

The Social Vagus

Written by John Edwards, D.C., CACCP

Thursday, 01 September 2016 00:00 - Last Updated Thursday, 14 September 2017 10:38

People in stressful situations bargain and negotiate. Then they get frustrated and angry. Then they shut down.

In November 2014, at the ICPA Freedom for Family Wellness Summit in Washington, D.C., I saw something that changed my life. Honestly, it actually saved my life. As a chiropractor I've always taught my patients there are two parts to your autonomic, or "automatic" nerve system. The one most people recognize is nicknamed the "fight or flight" system, and that system puts blood flow into your muscles and away from your organs.

The older part of our autonomic system, from an evolutionary perspective, exits outside, or para, to the sympathetic—hence the name parasympathetic nerve system. The parasympathetic struggles for a catchy nickname, because "rest and digest," or "feed and breed" both undersell how important this system is to our physiology.

WELLNESS LIFESTYLE

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The older part of our autonomic system, from an evolutionary perspective, exits outside, or para, to the sympathetic—hence the name parasympathetic nerve system. The parasympathetic struggles for a catchy nickname, because "rest and digest," or "feed and breed" both undersell how important this system is to our physiology.

The parasympathetic system regulates our most basic functions, including moving everything that enters and leaves the body. Back when planet Earth was filled with single-celled organisms sitting around in a soup of fluid, the only things a microbe could do were worry about not attracting predators in and pushing waste out. Our evolutionary extensions of that—insulation, sweating, tremors, etc.—are all functions controlled by this system. Opening blood vessels, bathing of the skin, and digestion happen because of this system. So do birth, growth, and healing.

Over time your limbs and hands to rest after our food for recognized that we were the final something else was chasing), the sympathetic nerve system developed to take the reserves of blood flow and metabolism away from our survival organs and put them into our muscles to move.

Stress puts people into the sympathetic, fight or flight state. We never meant to live there, though—we still have escape the tiger or respond it, and the moment is over. Except now we live with constant tigers—like we have.

relationships that are breaking down, a constant media barrage of negativity and impending doom from disaster. I've tried to get my patients to understand the importance of keeping out of the sympathetic state. I thought I was doing them a favor by emphasizing the "opposite," the parasympathetic system. But it turned out I was wrong.

I found evidence at the Summit that doctors in cardiac rehabilitation learned a secret to keeping their patients from being repeat customers after surgery. They knew that high-stress lifestyles caused the sympathetic system to constrict the heart's heat hose and hinder said that nerve signal eventually wore out. Involving the body, however, they discovered that the underlying issue of the parasympathetic system also essentially wore out, and the tone responsible for keeping the vital organs functioning began to fade.

In late 2014, thinking if the parasympathetic were dominant everything would be easy and easy in the body I never realized the consequences of truly living in this state of calmness: that the body would approach shutdown and death. Single-celled organisms actually used this as a survival mechanism. If they were threatened, they would begin death. The human parasympathetic adaptation to extreme stress is the same. We try to keep the attention, and if we are later than we see if playing dead will get us what we want. Sometimes the playing dead is a little too far, and we damage ourselves in the process.

The secret these cardiac rehab folks figured out was to get the patients' system from still tips.

What some nervous systems are calling the "social nerve system" is a development of polyvagal theory, developed by Stephen Porges, Ph.D. Porges describes the social nerve system as the part of our brain that uses voice, facial expressions, and eye contact to stimulate responses in another person. Infants were pretty much born there, at using existing systems to protect their small, fragile bodies, so Porges suggested that the brain adapted and developed ways to make other adults in the species care for and protect them via the social nerve system.

All three of these nerve systems—social, sympathetic, and parasympathetic—use needs to cope with stress. If the social strategy doesn't work, say in a newborn infant, and he can't bargain with the parents to meet his needs, the baby goes into fight-or-flight mode and angry crying. If that is allowed to keep going and nothing changes, the baby then drops into the parasympathetic strategy and plays dead. The success of any of these strategies is measured into our subconscious and because the professional we deal with stress as an adult.

I had been attempting to teach the responsibility of my office, progress for several major speaking engagements around the country, and with having to move out of our main office into a new place, and watch my wife struggle with depression in month after month we failed to connect—and then, because of my emotional distress, I knew I would see the weekend a break from our meetings. That was during what I'd built back to me as my "time-out from work." I'd run out of alternatives by the time the Parkway Inn was closed, and could not depart, in the midst of what should have been my biggest professional triumph, struggling against both physical and emotional shutdown. Hours before listening to the stories of the heart patients, I had met with a complex manager during a communication workshop, as both of us admitted we had no idea if our manager were going to survive the weekend. That passed sympathetic shutdown, and was well into the parasympathetic space.

Then I found some speakers reference this third system, and my world began to make sense. The way the nerve system, and in a larger sense the entire mind and body, prefer to function is in communication and harmony with the environments around it. I saw in that place, very familiar to many people of building on a life line in a stress. I was looking for people to empathize and share with, because honestly my body knew it was important for its own survival.

IF YOU DON'T HAVE SOCIAL OUTLETS FOR STRESS, SUCH AS A COMMUNITY OF FRIENDS OR FAMILY THAT YOU CAN REGULARLY AND HONESTLY COMMUNICATE WITH AND GET YOUR NEEDS FROM, THEN THE BODY REMAINS A FIGHT-FLIGHT PHYSIOLOGY.

The reason I had gotten myself into this stress in the first place was that I had become socially isolated. I set my schedule up for a fight it could survive. My body was literally screaming for attention, and when that didn't work it started to play dead. You can see people in these three stages every where around you. When you start to understand this, it's as if a veil has been lifted.

One Summit presenter, Joe Trippone, focused on the frequency that the brain and body give off. A baby exhibits a brain wave pattern that scientists designate as the ultra-slow wave mind. All of the baby to survival are written into the subconscious mind by a specialized set of nerve cells called mirror neurons. These mirror neurons help us to write the program for what to do later in life when we encounter a challenging situation.

In early childhood the brain waves shift into a creative pattern. This level of activity is responsible for forming a freemarker's into a horse, or a painting shadow into a creature hiding in the forest. In adulthood we retain this creative wave pattern in the early stages of sleep, right around the time we wake up, or during deep meditation. Amazingly, it's often enough to the subconscious level that we have the power to reprogram our neurological patterns by visiting this state.

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The parasympathetic system regulates our most basic functions, including moving everything that enters and leaves the body. Back when planet Earth was filled with single-celled organisms sitting around in a soup of food, the only things a microbe needed to worry about was attracting nutrients in and pushing waste out. Our evolutionary extensions of that—exhalation, sweating, menses, etc.—are all functions dominated by this system. Opening blood vessels, flushing of the skin, and digestion happen because of this system. So do birth, growth, and healing.

Once we grew limbs and needed to run after our food (or recognized that we were the food something else was chasing!), the sympathetic nerve system developed to take the reserves of blood flow and metabolism away from our survival organs and put them into our muscles to move.

Stress puts people into the sympathetic, fight-or-flight state. We weren't meant to live there, though—we either escape the tiger or vanquish it, and the moment is over. Except now we live with mental tigers—jobs we hate, relationships that are breaking down, a constant media barrage of terrorism and impending doom from disease. I've tried to get my patients to understand the importance of keeping out of the sympathetic state. I thought I was doing them a favor by emphasizing the “opposite,” the parasympathetic system. But it turned out I was wrong.

I heard evidence at the Summit that doctors in cardiac rehabilitation learned a secret to keeping their patients from being repeat customers after surgery. They knew that high-stress lifestyles caused the sympathetic system to antagonize the heart to beat faster and harder until that nerve signal eventually wore out. In relaxing the body, however, they discovered that the underlying tone of the parasympathetic system also eventually wore out, and the tone responsible for keeping the vital organs functioning began to fade.

So here I was, thinking if the parasympathetic were dominant everything would be nice and easy in the body. I never considered the consequence of only firing on this set of cylinders: that the body would approach shutdown and death. Single-celled organisms actually used this as a survival mechanism. If they were threatened, they would feign death. The human parasympathetic adaptation to extreme stress is the same: We cry, then scream for attention,

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and if no one listens then we see if playing dead will get us what we want. Sometimes the playing goes a little too far, and we damage ourselves in the process.

The secret those cardiac rehab folks figured out was to get the patient to renew friendships.

What some neuroscientists are calling the “social nerve system” is a development of polyvagal theory, developed by Stephen Porges, Ph.D. Porges describes the social nerve system as the part of our brain that uses voice, facial expressions, and eye contact to stimulate responses in another person. Infants were pretty much worthless at using existing systems to protect their small, fragile bodies, so Porges suggested that the brain adapted and developed ways to make other adults in the species care for and protect them via the social nerve system.

All three of these nerve systems—social, sympathetic, and parasympathetic—are used to cope with stress. If the social strategy doesn't work, say in a newborn infant, and he can't bargain with the parents to meet his needs, the baby goes into fight-or-flight mode and angry crying. If that is allowed to keep going and nothing changes, the baby then drops into the parasympathetic strategy and plays dead. The success of any of these strategies is cemented into our subconscious and becomes the predominant way we deal with stress as an adult.

I had been attempting to juggle the responsibilities of my office, prepare for several major speaking engagements around the country, deal with having to move out of our rental house into a new place, and watch my wife struggle with depression as month after month we failed to conceive— and then, because of my emotional distance, I heard her tell me she wanted a break from our marriage. That was during what I'll look back on as my “November from hell.” I'd run out of adrenaline by the time the Pathways Summit arrived, and could feel myself, in the midst of what should have been my biggest professional triumph, struggling against both physical and emotional shutdown. Hours before listening to the stories of the heart patients, I had cried with a complete stranger during a communication workshop, as both of us admitted we had no idea if our marriages were going to survive the weekend. I had passed sympathetic shutdown, and was well into the parasympathetic spiral.

Then I heard some speakers reference this third system, and my world began to make sense. The way the nerve system, and in a larger sense the entire mind and body, prefers to function is in communication and harmony with the community around it. I was in that place, very familiar to many people, of holding on to a lifeline in a storm. I was looking for people to empathize and share with, because innately my body knew it was important for its very survival.

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One Summit presenter, Joe Dispenza, focused on the frequencies that the brain and body give off. A baby exhibits a brain-wave pattern that scientists designate as the subconscious mind. All of the keys to survival are written into this subconscious mind by a specialized set of nerve cells called mirror neurons. These mirror neurons help us to write the program for what to do later in life when we encounter a threatening situation.

In early childhood the brain waves shift into a creative pattern. This level of activity is responsible for turning a broomstick into a horse, or a passing shadow into a monster hiding in the closet. In adulthood we revisit this creative wave pattern in the early stages of sleep, right around the time we wake up, or during deep meditation. Amazingly, it's close enough to the subconscious level that we have the power to reprogram our neurological patterns by visiting this state.

The final brain-wave pattern is the signal of rational thought. This mature pattern begins around 10 years of age and continues into adulthood. It is this pattern that can discern differences, for instance, between the broomstick and the imaginary horse. However, it's also the pattern responsible for rationalizing things, such as my procrastination on dealing with my emotions. This wave pattern had allowed me to "think" myself sick.

So now we have these two concepts: The three nerve systems, and the levels of brain-wave patterns that record our responses to stress. I mentioned how we can tell the way adults were programmed as little children based on the strategies that worked the best for them.

This is quite possibly the biggest revelation in neuroscience since psychoneuroimmunology—the understanding that the nerve, endocrine, and immune systems are all tied together with mental processes.

It's really quite simple. If you don't have social outlets for stress, such as a community of friends

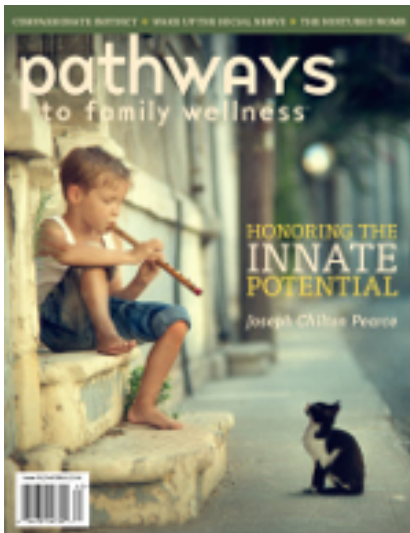
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or family that you can regularly and honestly communicate with and get your needs from, then the body retains a fight-flight physiology. This isn't a sustainable state, and if you do not transition back out of it then your body and mind begin to shut down. The manner and degree to which we choose to interact with other people, then, dictates a very important part of our health.

It takes more than merely spending 15 minutes in the morning doing affirmations or 30 minutes with a yoga DVD at your house. Understanding the purpose of the third nerve system brings you to a realization that there is an important reason for spending a Sunday morning creating spiritual community, or for actually attending a yoga class in person, that has little to do with the activity itself. The reason is in the people around you. It allows your pattern of brain waves to enter into a calmer, larger field that offers protection. The more you practice, the more your neurons acquire this pattern—"Neurons that fire together, wire together." Can you imagine the impact a group of people with a peaceful and blissful brain-wave pattern has on other people they meet in the community? The interaction between one another's social neurology can be a powerful agent for change.



This article appeared in [Pathways to Family Wellness](#) magazine, Issue #51.

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