

A speech in front of an unfamiliar audience in 10-minutes?
Heading to a group office meeting?
Just received a critical email from your boss?

Just the thought of any of those things may create some anxious feelings right now.

A new study from Stanford Medicine suggests the physiological sigh (or **Cyclic Sigh**) can combat anxiety in real time. The research from Dr. David Spiegel, & neurobiologist Dr. Andrew Huberman demonstrates that this style of controlled breathing for 5-minutes can lessen anxiety, improve mood, and lower your Heart Rate Variability (HRV), which is a sign of overall body calmness.

Extended Exhale or Sigh

Cyclic sighing is simple. If you're feeling stressed, take an inhale through your nose, hold for a second, then add a 2nd sharp inhale, followed by a slow, extended exhale (sigh) through the mouth. The sigh should be roughly 2X longer than the initial inhale. After just a few of these sighing exercises, you may feel more relaxed, but to get the full effect, Spiegel recommends repeating it for about five minutes. The second inhale in the double inhale with the long sighing exhale is "really important," Huberman says, allowing for not just the intake of more oxygen, "but also the offload of carbon dioxide." The long exhalation also activates the parasympathetic nervous system, according to Spiegel, which then slows down your heart rate and has an overall soothing effect on the body.

How exactly does the Cyclic Sigh work?

While most of the time our breathing is automatic, “you can very easily take over and control your breath, which then affects your overall physiology and stress response,” Spiegel says. Huberman claims the inhale/exhale will physically move your diaphragm. This will impact your thoracic cavity, the amount of blood in/out of your heart, your pulse, and HRV. Stressful moments can trigger physical changes like a faster heartbeat, stuttering, tightened muscles, and sweaty palms, all of which can lead to spiraling negative thoughts. “As soon as you notice what’s going on in your body, your brain thinks, ‘Oh no, this must be really bad, and you get more anxious,” Spiegel explains. It’s a snowball effect of negative emotions. And for those with anxiety disorders, the feeling can be brutal, making everyday life considerably more difficult.

Huberman notes that the Cyclic Sigh allows you to “feel more calm in real time, meaning without having to disengage from the stress-inducing activity.”

Breath Work is more effective than Meditation.

Huberman and Spiegel led a trial with over a hundred volunteers, comparing the Cyclic Sigh to two other types of breathing exercises. The researchers also had a control group of participants who passively observed their breath during 5-minutes of mindful meditation. “In mindfulness meditation, we instruct people to be aware of their breath but not try to control it,” Spiegel says.

Numerous studies have pointed to the benefits of mindful meditation, but it turns out that directly controlling your breath may unlock a more powerful response. In the Stanford [study](#), published in Cell Reports Medicine, the controlled breathing groups reported even more improvements to their moods, with significant increases in positive affect (more energy, joy, and peacefulness).

Verified Results

On average, the controlled breathing participants experienced a daily increase in positive affect of 1.91 points on the Positive/Negative Affect Schedule scale, while the mindfulness meditation group saw an increase of 1.22 points, meaning the improvement from controlled breathing was greater by about one-third. Cyclic sighing in particular resulted in the greatest daily improvement in positive feelings.

The researchers think that the sighing, emphasizing slow exhalation, may prove to be the most effective type of controlled breathing to combat stress.

Spiegel and Huberman still want to investigate controlled breathing more, with MRI tests to measure brain activity. But in the meantime, there's really no downside to trying the straightforward Cyclic Sigh next time you need a minute. "There's a growing interest in non-pharmacological ways of helping people regulate their mood," Spiegel says. "We may be able to identify certain kinds of anxiety that respond substantially to this simple treatment."

The "Cyclic Sigh" can be found on the SUND app.