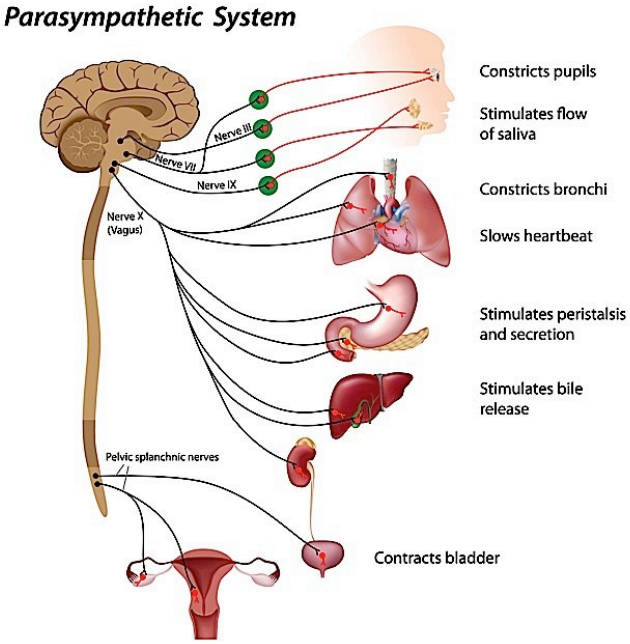
The Sympathetic And Parasympathetic Nervous System + The Vagus Nerve

Our nervous systems are a complex magical system made up of many parts. One of these is the 'sympathetic nervous system' — responsible for the 'Fight or Flight' reaction. You may be more familiar with the sympathetic nervous system and what it does. It is one branch of the 'autonomic nervous system' — so called because it's believed to act 'autonomously' (i.e. unconsciously). The other main branch of the autonomic nervous system is the 'parasympathetic nervous system' — which you may be less familiar with.



The parasympathetic system helps you regain control over fight and flight response, and has an indirect or direct influence over digestion, muscles,cardiovascular system, endocrine system etc.

The parasympathetic nervous system is responsible for 'Rest and Digest' functions, and none of us pay as much attention to it as we should. When we meditate, we encourage our body to switch operational control from the 'Fight or Flight' system to the 'Rest and Digest' system.

How do you do this? And why is it important?

You are familiar with how your 'Fight or Flight' reaction works — you're scared by something, and your sympathetic nervous system leaps into action to give you the 'boost' you need in order to either fight or flee our way out of danger.

This involves diverting resources from the deeper organs to your muscles, and from higher cognitive function to the 'reptilian' portion of your brain which deals with immediate survival. Adrenaline and cortisol are released to facilitate this, as well as to give you the ability to escape danger.

The 'Fight or Flight' reaction can feel exhilarating in short bursts — it's why we ride rollercoasters — but it's not designed to last more than half an hour at the most. Beyond that, it becomes damaging.

Society is currently running tens of thousands of years ahead of evolution. Our 'Fight or Flight' reaction is designed to help us flee lions — but it's being activated by traffic, angry people, overwhelm at work. A reaction which is supposed to last mere minutes before being drained out by physical exertion is lasting for hours, days, weeks, even months. And that's wrecking havoc on our health.

What should happen is that our sympathetic nervous system should naturally cede control to our parasympathetic nervous system once the danger is past, and the 'Rest and Digest' system would smoothly get our bodies and minds back to the healthy activities of digesting food, healing injuries, and processing memories, experiences, and other psychological issues.

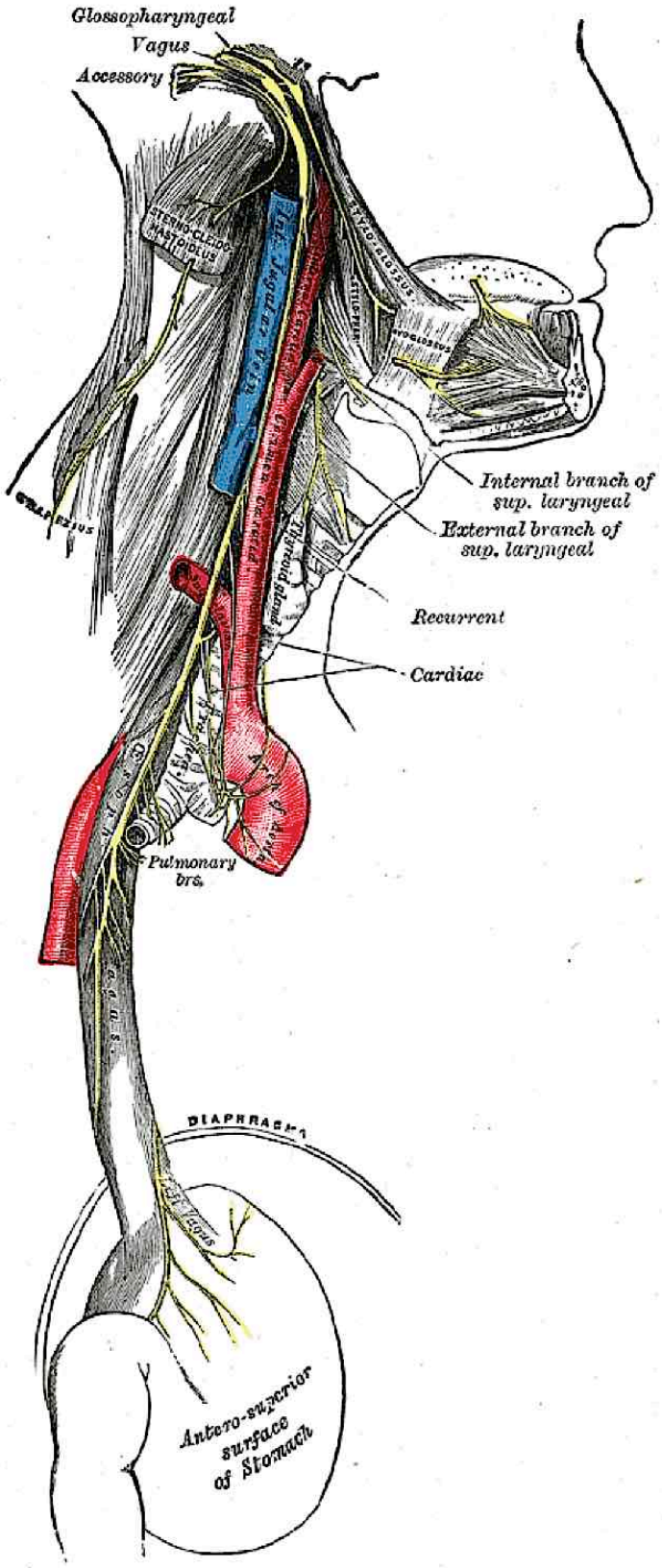
We can trigger a 'Fight or Flight' reaction in ourselves just thinking about something stressful does the trick. But can we do the same for a 'Rest and Digest' reaction? New studies into the vagus nerve are showing us we can.

How?

Our ‘Fight or Flight’ and ‘Rest and Digest’ systems were thought to be launched by the brain in response to external triggers. Our muscles, digestion, cardiovascular system, endocrine system and so on are told what to do by messages carried from the brain by our nerves, and they respond accordingly.

Many people believe that this is a one-way system – messages come from the brain, and the organs obey. However, evidence increasingly shows that it can work the other way as well.

For centuries, meditation practitioners have spoken of ‘finding your center’ — that area of calm inside yourself from which you can gather and control your sense of self. Scientists have found something similar to the ‘center’ in the vagus nerve. It’s not a perfect analogy, but it does seem that the ability to locate and work with your vagus nerve is just as effective at ‘centering’ you as taking a sedative. How do you do this? You Meditate!


Glossopharyngeal
Vagus
Accessory
Internal jugular vein
Internal branch of sup. laryngeal
External branch of sup. laryngeal
Recurrent
Cardiac
Pulmonary brs.
Antero-superior surface of Stomach

The vagus nerve

Essentially, the Vagus Nerve reverses the flow of information — rather than orders flowing from your brain to your body, the nerve is instead taking some very strong suggestions from the body back to the brain. And, nine times out of ten, the brain listens. By lowering your breathing rate, your Vagus Nerve notes that things must be calm — you have no reason to be breathing hard and fast, and must therefore be able to relax. As it travels around your body and receives 'relaxed' messages from those organs over which you do have conscious control while meditating (your lungs, principally, but also your heart to a certain extent), it will infer that you are in no immediate danger, and have no need, therefore, to be stressed. It will convey this message to the brain, which (nine times out of ten) will then ease control over the to parasympathetic nervous system, allowing you to relax, rest, and digest.

When the parasympathetic nervous system has control, you are capable of deeper thought than you are when the sympathetic nervous system is in control. In other words, when your immediate survival is not at stake, the brain is more willing to afford time for deep contemplation. This perhaps explains why the deep breathing and physical relaxation aspects of meditation facilitate such excellent self-exploration.