

# Don't Panic! Stress Is Contagious

New research finds evidence that stress is a contagion.



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One of the most valuable lessons my father ever taught me was: "[anxiety](#) is contagious." As a neurosurgeon, my dad learned early in his [career](#) that it was impossible for him to have grace under pressure in the operating room if any of his surgical assistants were acting nervous.

During [brain](#) surgery, my father was notorious for asking less-seasoned

people, who were stressing out, to leave the OR. He often recited Branch Rickey's mantra, "Let's not get panicky." Like all of us, my father picked up on other people's anxiety on a visceral level. This made it difficult for him to maintain zen-like composure if there was a crisis during surgery and rookies in the OR became frantic, spastic, or discombobulated.

As a tennis coach, my dad taught me some tricks for maintaining grace under pressure. One was to always take a few deep breaths, bounce the tennis ball three times, and imagine my vagus nerve squirting acetylcholine onto my heart (which slows your heart rate by engaging the [parasympathetic nervous system](#)) before every serve. This would stop the "fight-or-flight" feedback loop of anxiety from feeding on itself inside my own body and lower my cortisol levels, which is a biological indicator of [stress](#).

## **Stress As a Classroom Contagion**

This week, a new study reports that stress can be a contagion. The researchers identified the communicability of stress by measuring levels of cortisol in students in classrooms compared with teachers experiencing 'burnout' versus 'no-burnout.'

The June 2016 study, "[Stress Contagion in the Classroom? The Link Between Classroom Teacher Burnout and Morning Cortisol in Elementary School Students](#)," appears in the journal *Social Science & Medicine*.

The purpose of this study was to explore the link between elementary school teachers' burnout levels and students' physiological stress responses. Using a stress-contagion framework, the researchers found

higher levels of teacher burnout were linked to elevated cortisol levels in their students.

For this study, the University of British Columbia researchers assessed each teacher's occupational stress levels using the Maslach Burnout Inventory modified for teachers. Cortisol levels were measured from saliva samples taken from over 400 elementary school children as an indicator of students' hypothalamic–pituitary–adrenal (HPA) functioning.

After analyzing the data, the researchers found much higher cortisol levels in students in classrooms with teachers experiencing more burnout, or feelings of emotional exhaustion. Higher cortisol levels in elementary school children have been linked to learning difficulties as well as mental [health](#) problems. In a statement, [Eva Oberle](#), the study's lead author, said,

"This suggests that stress contagion might be taking place in the classroom among students and their teachers. It is unknown what came first—elevated cortisol or teacher burnout. We consider the connection between student and teacher stress a cyclical problem in the classroom."

Oberle emphasized that a stressful classroom climate is often the result of inadequate support for teachers saying, "Our study is a reminder of the systemic issues facing teachers and educators as classroom sizes increase and supports for teachers are cut."

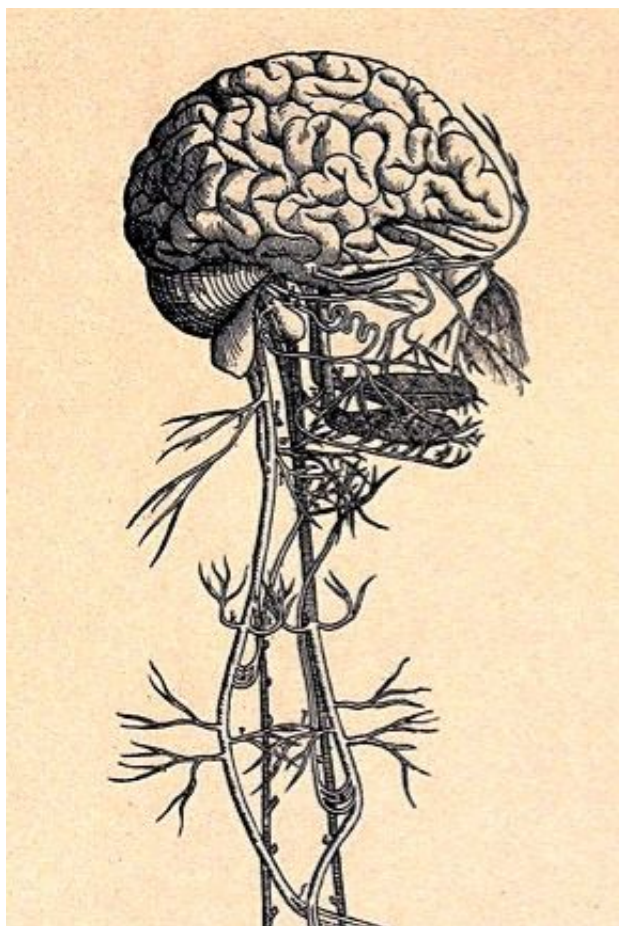
In a vicious cycle, once the stress contagion is running rampant in a classroom (or school) the free-floating anxiety among students may create more challenging situations for teachers due

to increased behavioral problems, or special needs. This presents the chicken-or-the-egg question: Are teachers [burned out](#) because their students are stressed out, or vice versa?

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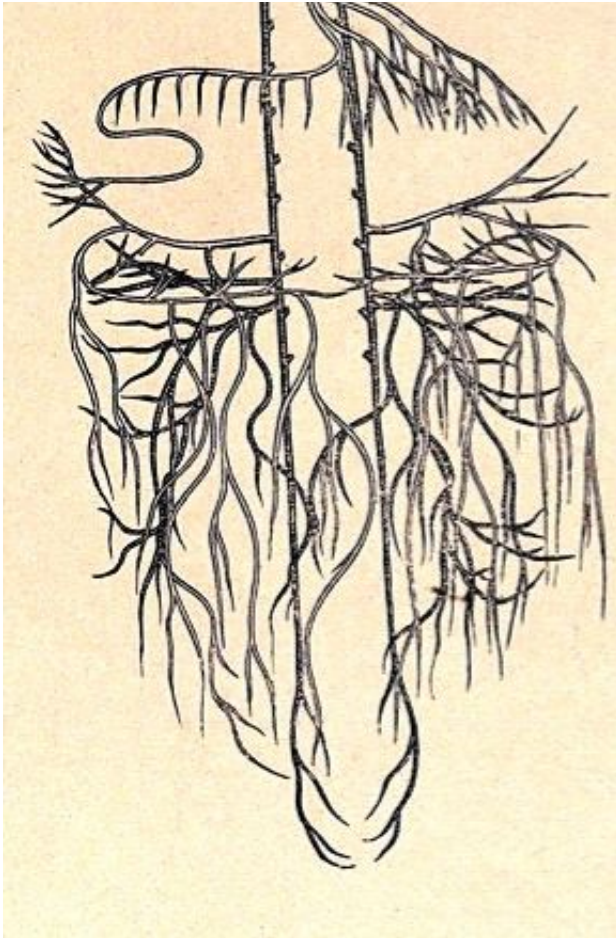
Within this conundrum, teachers could feel overwhelmed and report higher levels of burnout, which may impact teachers' ability to effectively manage their students and create a snowball effect. Poorly managed classrooms can contribute to students' needs not being met and cause stress levels to spiral out of control for all parties involved.

### **Conclusions: [Mindfulness](#) and Your Vagus Nerve Can Stop the Spread of Anxiety**



This is the first study to to examine the connection between teachers' occupational stress and burnout as being linked to students' physiological stress regulation. What can we do to break this cycle? Although it's not a panacea, as a first step, I would recommend that anyone who feels stressed out should take a few deep, diaphragmatic breaths, which engages the vagus nerve and can stop the spread of anxiety





The vagus nerve is known as the "wandering nerve" because it has multiple branches that diverge from two thick stems rooted in the cerebellum and brainstem that wander to the lowest viscera of your abdomen touching your heart and most major organs along the way in a brain-gut feedback loop.

Source: Wellcome Library/Public Domain

counterproductive. Mindfulness and diaphragmatic breathing are an easy way to decompress, snap out of it, push the reset button... and break this cycle. Personally, I learned as an athlete that one of the best ways to avoid choking was to combine deep breathing with consciously relaxing the back of my eyes, which I believe may also be connected to the vagus nerve somehow.

within your own nervous system and among groups of people (i.e. students and teachers in classrooms).

Also, practicing a simple 3-step mindfulness [meditation](#) can lower stress levels in just a few seconds. To kick-start a state of mindfulness, all you have to do is: 1. Stop. 2. Breathe. 3. Think about your thinking. With practice, you'll get better at guiding (or clearing) your thoughts to create a stress-free state of mind.

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We all get stuck in mental ruts and can get stressed out in ways that are contagious and

On average, human beings take 20,000 breaths a day. This gives each of us 20,000 chances every day to engage our vagus nerve and parasympathetic nervous system, thus stopping our stress and anxiety from going viral.

To read more on this topic, check out my *Psychology Today* blog posts,

- "[The Neurobiology of Grace Under Pressure](#)"
- "[How Does the Vagus Nerve Convey Gut Instincts to the Brain?](#)"
- "[Mindfulness Meditation and the Vagus Nerve Share Many Powers](#)"
- "[Cortisol: Why 'The Stress Hormone' Public Enemy No. 1](#)"
- "[Holding a Grudge Increases Cortisol and Reduces Oxytocin](#)"
- "[Mindfulness: The Power of 'Thinking About Your Thinking'](#)"
- "[5 Neuroscience Based Ways to Clear Your Mind](#)"

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