

# Taming the Tiger of Test Anxiety

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Tests can be stressful. Any time we are being evaluated, we naturally feel a degree of stress. Stress can keep us on our toes, allowing us to fully engage and deliver optimal performance, or it can flood us, overwhelming and drastically impairing our performance. Take a moment to remember a time when you felt some anxiety about a

test: an admissions test, a challenging final, a certification exam.

Recall the emotions, the bodily sensations, the thoughts that ran through your head as you sat for that exam. In that stressed condition, how good were you at regulating your anxiety?

How good are you now? Any improvement? Most likely your emotional self-regulatory mechanism is much more robust in adulthood than it was in adolescence. As you work with students who are struggling to regulate their anxiety on tests, you can be a powerful source of empathy and information to help them with this task.

Test anxiety appears as early as elementary school; becomes more prevalent in high school; and can endure into college, graduate school, and beyond. Academic research has found that 61% of students will experience test anxiety at some point during high school and 26% of students will experience test-anxiety on a regular basis.<sup>1</sup> Test anxiety is more prevalent today among US students than at any prior time.

Certain student populations are more vulnerable to test anxiety than others, including students with disabilities, attentional deficits, and perfectionistic tendencies. Students under performance pressure (whether from peers and family or because of placement in talented and gifted classes) are also more likely to experience test anxiety. Girls are more likely than boys to experience all forms of academic anxiety, including test anxiety. Research shows that this anxiety differential contributes to gender gaps in standardized test scores<sup>2</sup>. Test anxiety manifests in a variety of forms. Students may experience affective symptoms, such as excessive worry or fear; physiological symptoms, such as a dry mouth or upset stomach; behavioral symptoms, such as avoiding testing events or cheating on tests; or cognitive symptoms, such as inattention or cognitive obstruction (a flood of distracting thoughts) during a test. Elementary students have a greater tendency to exhibit the physiological symptoms of

test anxiety, while older students have a greater likelihood of experiencing its behavioral and affective symptoms<sup>3</sup>.

When you have students who are spending excessive time preparing for tests coupled with low performance, test anxiety may be a factor. Similarly, if you notice students exhibiting avoidant behavior, such as developing strange illnesses before big tests or putting off preparation for tests, test anxiety may be an issue. Left unchecked, test anxiety can lead to feelings of frustration, diminished academic motivation, lower self-evaluation and self-esteem, and a greater tendency to cheat on tests or devalue them.

If you think a student may be experiencing test anxiety, it is important to determine whether there are other confounding factors, such as processing speed deficits, skill deficits, or learning differences, underlying the anxiety response. Some students feel anxiety simply because they cannot finish in the allotted time or are struggling to process the information on a test.

## UNDERSTANDING THE MECHANISM OF TEST ANXIETY

If we can teach students how anxiety functions in the body, we can empower them to better self-regulate the anxiety mechanism. The linchpin of the anxiety system is the amygdala, the almond-shaped group of nuclei, embedded deep in the temporal lobe, responsible for identifying threats in the environment and preparing the body to face imminent danger. Once a student identifies a test or exam as a threat, stress hormones are released into the blood stream, the sympathetic nervous system engages, and the body prepares for a fight-flight-freeze-or-fold response.

Once activated, the anxiety/stress response can run rampant or be deactivated by intentional, mindful, focused efforts. Self-regulation is an inside job; it's an acquired skill that we tend to develop with age and experience. An individual skilled at self-regulation can quiet the initial activity of the amygdala and reduce the stress response. The key to self-regulation is the frontal cortex, the reasoning center of our brain, that can regulate the activity of the amygdala by sending neural messengers such as GABA (gamma-aminobutyric acid) to inhibit stress hormone secretion and activate the calming parasympathetic nervous system.



interventions you can use to help your students. Here are some techniques that may be useful:

**Normalize test anxiety.** We can let our students in on the secret that we too experience anxiety, and many of us have had to face test anxiety during our academic lives. This helps students realize that they are not alone. You could even volunteer the manner in which you regulate your own anxiety to encourage students to develop strategies that will be effective for them.

**Draw skills from other domains of competence.** Students can look to their own lives to see where they have been successful in regulating stress or anxiety. Many students have had to face performance conditions in athletics, performing arts, or other domains. Students can learn to evoke strategies that have already worked for them and bring those to the test.

**Teach students the underlying mechanism of anxiety.** A little neuroscience goes a long way. Students who understand how stress hormones and self-regulation work can better manage their anxiety responses.

**Encourage students to write about their test anxiety.**

Writing about fears and anxieties enhances self-regulation. Research from the University of Chicago<sup>4</sup> reveals that 10 minutes of expressive writing about test anxiety significantly reduces anxiety and improves performance.

**Help students to reappraise their arousal.** Students may misinterpret the physiological symptoms of arousal (e.g., sweaty palms and rapid heartbeat) as evidence that they are not ready for a test. This is anything but the case! Such symptoms result from the moderate increase in stress hormones that are needed to facilitate sustained focus and cognitive effort. And many great test takers feel those symptoms before a test. Explaining to students that some physical symptoms are in fact beneficial for thinking and reasoning has been shown to significantly enhance test performance.

Reinforce a flexible rather than fixed mindset. Carol Dweck's research shows that students with a fixed view of intelligence will view tests as an opportunity for failure and a threat to their identity. Students with a growth mindset will be less likely to fear a test or its outcomes and more likely to view a test as a challenge that can be mastered.

Help students manage their self-talk. You can help students correct their maladaptive self-talk and retire the "I'm a bad test taker" mantra. Encourage your students to be very careful of the messages they give themselves before and during a test, and help them shift self-talk towards the positive. Students need to learn to access their inner coach, their internal voice of support—you can help model this for them. Encourage students to use internal "you statements" rather than "I statements" to self-regulate and self-motivate: "Jennifer, you can do this; you've prepared and you've got this." Researchers have found that this shift to the third person enhances self-regulation.

One of the primary reasons test anxiety can be so debilitating for your students lies in the flooding of stress hormones during an assessment. There is nothing wrong with a little cortisol (one of the principal stress hormones). In fact, researchers have found that the best test takers show an increase in cortisol levels immediately before and during tests. A moderate uptick elevates our attention, heightens our focus, and allows us to perform at peak levels; however, excessive levels of stress hormones impair the functioning of working memory and have been found to inhibit the retrieval of already stored information. As stress hormones rise beyond optimal levels, students will find themselves struggling to remember material they have previously studied and mastered.

In addition, test anxiety eats up available cognitive capacity through the mechanism of cognitive obstruction. We can only hold so much information in our minds at one given time. As limited capacity is used up by distracting thoughts, negative self-talk, and fearful cognitions, performance becomes impaired. The ability to organize one's thoughts and concentrate on the given task will be disrupted. Researchers have found that students who suffer from test anxiety dedicate up to 40% of their time on task-irrelevant thoughts!

The one-two punch of diminished working memory function because of stress hormones and cognitive obstruction because of task-irrelevant cognitions can put a serious damper on performance. And in this diminished state, test-anxious students may feel overwhelmed, frustrated, helpless, and discouraged. But there is hope for those students—and you can be part of the solution.

#### **WAYS TO HELP YOUR STUDENTS MANAGE TEST ANXIETY**

Because test anxiety manifests behaviorally, cognitively, physiologically, and emotionally, there are many potential

**Use cognitive rehearsal and active imagination.** Walk your students through a guided visualization of the perfect test day. Help them create a vivid experience of their optimal performance and encourage them to repeat it. This primes the brain for success on test day.

**Give students some success to enhance self-efficacy.** Students with greater self-efficacy for testing exhibit lower test anxiety. If students can demonstrate mastery in limited practice conditions, it can lead them to reappraise their abilities and build confidence that they can succeed on the official test.

**Ensure that your student has the necessary content knowledge and test-taking skills.** Students who are test wise and have mastered the relevant content are less likely to experience test anxiety than those who are underprepared or less familiar with test-taking strategies.

**Teach students to use the body to reduce anxiety.** When the body is relaxed and the breath is slow and measured, anxiety tends to decrease. Students can learn some basic relaxation skills to help quiet the mind when arousal peaks. Students can practice closing their eyes and taking several deep breaths or tensing and relaxing muscles to help calm themselves. Some students like to practice meditation and mindfulness as a means of self-regulation; others benefit from vigorous exercise the morning of a test. During the test, some students will place a hand on their heart and breathe in slowly to calm arousal; others benefit from interventions, such as tapping, which help calm the nervous system.

**Encourage proper diet and sleep hygiene.** Hungry, tired students will have a harder time self-regulating on test day. Ensure that students have proper sleep for the two days leading up to the test and go into the test fully nourished, with snacks prepared for breaks during a longer assessment.

**Simulate the anxiety-inducing conditions to facilitate self-regulatory practice.** Test anxiety is state-specific, manifesting only under certain conditions. Encourage your students to practice their self-regulatory skills in conditions that closely approximate official testing conditions. Practice tests are ideal for this purpose.

Enhance self-nurturing on test day. Students can increase their self-nurturing behaviors before a test: eating a favorite breakfast; playing enjoyable music on the way to the test center; arriving with plenty of time; and giving themselves positive, encouraging messages.

When you introduce potential interventions to your students, ensure that you do so early enough to allow them to practice long before the official test day.

**Reducing external sources of anxiety.** Parental hovering and anxiety can negatively affect students. You may need to encourage a student's parents to decrease some of the attention, focus, and pressure on testing outcomes.

## IN CLOSING

Engaging in this work helps strengthen the empathic connection with your students and reinforces the positive therapeutic alliance. By coaching your students on ways to tackle test anxiety, you will help them learn to self-regulate. This is a fundamental life skill that will transfer to other domains and benefit them for years to come.

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