginner content exists, from apps, such as Calm, to Netflix's Headspace Guide to Meditation to YouTube videos posted by meditation coaches. Dixon recommends testing out [different styles](#) of guided meditations—from body awareness scans to visualizations—to see what you like best. "It's important to explore," Dixon says, "and if you don't resonate with something, not to get discouraged but just to say, 'This is not working for me; I need something else.'"

Pick a practical amount of time to meditate

A single meditation session can leave you feeling calmer and more alert, but a daily or near-daily practice can have greater benefits. For beginners, Lumba-Brown suggests starting with about six minutes of meditation per day. "I like to take a number that really works well in any situation during the day," she says.

Working up from there, an ideal target of 7 to 15 minutes per day will help meditators feel a meaningful ongoing difference in their physical

and mental awareness. To level up to rock-star benefits, go for 20 minutes. But even an expert like Lumba-Brown acknowledges that sometimes, it's just not possible to reach this benchmark in a focused and intentional way. Aim for quality over quantity.

Find an anchor

One way to guide yourself into meditation is with an anchor—something external that you can return your focus to when your mind starts to wander. Focusing on sensations that are easy to pay attention to—such as counting your breaths, the feeling of the ground underneath your feet, or repeating a mantra—gives the mind something to do that serves the purpose of meditation. Dixon advises breathing in and out in sync with a ticking clock. Finding a physical anchor can work well too—Lumba-Brown's tactile item of choice is her beaded necklace.

Take advantage of the great outdoors

"Nature can be a great way to limit distractions, because nature itself carries this silence kind of naturally," Dixon says. "Even if there are birds chirping, it's still a very present and quiet atmosphere." Focusing on the sights, sounds, and smells of nature can be one way to center your focus and presence. And if you aren't one to sit still, some apps offer guided walking meditation.

Believe in yourself

Meditation is a mentally challenging exercise. Self-efficacy—the belief in your ability to act in ways that lead to reaching goals—can go a long way toward helping you overcome the potential discomfort of sitting alone with your own thoughts. "If you see meditation as a skill you can tangibly improve at, that's going to help you," Dixon says. "You will get

better at it."

Provided by Stanford University

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