

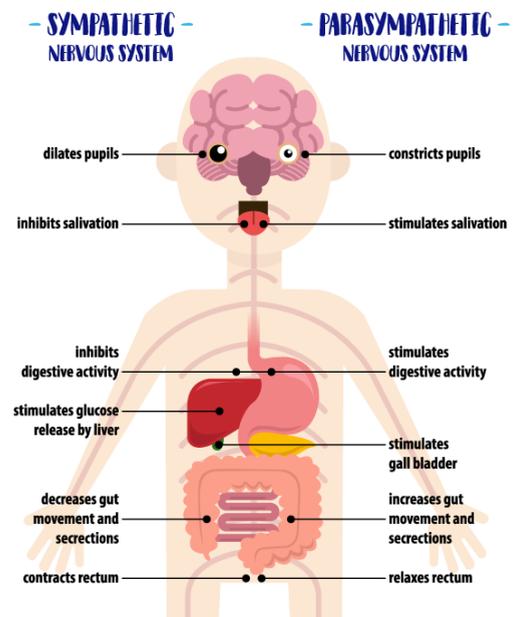
## What do we say to anxiety? NOT TODAY!

### Fight and flight reactions in a delayed return environment

Why are human beings the only living creatures on the planet that suffer from chronic anxiety? The answer is actually rooted in our biology, and the way our lifestyles differ from other mammals. A gazelle, for example, lives in what is called an 'immediate return environment.' Meaning, that if it is hungry, it nibbles on some grass, and the hunger is sated. If a gazelle's safety is threatened and it is able to get away, it can happily return to grass nibbling. Everything a gazelle does has an immediate influence on its wellbeing.

Human beings however, live in a very different world. We live in what is called a 'delayed return environment. If the economy is bad, and your job is threatened, you could spend weeks in a state of worry before the situation either worsens or is resolved.

When the gazelle's life is threatened, it's SNS system triggers what is called a fight or flight response, and it instinctively runs from the danger. When your livelihood is threatened, your SNS system triggers, however, there is no immediate way to deal with the threat, thus, anxiety is born.



### So what do our guts have to do with any of this?

To help understand this we need to look at the autonomic nervous system within our body.

Our autonomic nervous systems control the parts of our body that work without conscious thought. For example, it controls our lungs, heart, pupils, liver, digestion etc. It is divided into three separately working systems that each have their own responsibilities. These three subdivisions are called the Sympathetic Nervous System (SNS), the Parasympathetic Nervous System (PNS), and the [Enteric Nervous system \(ENS\)](#).

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The PNS controls the body at rest, and is responsible for the body's "rest and digest" function. The SNS controls the body's responses to a perceived threat/stress and is responsible for the "fight or flight" response. When we consider the overall body response, the SNS speeds up, tenses up, becomes more alert, and bodily functions that are not critical to survival shut down. The PNS counterbalances the effects of stress by restoring the body to a state of calm. With respect to the gastrointestinal system the SNS decreases gut movement and secretions, while the PNS increases gut movement and secretions.

The ENS is embedded in the lining of the entire gut (gastrointestinal system) and is connected directly to the CNS through the vagus nerve that runs from your brain stem down to your abdomen.

The vagus nerve is the highway that sends far more information to your brain than your brain sends to your gut. A troubled intestine can send signals to the brain, just as a troubled brain can send signals to the gut. Therefore, a person's stomach or intestinal distress can be the cause or the product of anxiety, stress, or depression because the brain and the gut are intimately connected, otherwise known as the Gut-Brain Axis.

## Great, but that still doesn't help me. How can I help keep my anxiety at bay?

In a study done with medical students preparing for an important test, they were asked to drink probiotic-rich fermented milk or placebo for eight weeks prior to the exam. Students given the fermented milk showed lower cortisol levels (the stress hormone), increased serotonin levels, and fewer GI symptoms typically associated with stress and anxiety than students in the control/placebo group.

What's more, human studies on people who have a diet high in **dietary prebiotics** (which are foods made up of the fibers that microbes need to eat to survive) also helped to generate more serotonin and dopamine in the enteric nervous system. The abundance of these happy-neurotransmitters help to mitigate stress and anxiety, by travelling up the vagus nerve to the brain.

With the knowledge we have now, we have a roadmap to better mental health that can often be controlled by daily changes to our lifestyles. By actively staking **steps to keeping your microbiome healthy**, we can begin to find peace and say NO to anxiety!

**To learn more about the microbiome take our interactive tour! ----->**

[Learn More!](#)

Want to RISE up for Digestive Health? This summer we're hosting our annual fundraiser in Collingwood Ontario! Join us and help us raise funds for research and awareness initiatives! Together we can help the 20,000,000 Canadians who are affected! Click below to join!

