

# How to breathe for better health, studying and test taking

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Dr. Nathaly Shoua-Desmarais practices diaphragmatic breathing using biofeedback. Credit: Florida International University

If you're reading this you're obviously breathing, but are you doing it right?

From the moment we're born we just do it, we take [breathing](#) for granted until someone or something takes our breath away. Most of us don't realize that as we grow up, we change the way we breathe.

"Babies use diaphragmatic breathing. Somewhere along the way we develop bad habits that develop into thoracic breathing," says Nathaly Shoua-Desmarais, a clinical psychologist and board-certified biofeedback specialist who heads the Medical Student Counseling and Wellness Center at the Herbert Wertheim College of Medicine.

## **Diaphragmatic vs Thoracic breathing**

Diaphragmatic breathing, also called deep or belly breathing, is done by contracting the diaphragm, a large dome-shaped muscle at the base of the lungs. It is more efficient than thoracic breathing, also called shallow or chest breathing, which uses the muscles in your upper chest.

"When you breathe with your upper chest, upper lungs, [upper body](#), what happens is you are taking in less oxygen which is vital to your [body](#) and organs," says Clinical Psychologist Melanis Rivera.

Breathing is essentially a gas exchange. You inhale oxygen and exhale carbon dioxide, a byproduct of the food we eat which the body needs to get rid of, so it doesn't reach toxic levels.

"The misconception is the longer you suck in air the better, but it's the longer exhalation that provides the most benefit," says Shoua-Desmarais, who recommends inhaling for four seconds and exhaling for six seconds.

In biofeedback sessions offered at the Wellness Center, [medical students](#) are often amazed to see the actual physiological changes—increased blood flow to the brain and [vital organs](#)—that occur during their calm breathing exercises.

"So it's not just that you feel better, you're actually looking at a screen and see your body reacting to it," says first-year medical student Warren Rehrer. "It's pretty cool."

During one biofeedback session, Rehrer noticed that calm breathing increased the temperature in his hands; now he uses the technique to stay warm while studying for hours in the library, which he says can get chilly. He's also become more mindful about his breathing in general, and especially before a tough test.

"Just realizing that I may be breathing a little faster than I should, and trying to slow it down a little bit, there's never been a time when I don't feel better afterwards," Rehrer says.

The staff at the Wellness Center recommends students do 10 minutes of diaphragmatic breathing practice before taking a test.

## **Change your breathing, change your life**

Calm breathing, as the name implies, helps to calm and relax. Studies show it can reduce tension and anxiety, and improve concentration and memory—all of which are particularly helpful to students as a study aid and for test taking.

In contrast, shallow breathing can add to anxiety, muscle tension, and fatigue, and can result in panic attacks and headaches.

But if you decide to give calm breathing a shot, take it easy at first. "If you've been chest breathing for a good portion of your life and you suddenly tell your body, hey, let's stretch out these lungs, you could feel dizzy or get a headache, even hyperventilate," says Rivera. She suggests starting out with 5-minute breathing routines until your body adjusts."

Soon enough, you'll get the hang of it and begin to reap the benefits.

Provided by Florida International University

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