



The Science of Choking Under Pressure

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Choking under pressure, where one freezes and underperforms when it matters most — even despite deep expertise and years of practice — is well known in the world of sports. But we hear less about the day-to-day chokes that happen at work.

Most of us can reflect on a few of our own choking moments. Maybe you lost your voice or your ability to think straight when speaking with an important client, manager, or audience. Nobody is immune: for example, Mahatma Gandhi had a choking moment during his first case before a judge and “ran from the courtroom in humiliation.” To help prevent “the choke” at work, we can apply learnings from the world of sports to the world of management.

The science of choking under pressure

When we “freeze,” our bodies are engaging a threat response to something in our external environment. That “something” is different for everyone. At work, it might look like a difficult conversation, a negotiation, a pile of paperwork, or a public speech.

When you choke, physiologically, your body has entered into protection from danger mode and has released a cocktail of stress-related hormones like cortisol and adrenaline. These can elevate your breathing and heart rate, dilate your pupils, and even cause you to sweat. When under threat, your working memory becomes impaired, meaning you have trouble making sense of and acting on new information, become more prone to recalling and reliving negative emotional experiences, and consciously overthink behaviors that should be second nature. Ultimately, when

choking, not only does your performance in the moment decline, but it can trigger a vicious cycle of self-doubt, shame, guilt, and fear, making it all the more likely you'll choke again, limit taking future risks, and even suffer long-term mental health consequences, such as the PTSD experienced by Olympic champion René Holten Poulsen.

You're most likely to choke when the external demands or pressure of the situation overwhelm your personal resources to cope with it. This happens, for example, when the stakes are raised and the situation occurs infrequently. While soccer players may find a penalty kick relatively simple during practice, the stakes (e.g., your team's entire future and funding) and rarity (e.g., you have only this one chance) are immensely elevated in knockout-stage competitions (e.g., a World Cup final). A choke can also happen even when the pressure remains constant, yet your ability to use coping resources becomes depleted — for example, when you feel anxious or begin to question your abilities. The frustrating part is that this demands — resources imbalance can happen completely unconsciously, meaning that while you think you're ready, your unconscious brain has other ideas.

How to harness your big moments at work

Like an athlete ready for the big game, assuming that you've already learned and practiced the skills that you'll draw on, there are a number of techniques that can help you reduce the pressure or boost your ability to cope with it, which will ultimately help you fully access that well-honed skill and both prevent and navigate through a potential choke.

Be there, over and over.

Golfing legend Jack Nicklaus famously said, "I never missed a putt in my mind." The same part of the brain is activated when we visualize an action (e.g., lifting your left hand) and when we actually perform the action. That's why mental imagery is used to improve motor learning in rehabilitative settings, such as after a stroke.

In the world of sports, star athletes such as Serena Williams, Wayne Rooney, and Michael Jordan are all strong believers in visualization. Visualizing previous successes at crucial moments has multiple benefits: It prepares athletes for various scenarios and allows them to manage expectations and emotions more effectively. There is a significant body of scientific evidence showing the power of visualization to enhance strength, accuracy, and endurance, as well as reducing anxiety and increasing sense of control in emergency situations.

When preparing for a big moment at work, rehearse it in your mind in as much clarity and detail as you can. What will it look and feel like to walk into your manager's office and ask for that raise? How do the lights feel as you walk out in front of the audience, into the boardroom, onto the stage, or even sign on to Zoom? What will be the first words you say?

Practice for pressure.

Athletes train not only for skills and abilities, but also for pressure. For the 2012 and 2016 Olympics, Team Great Britain's mental fortitude training gradually increased pressure on athletes to intentionally evoke — and practice working with — their choke-response. Top coaches introduce mental, technical, tactical, or physical competitive stressors by unexpectedly changing the usual conditions. For example, they might force right-footed soccer players to use only their left foot during practice, or introduce better opponents by surprise. Swimmer Michael Phelps' coach, Bob Bowman, once stepped on and cracked Phelps' goggles before a race, forcing him to compete "blind." This experience proved useful when his goggles filled with water after he dove during an Olympic race in 2008: "From the 150-meter wall to the finish, I couldn't see the wall. I was just hoping I was winning." Not only did he win the gold medal, but he also broke a world record.

Steve Jobs was known for his stellar presentations, but also for the amount of practice he would put in. Rehearsal is important, whether you're alone in your office or in front of a camera or crowd. You can raise the stakes by asking your audience to interrupt you, say a negative comment, or switch off your computer, forcing you to continue without your supporting slides.

Develop a pre-performance routine.

Those sometimes perplexing routines, movements, or sets of words that you see and hear before an athlete delivers an important serve in tennis, a free-throw in basketball, or a penalty kick in soccer have a very important purpose. Rafael Nadal is said to have an elaborate 12-step court routine that lasts around 30 seconds. NBA star Karl Malone was known for his particular free-throw routine that involved speaking to himself.

A pre-performance routine can help you clear your mind, get into the moment, and set that well-honed skill to autopilot. At work, you might develop a short ritual, such as breathing exercises, repeating a phrase or mantra, listening to a particular song, sipping a favorite tea, or doing a few physical stretches in your office that can get you in the right mindset to tackle those first moments before autopilot can kick in. Once you've got a routine you're comfortable with, you can use it whenever you need to access the knowledge, skills, and behaviors you've been well-trained for. You might also develop a mini-routine that you return to when you realize you're choking.

Don't think, just do.

Most athletes know that overthinking in the moment — or paralysis by analysis — can make them doubt themselves or focus too much on every aspect of a movement (e.g., the position of your leg and foot when kicking a ball) instead of letting it go (outside of conscious awareness), triggering a choke. To avoid this, some athletes opt for “self-distraction” in the minutes or hours prior to a race or a game. Listening to music, reading, or doing something with your hands to stay out of your head are ways to escape from the surrounding elements and thoughts that could add pressure. For instance, in the minutes before a race, Usain Bolt will randomly think about anything else, until the moment he hears “on your marks.” He says: “[N]o matter how much pressure is on, I never think about it, because it starts creeping in and plays with your mind. That's why I clown around before a race. I'm relaxed, I enjoy myself.”

Mindfulness and meditation techniques help train you to acknowledge your surroundings while remaining alert, attentive, and present within yourself in the

moment. A wealth of research shows how mindfulness and meditation can calm the brain and nervous system, reduce anxiety, and improve performance. Numerous athletes use these techniques before and during big sporting events. For example, Novak Djokovic practices mindfulness daily:

Instead of trying to silence your mind or find “inner peace,” you allow and accept your thoughts as they come...They do bounce around like crazy, but they’re supposed to, your job is to let them come and go...I’ve done so much mindfulness that my brain functions better now automatically...I used to freeze up whenever I made a mistake. Now when I blow a serve or shank a backhand I still get those flashes of self-doubt but I know how to handle them.

Simply writing down your fears can also help alleviate them for performance. Mindfulness trainings are increasingly popular in organizations, and supporting apps have been shown to be effective in reducing performance anxiety (as long as you actually stick to them).

Develop a stress mindset.

Tennis legend Billie-Jean King has said, “Pressure is a privilege.” A decorated champion, King saw stress as “earned.” Shifting your mindset from “stress is depleting” to “stress is enhancing” actually changes the way your body responds to it. To do this, next time you’re nervous and feel your heart starting to race, don’t tell yourself to calm down — your body won’t buy it. Rather, tell yourself you’re excited and gearing up for optimal performance. Six-time Olympic gold medalist Sir Chris Hoy said, “Never use the words ‘nervous’ or ‘anxious’; use the words ‘exciting’ and ‘adrenalized.’”

When Djokovic is playing in front of a crowd that’s mostly in favor of his opponent, he says, “At times you just try to ignore it, which is quite hard, but I like to transmutate it in a way, so when the crowd is chanting ‘Roger,’ I hear ‘Novak.’” This is a way to tell your body and mind that the stress you’re facing is positive, supporting you.

Seemingly small strategies like self-talk (e.g., saying “I’m excited” out loud) or inner dialogue telling yourself you’re excited can help you harness and channel the stress to focus and perform, averting a choke.

Rationalize the event and your bumps along the way.

It’s important to put your performance into perspective, so the anticipated results don’t overwhelm your ability to perform (or your enjoyment). This involves, for example, disconnecting your identity (i.e., who you are as a person) from the results. That is, a loss doesn’t mean that you are a loser, and a win doesn’t mean that you are a winner. For example, after winning gold at the alpine skiing world cup in 2020, Lara Gut-Behrami said: “It’s just a victory, it doesn’t change your life. There are more important things.” Serena Williams highlights that setbacks are part of the process, and motivation to keep going. Prolific basketball coach Dawn Stanley has a 24-hour rule for athletes whereby they have “24 hours to ‘bask in [their] victory’ or ‘agonize over [their] defeat.’”

You can also put the big moment into perspective by taking what President Obama refers to as “the long view”: reframing any immediate “crises” so that you can see the big picture — whether that’s your values or your long-term goals — which can help you minimize the effects and importance of a single event.

Nobody is immune from choking in a big moment. However, what we learn from the greatest athletes in the world is that there are behaviors and mindsets we can all practice to help prevent a choke and better navigate it when it arrives.

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