



Effective Processing and Regulation: The Essential Foundation for Health



It's not all in the mind.

Among this century's medical and social breakthroughs is the recognition that the statement "*it's all in the mind*" is inaccurate.

Whether it's due to our growing awareness of the effects of ongoing stress or the mixed results of behavioral therapies, we can now see that there are aspects of our health that are out of our conscious control.

Taking a fresh look at the way we as human beings develop and the **way our brain connects with our bodies** can give us insight into how we can become our best selves.



How Does the Brain-Body Develop?

As a therapist, clinician or mental health professional, you've studied how human beings develop physically and neurologically.

Our growth happens gradually, with higher brain skills developing after a solid sensory and motor foundation is set.

Yet sometimes the foundation isn't fully developed, and our higher level processing and emotional regulation gets shaken by life's challenges. Sensory processing differences, neurodevelopmental or other conditions can also impact the ability of individuals to connect with themselves and others.

The result? We don't function quite as well.

Higher brain functions, such as learning, communication and attention, are dependent on how well we're able to process incoming information at the sensory and motor levels.



Desperately Seeking Homeostasis

Mental health, bodywork, healthcare and therapeutic professionals are seeing an influx of need as people of all ages, demographics and geographies are experiencing challenges.

Research and experience tell us that rapid societal change and adverse life experiences are increasingly resulting in physical and mental health challenges for huge parts of the global population, and include:

- Chronic health problems
- Mental illness
- Substance use problems
- Emotional problems
- Changes in appetite, energy, desires, and interests
- Difficulty sleeping

With the COVID-19 pandemic, many who are otherwise healthy are finding that chronic stress and uncertainty are significantly disrupting their ability to work, connect and function.

Now more than ever, we are all fighting to find and maintain **homeostasis**, a steady state of internal physical and emotional balance that allows us to function optimally — and with a felt sense of safety.

Content source: [National Center for Injury Prevention and Control, Division of Violence Prevention](#)



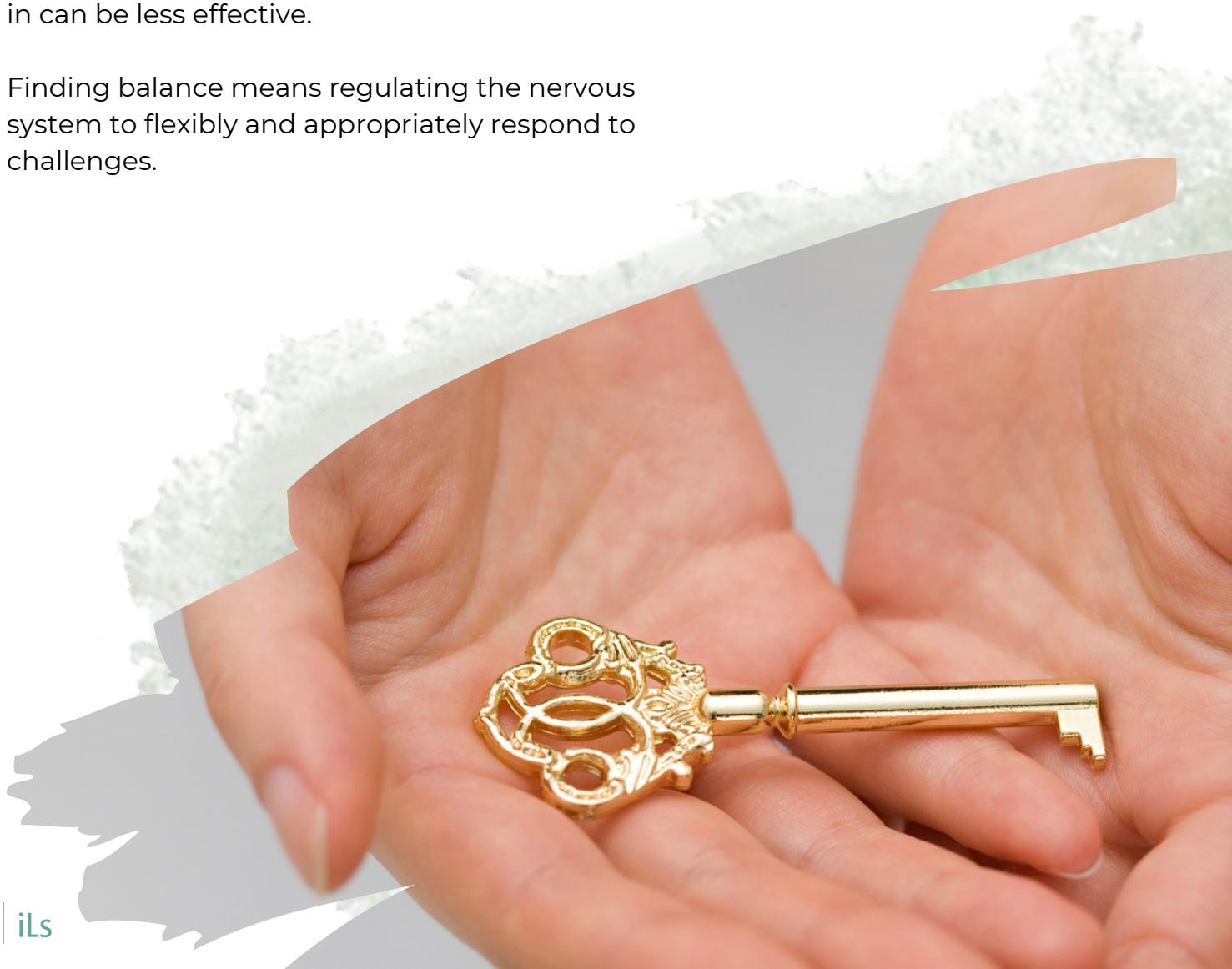
The Nervous System is the Key

While traditional treatments help some individuals, many with adverse experiences or conditions, such as anxiety, attention deficit hyperactivity disorder (ADHD), autism or post traumatic stress disorder (PTSD), continue to face challenges.

Those challenged by learning and developmental difficulties or mental health issues are realizing that improvement is dependent on our emotional state.

If we're worried and feeling unsafe, our defenses go up, and whatever activity or therapy we're engaged in can be less effective.

Finding balance means regulating the nervous system to flexibly and appropriately respond to challenges.



Connecting with the Vagus Nerve

The autonomic nervous system (ANS) is the primary regulator of important systems in our body, including our heart, respiration rate and digestion.

It's constantly sending and receiving information between the brain and body, helping us respond to changes in our internal and external environment.

Our ANS is largely influenced by a nerve that is hugely important to our overall well-being: the **vagus nerve**.

The **vagus nerve** is the longest cranial nerve in the body, stretching from the brainstem all the way down to the stomach.



Vagal Connection to Social Engagement

The vagus nerve can influence our emotional and physiological states.

This connection is explained by **Dr. Stephen Porges**, whose Polyvagal Theory is widely accepted as a neurobehavioral scientific breakthrough and has revolutionized our understanding of the body's autonomic nervous system and the way we respond to anxiety, stress and trauma.

One key insight is that it's difficult for clients to change their thoughts, feelings and behaviors when their nervous system is stuck in a state of chronic defense.

By learning to regulate our nervous system, we can change how we respond to life's challenges, how we experience and engage in therapy, and how we connect to the world around us and others in it.

By stimulating the ventral vagus, we activate the social engagement system, and can guide clients to become more aware, regulated and resilient — and more receptive to interventions.

Continue reading to learn how integrative therapies that stimulate the vagus nerve can vastly improve nervous system regulation and re-pattern the nervous system for lasting change.



Dr. Stephen Porges
Author of the Polyvagal Theory and
Chief Scientific Advisor at Unyte.

Polyvagal Theory explains the connection between the ventral vagal system and feelings of safety.

A Polyvagal Approach

Polyvagal Theory provides a new framework for understanding how the autonomic nervous system (ANS) functions in our modern world.

Through decades of research in neurophysiology and human evolution, Polyvagal Theory asserts that humans rely on social behaviors — communication, collaboration and connection — to survive.

In response, our nervous system evolved hierarchically to support this purpose.

According to Polyvagal Theory, the parasympathetic nervous system has two parts, guided by a ventral and dorsal division of the vagus nerve complex (CN X), each with unique functions.

The sympathetic nervous system evolved to help us mobilize in the presence of danger. This is known as the classic "fight-or-flight" reaction, with physiological impacts including changes in heart rate and blood pressure, rapid breathing, hyper-vigilance and blood flow to the extremities.

The newest evolutionary addition is the ventral vagus branch of the parasympathetic nervous system, also called the "social engagement system." It supports social behaviors through innervation to muscles of the head and neck, which support facial expressions, vocal prosody, listening and language.



Two Pathways of the Vagus Nerve

The vagus nerve is divided into two parts, the dorsal and ventral vagus.

The **dorsal vagal pathway** responds to cues of extreme danger.

The dorsal vagus branch helps us survive by shutting down some important physiological functions, such as digestion, in the presence of a life threat.

This is an evolutionary adaption for survival that's built into our nervous system; our body's "last-ditch effort" to survive. If any animal is unable to run or fight, they play dead.

The **ventral vagal pathway** responds to positive cues, and supports feelings of being safe and relaxed.

When firmly grounded in the ventral vagus, our heart rate is slower, our blood pressure drops and our defenses are down. In this state, we are calm and regulated.

In the therapeutic context, we are "available" — both physiologically and psychologically — for change.



Neuroplasticity Aids in Healing

Integrated within our nervous system are sensory pathways that help us interpret our environment. Like the regulation of emotions, our ability to process sensory input determines our ability to think, learn and communicate with others.

For example, an individual with differences in how they process sensory information can feel isolated and have difficulty sitting, socializing, making friends and feeling happy in the world. As a result, they can be less receptive to therapy.

The good news is that our brain and nervous system are plastic. With specific input, such as vagus nerve-stimulation through listening therapies like Dr. Stephen Porges' Safe and Sound Protocol, we can rewire sensory pathways to become more flexible and better at processing and responding to our environment. **More specifically, we can rewire how our brain interprets threats and cues of safety.**



We can't control external situations or obstacles, but we can change how our brain and nervous system respond to them.

The Ear as the Portal to the Brain

Similar to a massage acting on muscles of the body, sound vibrations activate the auditory neural network, including a branch of the vagus nerve.

As the vagus nerve is stimulated, signals are sent to our nervous system telling it to relax and let go of tension. With relaxation, our brain and body functions can improve.

We hear in two ways, bone conduction (sound waves vibrating the bones of the auditory canal) and air conduction (sound waves vibrating our ear drums). Manipulating bone and air conduction through sound can be effective ways to stimulate brain activity.

Sound-based therapies like the Focus System and the Safe and Sound Protocol (SSP) influence the nervous system through the auditory portal.

Based on hierarchical recruitment of the autonomic nervous system, the SSP trains the middle ear muscles to tune into cues of safety signaled by frequencies of the human voice, which stimulates the social engagement system through the neural network associated with listening.



Help Your Clients Thrive

At Unyte, our mission is to guide every person to train their nervous systems to become more aware, regulated and resilient so they can feel safe, happy and healthy and more effectively respond to life's challenges.

Read on for specific case stories and to learn more about the non-invasive therapeutic programs developed by Dr. Stephen Porges and Dr. Ron Minson, used by expert therapists and mental health professionals like you.



THE SAFE AND SOUND PROTOCOL

The Safe and Sound Protocol (SSP) is an evidence-based therapeutic program created by Dr. Stephen Porges and is designed to reset the nervous system and return it to safety.

The SSP is designed to work with other therapeutic approaches and modalities, with demonstrated benefits for individuals with trauma, anxiety, sensory processing differences, ADHD, ASD and more.

[WATCH VIDEO](#)

THE FOCUS SYSTEM

The Focus System is a clinical intervention developed by Ron Minson, M.D. and is used to improve brain function through brain and body integration via multisensory input.

The Focus System can be used in-clinic or at home, and consists of therapeutically treated music combined with fun movement activities, and, when ready, cognitive challenges to further activate brain networks.

[LEARN MORE](#)

Speak with one of our Program Consultants, many of whom are practitioners, to learn how to integrate Unyte's life-changing tools into your unique practice.

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Success Stories: Maria

Maria is a 42-year-old woman with a history of early childhood trauma. She has been in counseling and cognitive behavioral therapy for many years to address her hypervigilance and difficulty in social situations.

PROGRAM USED: THE SAFE AND SOUND PROTOCOL (SSP)

Maria's therapeutic goals with her SSP-certified therapist were to regulate herself more effectively, calm her feelings of fight, flight and freeze, and achieve more genuine feelings of social engagement.

The protocol was completed in five consecutive days. After the first night, she began sleeping better. After the third, she felt exhausted earlier and needed more sleep than usual throughout the program. By the fifth session, she appeared happier and "lighter" to her therapist, and remarked that she wasn't sure why but she felt noticeably more relaxed.

Results: In the ensuing days and weeks, Maria has come to feel significantly more positive about her life, more open to conversations with others (which she used to shy away from) and no longer has the mood swings she used to endure on a daily basis. Two months after her therapy, her friends comment that she "looks different."

In her own words: *"My life has changed."*



Success Stories: Tom

Tom is an eight-year-old boy. He was having significant trouble in school with sustaining his attention in class as well as sensory sensitivities that made it hard for him to be in large groups.

PROGRAMS USED:

THE SAFE AND SOUND PROTOCOL (SSP), THE FOCUS SYSTEM

Tom was brought to an Occupational Therapist who developed a program that addressed:

- Higher order attention and executive abilities
- Processing speed
- Phonetic decoding
- Reading skills
- Sensory-seeking behaviors

Tom completed the SSP within five days, followed by the Focus System program, which was abbreviated to 20 hours over six weeks.

Results: Tom's academic achievement post-therapy increased an average of 1.6 grade levels. His score on the IVA (ADHD assessment) improved by 32%, bringing him into the normal range for his age group.

Tom was able to participate in school activities in the classroom and on the playground as if he had never been hypersensitive. He became more social and active with other children and seemed happier overall.

Success Stories: Sarah



Sarah is an 11-year-old girl diagnosed with Autism. Prior to going through the SSP, her areas of difficulty included auditory and tactile sensitivity, separation anxiety, poor eye contact, and a narrow field of interest within her physical and social environments.

PROGRAM USED: THE SAFE AND SOUND PROTOCOL (SSP)

Sarah went through the five-hour SSP program over the course of eight days at her Occupational Therapist's clinic. Although her auditory sensitivity required her to take longer than usual to complete the program, she did so without disruption and enjoyed playing while listening to the SSP music.

Results: Sarah's response to the SSP was apparent to everyone who knew her. Teachers and therapists remarked that she was much more engaged and aware of her surroundings, engaged with students as she hadn't before, and maintained good eye contact for the first time.

Her parents reported similar behavior changes at home, and were able to take her out to public places.

Sarah still has an occasional meltdown but is now better able to verbalize her problem and regulate herself to come out of it.



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