

YogaTherapyinPractice

Discover Your Nervous System's Rhythm and Movement

By Charlotte Nuessle

Understanding the basic functioning of my autonomic nervous system (ANS) through polyvagal theory has led me—and my clients—to experience much greater self-acceptance. The body's innate wisdom is powerful.

This article begins with how my own system and life journey drew me to yoga. I'll briefly review the states of the ANS and their functions. I'll also share an example of how I've observed the ANS in my role as yoga therapist. As you read the article, you might notice subtle signals in your body. Developing curiosity about your nervous system signals and how to understand them more could benefit you and your work.

My ANS Story

Arriving in the world as a baby who cried *a lot*, I was welcomed with love by my maternal grandmother. We lived together with her in the home where my mother grew up. My body remembers being held in my grandmother's strong embrace. That body memory remains a refuge for me today.

She died when I was three and a half, way before I had sufficient words for how I felt losing her. My young nervous system was shaped in the felt sense that my grandmother loved me and would always be there for me. Although my family was loving, no one could replace my bond with her.

By the time I was 13, my aunt and my mother had died, and my only sibling, an older brother, was a Vietnam veteran with PTSD. These losses piled on top of the loss of Grandma. Their impact was heightened by my sensitive nature and the absence of a caring, wise feminine presence to help navigate teenage complexities.

Tumultuous teenage years developed me into a strong rebel who protected the vulnerable parts inside. My family and mainstream culture tried but couldn't help me with my pain. It was the early 70s, an age of rebelling: drugs, sex, hitchhiking, *Be Here Now*.

When I was 18, yoga arrived as a lifeboat. I moved into a yoga ashram, where I studied for nearly 20 years. Filled with high points, there was also plenty of muck. In ashram living I often forced myself to fit into an ideal of what it meant to be spiritual.

Then, 23 years ago, I married and found deepening stability through a loving relationship. I have slowly but surely turned toward younger places that needed healing, breath by breath, like a lotus emerging out of the muck.

These life experiences shaped my nervous system, which in turn shaped me into who I am today. My nervous system sought out situations to feel safely connected; it protected me when I might be in danger and shut me down when nothing else worked.

Let's pause here to consider some life circumstances that have made you into who you are today.

ANS Overview

The ANS is responsible for regulating many bodily processes, largely without our conscious input. This system's two branches, the sympathetic and parasympathetic nervous systems, represent the fight-flight-freeze and rest-digest responses, respectively, and usually act by stimulation (sympathetic) or inhibition (parasympathetic).

Polyvagal theory (PVT) describes three basic ANS states—ventral vagal, sympathetic, and dorsal vagal. These autonomic system responses are automatic, without conscious involvement or thinking, although you can become conscious of and influence them. When they work well together, you experience feeling joyful, capable, and at ease. When they are dysregulated, you experience a sense of danger and collapse and a lack of feeling safely connected to others. You can recognize these states in yourself and clients.

This article gives a basic foundation of the ANS states. They do not exist independently but rather operate on a constantly interacting continuum. As a yoga therapist, you want to tune into your nervous system's signals. It's natural for your nervous system to give you signals as you work with clients—and vice versa. An understanding of those ANS responses via PVT can help you learn to manage them. Of course, there is more to know about how the nervous system is shaped, how it shifts, and how to support its resilience. The references mentioned throughout this article are a starting point.



Ventral Vagal Complex (VVC)

In a VVC-mediated state, you feel secure inside yourself and in relationship to your environment. You express this sense of security through cues of the social engagement system, a function of the parasympathetic nervous system (also known as the rest-and-digest system). In this state you can experience, for example, feeling warm and at ease with whoever walks in for a session. Your presence creates a safe environment where your client can address their challenges and concerns. This kind of positive connection is necessary for the best new learning and healing to happen.

Sympathetic Mobilization

As a branch of the ANS, the sympathetic nervous system (SNS) stimulates the powerful fight-or-flight response in situations in which our system perceives danger. It is also constantly involved in regulating homeostasis throughout the body, for example, pumping our blood and affecting heart rate and breath rhythms.

Client example: When “Sarah” came for a private session, she was in chronic pain. She told me how she worried she’d never recover and return to a life not defined by pain. The pain triggered her SNS fight-or-flight response to prevent shutting down. (And her SNS system triggered responses that increased her pain.) Worrying may have been the way her system was trying to manage this response.

My nervous system signaled danger when Sarah shared her pain. To manage my response and hers, I asked if she would pause and invited her to find a comfortable position to relax her body. Then, I guided her to explore gentle, fuller breaths to help her system integrate what she had shared, through strengthening a sense of safe connection (VVC) between us.

Dorsal Vagal Complex (DVC) Immobilization

The DVC state, or immobilization, is another protective response of our human nervous system. It engages automatically when the SNS fight-or-flight response is not effective in protecting us from perceived danger. Commonly, it is the experience of wanting to be invisible and shutting down when showing up feels life-threatening or too painful to bear.

Well-regulated DVC function is correlated with healthy functioning of the digestive system.

My story: I benefited in many ways from ashram living. Although I practiced tuning in, I didn’t have tools to integrate the movement of my nervous system’s shifting states and the powerful felt senses that came with them. The culture was about being spiritual, which sometimes translated to me as numbing and not listening to the body’s signals.

Hours of daily practice happened sitting on a cushion, and this time became a symbol of how spiritual I hoped to be. There was meditation in the morning, a *satsang* gathering in the evening, and sometimes several hours on weekends listening to teachings. My asana practice wasn’t balanced to support that much floor time, but I pushed my body to sit for hours. In looking back, overriding messages of discomfort was a way I dissociated.

Role of Yoga: Regulation

In 2018 a team headed by Marlysa Sullivan, PT, C-IAYT, and including Stephen W. Porges, PhD, produced the investigative paper “Yoga Therapy and Polyvagal Theory.” The paper cited research that yoga practices are self-regulating—a term used to describe how you manage your responses to the nervous system’s signals. These signals might be anything from a quick shift from feeling calm to getting irritable or to not having energy to work on a priority project. These signals might manifest in how you are breathing, whether you feel tense, or a harsh tone in your voice.

It’s natural for your nervous system to give you signals as you work with clients—and vice versa. An understanding of those responses via polyvagal theory can help you learn to manage them.

We can theorize that conscious ujjayi breathing shifts the nervous system toward the parasympathetic VVC response. Bringing in the VVC is associated with moving into safe mobilization and stillness. For example, wisely integrating a rhythm through asana, breathwork such as calming ujjayi, and sound is an example of a way to shift into safe mobilization. From there, savasana moves the system into deeper stillness and safety.

From a state of relaxation, practices of classic pranayama or meditation deepen quiescence. You can more reliably envision calmness, experience stillness, and find a place of peace within as a refuge. Entering meditation from an agitated or despairing state, on the other hand, can trigger protective states reflected in rumination, checking out instead of becoming increasingly self-aware, or pushing on rather than acknowledging your needs.

Self-regulation requires self-awareness. You need, for example, the capacity to recognize when you feel distressed by physical pain. Instead of pushing yourself in asana in ways you might later regret, you would listen for messages that would help you choose a gentle practice to avoid further irritation.

Self-regulation is one reason that my 18-year-old nervous system was drawn to yoga and to live in an ashram. My ANS had become routinely dysregulated with loss, feelings of isolation, and abandonment. Yoga and community living brought experiences of profound connection.

Co-Regulation

In *The Pocket Guide to Polyvagal Theory: The Transformative Power of Feeling Safe*, Porges describes co-regulation as “the mutual regulation of the physiological state between individuals.” An example is how a mother might soothe her baby’s cries with soft cooing. The baby is calmed by the mother’s soft voice and smiles. Both benefit from the interaction: The mother feels a warm connection with her baby, and the baby feels safe. A co-regulated nervous system state brings a feeling of ease. This example also illustrates how sharing feelings of ease with another person who is safe and supportive can assist an individual in regulating the nervous system.

For another example, call to your mind a teacher with whom you could practice over and over. You feel warmth and a trusting presence. The studio feels like a place you can relax. Perhaps you remember a supportive conversation you had, a caring look on the teacher's face. This is an example of the co-regulating effects of yoga.

A third example is chanting "Om" in a group. A pilot study by Kalyani, et al., entitled "Neurohemodynamic Correlates of 'OM' Chanting," used functional magnetic resonance imaging to reveal a promising effect of this chanting toward increased ventral vagal tone.

On the other hand, in a yoga class setting some practitioners might dissociate. They might have the intention to connect with their body, but something signals their nervous systems and instead what they experience is "I'm out of here!" These are some of the people you have seen who show up once and never come back.

Client example: One woman, "May," practiced with me regularly for about 7 years. I discovered that for May, a common response to following directions for adaptive poses was to move into DVC-mediated disconnect.

She could concentrate on her feet when I guided basic feet awareness exercises. However, when I invited her to bring that awareness into a standing asana, such as *virabhadrasana* (warrior) I, she couldn't maintain this focus on her feet. This was at a time when I thought EVERYBODY's practice SHOULD benefit from feet awareness. I was convinced that if she was more motivated, she could change.

My own ANS went into SNS mobilization. I would strongly encourage her to practice more, to examine how her actions showed whether she valued her yoga practice. I attributed meaning to her actions and took the situation personally. These are signs of the fight response.

Pause here. Breathe. Reflect on how this is an example of how not to create safety.

Let's consider what might have been happening for May. She could have been dissociating because of physical challenges. She had dealt with pelvic-floor issues related to lumbopelvic instability. Maybe her foundation for standing posture lacked support related to her fallen arches. Perhaps it overwhelmed her to be focused on chronic, difficult-to-resolve patterns during a pose.

Plus, I asked her to focus with an authoritative tone in my voice. Because May's habitual response pattern was to shift into DVC dominance as a protective response, her system easily went into dissociation as protection. Another client's ANS could have shifted into SNS fight or flight.

What was happening for me? My advice to work harder came from a pushy place. I needed to notice a shift that occurred in me, from feeling good to feeling driven in the situation. I couldn't co-regulate with her in those moments.

Luckily, the outcome was that May did take away a personal yoga practice that continues to be meaningful to her. Also, in my practice, I made repairs often as a teacher and therapist, when I instinctively felt myself shift into SNS mode. Often in class I would simply say that I had been a little off, and I would ask for the students' understanding. My sincerity and concern came through, and this was enough to restore safe connection.

I continue to learn how to turn toward discomfort inside, instead of attempting to control the situation around me. Feeling

safe and connected internally has become the foundation of my teaching.

Goal or Flow Oriented?

Increased ventral vagal tone, spending more time feeling *safely* connected, *safely* mobilized, and *safely* still, shapes the nervous system to shift more flexibly from one state to another.

There is a goal of being in the VVC's zone of safety and connection; it's just that we don't stay there all the time. It's easy to think that the aim of yoga practice is about achieving a static state of balance (*sattva*), but this can feel more like *grasping* for inner peace. In my example above, instead of joining with May's experience I became fixed on driving her toward *my* goal. This was a breakdown of the network of safe connections.

A highlight of the yogic tradition is cultivating one-pointedness and steadiness of mind. Having determination to follow through on a practice, for example, gives energy to fulfill your dreams, to stretch and learn something new. It's helpful, however, to recognize a *healthy capacity for engaged action* distinct from being driven. Notice tendencies to be controlling and what or whom you want to master. These are common reactions that could reflect a hyperactive SNS.

Feeling Stuck

A regular life offers plenty of the usual ups and downs, and often specific challenges.

As noted, the ANS is designed to flow from one state to another. Experiences that register as a danger or life threat may signal, among other possible responses, sympathetic or dorsal-vagal protective activation. Your system is vulnerable to being shaped by these experiences if they are intense or cumulative.

The ANS flags repeated intense experiences as important. When undigested, such experiences lead to cycles of automatic protective responses. This patterning happens quickly, below the level of conscious thought. The CDC-Kaiser Adverse Childhood Experiences Study conducted from 1995 to 1997 confirmed that un-integrated early trauma shapes later responses. In my example, my grandmother's death set the stage for the later losses I experienced to affect me more deeply.

As Deb Dana, LCSW, pointed out in *The Polyvagal Theory in Therapy: Engaging the Rhythm of Regulation*, even an experience of not feeling understood as a child, despite a loving family, can prime the system to experience more anxiety, causing dysregulated sympathetic responses as an adult or more disconnection due to dysregulated dorsal vagal tone. Dana wrote: "Polyvagal theory shows us that co-regulation is a requirement for feeling safe . . . , that our physiology is regulated in safe connection to one another. . . . We suffer when our biological need for connection is unmet, and our suffering leads to autonomic responses."

Even if your needs for co-regulation were not met at an earlier time, you can learn to regulate your ANS yourself. Your system can be reshaped from any point in life. To offer a space for others to experience safe connection, yoga therapists need to experience safety in their own connection with others. Here are some ways to explore shifting toward feeling safely connected, or shifting toward a VVC-mediated state.

- One cannot manage what one does not measure, so cultivating self-awareness, as mentioned above, is key.
- You can also regulate your system through being present in nature or enjoying your pet.
- Linda Graham, MFT, in her book *Bouncing Back: Rewiring Your Brain for Maximum Resilience and Well-Being* describes activating oxytocin release as “the fastest way to regulate the body’s stress response and return to a sense of calm.” This release can be effected by the simple practice of kindly placing a hand on one’s heart to self-soothe.
- Rick Hanson, PhD, put forward the model of HEAL in his book *Hardwiring Happiness: The New Brain Science of Contentment, Calm, and Confidence*. HEAL stands for **h**ave a positive experience, **e**nrich it, **a**bsorb it, and **l**ink positive and negative material. Deepening the felt sense of being safely connected re-patterns the nervous system and rewires the brain to strengthen regulation.
- Safe connection within the yoga educator-practitioner relationship is a way of strengthening co-regulation.

Take-Aways

Your nervous system has a vital role to play in creating the background of how you relate to your clients.

You never outgrow your nervous system’s need for safe connection.

You and I and all of us need to feel safely connected to support positive changes in our systems. The ANS shifts in and out of feeling safely connected all the time; it’s part of being human.

It’s important to start where you are. You can learn to become aware of your own autonomic states and find simple ways to gently shift your nervous system toward being more safely connected. Learning from experience (rather than book-knowledge alone) brings greater compassion and clarity into your work, as others experience the same kinds of ANS shifts you do.

This understanding has changed how I offer my work. Every person responds differently to yoga practices. Take turning inward, for example. If someone experienced a situation that felt dangerous when they were quiet, that experience shaped their nervous system. When asked to turn inward, she or he might have an uncomfortable alert signal (SNS) or just shut down (DVC) instead of a calming response.

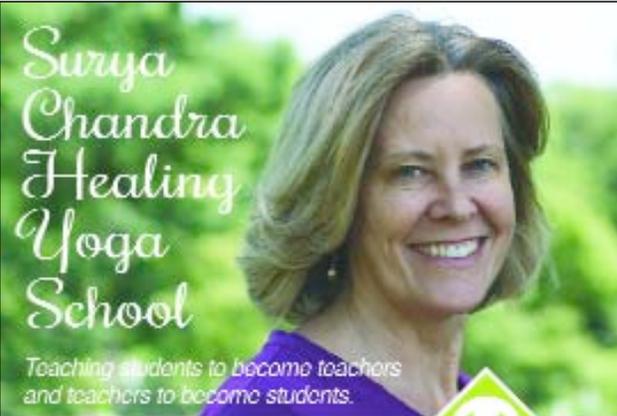
Let’s pause again. Notice how your body responds to this understanding.

You need your own practice, and you also need safe connections with others. This can be another opportunity to extend kindness toward any places that didn’t receive the safe connection needed earlier in life.

This journey of tuning in is courageous, as is the work of compassionate co-regulation. Perhaps the most challenging and at the same time rewarding part of the journey is embracing the authentic goodness and wisdom of your own nervous system’s needs for safe connection. **YTT**



Charlotte Nuessle, C-LAYT, offers the online course “Tune into Your Nervous System: Discover its Rhythm and Movement.” Contact her at charlotte@charlottenuessle.com



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