

SCIENCE

How not to choke under pressure

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Jordan Awan

The right kind of preparation can keep us from stumbling during stressful situations, says cognitive scientist Sian Leah Beilock.

This post is part of TED's "How to Be a Better Human" series, each of which contains a piece of helpful advice from someone in the TED community; [browse through all the posts](#) here.

“They choked.”

It's one of the most humiliating things you can say about a person. Just about all of us have choked at some point in our lives, whether it was during a test, a game, a talk, or a sales call.

And, boy, do I know the feeling. Growing up, I was an avid athlete. My main sport was soccer, and I was a goalkeeper, which is both the best and the worst position on the field. All eyes are on you, and with that comes the pressure. I distinctly remember one high-school game in particular. I was playing for the California state team, which is part of the Olympic Development Program. I was having a great game — until I realized that the national coach was standing right behind me. Then everything changed. In a matter of seconds, I went from playing at the top of my ability to the very bottom. I choked under the pressure of feeling those evaluative eyes on me, my team lost, and the national coach walked away.

My experience on the playing field — and in other important facets of my life — pushed me into the field of cognitive science. I wanted to know how we could use our knowledge of the mind and the brain to come up with psychological tools that would help us perform at our best.

I also wanted to find out: Why do we sometimes fail to perform up to our capabilities when the pressure is on? It might not be so surprising to you to hear that in stressful situations, we worry — about the situation, the consequences, and what others will think of us.

But what may surprise you is that we often get in our own way precisely because our worries prompt us to concentrate too much. When we're concerned about performing our best, we may try and control aspects of what we're doing that are best left on autopilot and outside conscious awareness. As a result, we mess up.

My research team and I have studied this phenomenon of overattention, which we call paralysis by analysis. In one study, we asked college soccer players to dribble a soccer ball and to pay attention to an aspect of their performance that they wouldn't otherwise attend to. Specifically, we asked them to pay attention to what side of their foot was contacting the ball. We found that when we drew their attention to the step-by-step details of what they were doing, their performance was slower and more error-prone. Much of this paralysis by analysis comes down to activity in our prefrontal cortex, the front part of our brain that sits over our eyes. While it usually helps us focus in positive ways, it often gets hooked on the wrong things.

In basketball, the term “unconscious” is used to describe a shooter who just can't seem to miss a shot. NBA All-Star Tim Duncan has said, “When you have to stop and think, that's when you mess up.” In dance, the great choreographer, George Balanchine, used to urge

his dancers, “Don’t think; just do.” When the pressure’s on, we frequently try and control what we’re doing in a way that leads to worse performance.

So how do we unhook our brains?

We can do something as simple as singing a song or paying attention to one’s pinky toe — as pro golfer Jack Nicklaus was rumored to do. Or, we can find some other mindless activity that can help take our minds off the details of what we’re trying to do.

Another strategy requires closing the gap between training and competition, so we can get used to that feeling of all eyes on us. This means practicing under the conditions that we know we’ll be performing under. Whether we’re getting ready for an exam or a talk, we can put ourselves in a simulation of the future stressful situation.

If you’re taking a test, periodically close the book while you’re studying and practice retrieving the answers from memory in a set amount of time. If you’re giving a talk, practice a few times in front of other people. And if you can’t find anyone who will listen, rehearse in front of a video camera or a mirror. Our ability to become accustomed to what it will feel like can make the difference in whether we choke or we thrive.

We can also take steps to rid ourselves of those pesky self-doubts that creep up in pressure-filled situations and lead to paralysis by analysis. Researchers have discovered that simply writing down our thoughts and worries before the stressful event can help download them from our minds. Journaling or jotting your thoughts on paper or on your phone can make it less likely they’ll pop up and distract you during the moments that count.

Fast-forward from my high school soccer game to my freshman year in college. I was in a chemistry class for science majors, and I did not belong there. Even though I studied for my first midterm exam, I bombed. I got the single worst grade in a class of 400 students. Not was I convinced I shouldn’t be a science major but I thought about dropping out of college altogether.

Instead, I changed what I did. Rather than study alone, I studied with a group of friends who’d close their books and compete for the right answers at the end of the study session. We were learning how to practice under stress, closing the gap between training and competition.

When the day for the final exam came, my mind was quiet, and I got one of the highest grades in the entire class. As it turns out, it wasn't just about learning the material; it was about learning how to overcome my limits when it mattered the most.

This post was adapted from Sian Leah Beilock's [TEDMED](#) talk. Watch it now:

Sian Leah Beilock
Why we choke under pressure — and how to avoid it

ABOUT THE AUTHOR

Sian Leah Beilock became the 8th President of Barnard College in July 2017. Prior to her appointment, Beilock spent 12 years at the University of Chicago. As the Stella M. Rowley Professor of Psychology and a member of the Committee on Education, she specialized in how children and adults learn and perform at their best, especially under stress. In her role as a member of the senior leadership, she served as the Vice Provost for Academic Initiatives, and as the Executive Vice Provost and an Officer of the University.

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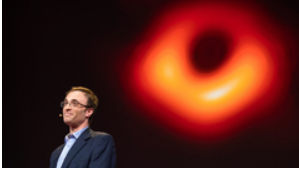


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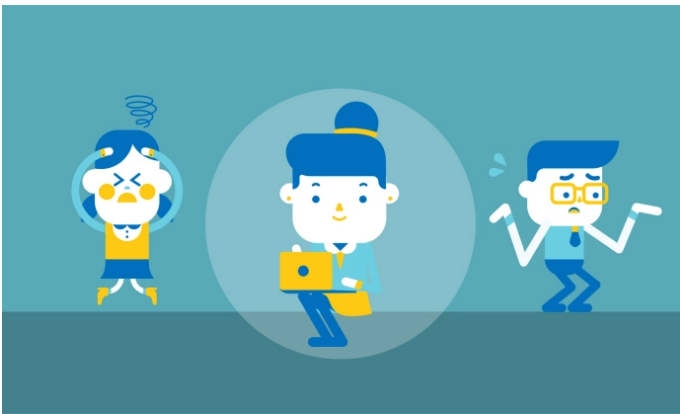
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