

# UNDERSTANDING POLYVAGAL THEORY

#### THE BODY'S RESPONSE TO THE WORLD AROUND US

The nervous system, neuroplasticity, and Polyvagal Theory.

Scientific advancements have helped us better understand how the nervous system and brain work and have given us greater insight into what's happening in the minds and bodies of those who struggle.

The notion that the brain is able to change in response to stimulation, an ability known as "neuroplasticity," is now so widely accepted it can be called fact. Unyte-iLs programs are based on this principle, providing gentle and specific stimulation in order to activate the neural pathways used in the processing of sensory information. Neuronal connections in these pathways are strengthened and new connections are established through repeated sessions of multisensory input.

## POLYVAGAL THEORY

Polyvagal Theory or the "science of feeling safe," is another one of the key research advancements that helps us better understand our challenges and gives us a foundational framework for noninvasive ways to support them.

Developed by world-renowned researcher and Unyte-iLs Chief Scientific Advisor, Dr. Stephen Porges, Polyvagal Theory focuses on what is happening in the body and the nervous system, and explains how our sense of safety, or danger or threat, can impact our behavior. Understanding Polyvagal Theory gives us a scientific framework that can be applied through physiological, or "bottom-up" therapies, to help change and improve how we feel, think and connect with others.

#### INTERNAL CONTROL CENTER

The mind and body are connected through the vagus nerve, which is the longest nerve in the autonomic nervous system, stretching from the brainstem to the colon. It is our internal control center, allowing the brain to monitor and receive information about many of our bodily functions.

The vagus nerve helps to regulate many critical aspects of human physiology, including the heart rate, blood pressure, sweating, digestion, and even speaking. As the body takes in information automatically through neuroception, the vagus nerve processes the signals and cues from the world around us and, in turn, determines how we react through three physiological states: Parasympathetic / Ventral Vagal state our centered "true self" state, where all social interaction, connection and cognition occurs

Sympathetic state feeling of threat or danger, and feeling the need to either "fight" or "flee" from a situation to seek safety

Dorsal Vagal state our "freeze" state, when we feel our lives are so immediately threatened that we become immobilized

### CHANGE STATE TO REGULATE

We all process cues and signals from the world around us differently. Some of us may naturally feel more calm and spend more time in a ventral vagal state while others, due to genetic makeup and life experience may feel more threatened or endangered and default to sympathetic or dorsal vagal state. This is especially true of those who experience the effects of trauma, or with conditions such as anxiety, ADHD, autism or PTSD.

Stimulating the vagus nerve and providing cues of safety can enable our nervous system to reset and change our physiological state — helping us to more easily access our ventral vagal state and to more consistently feel safe and calm.



### TAKE IT All In

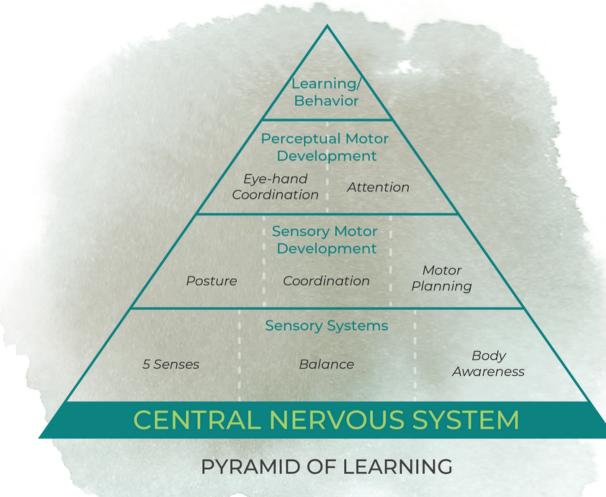
Our brain and nervous system act like a sponge, constantly taking in information from the world around us, helping us to assess if we are safe or in danger. This is called "neuroception". Every input is assessed through this lens — what we see, what we hear, and what we experience. A soothing voice, an unexpected sound or unwelcome situation. Our body senses it, takes it all in, and responds automatically.

#### BUILT This Way

While genetics play an important role in our health, wellness and overall lives, so does what we experience day-to-day. Our nervous system is constantly making decisions on our behalf, and much of our behavior is reactive based on these constant cues and signals. Often, especially for those who are struggling, our system misinterprets these cues and presents a "danger" response when in reality, no real danger is present.

#### HOW THE BODY AND MIND DEVELOP

It happens gradually, with higher brain skills developing after a solid sensory and emotional foundation is set. Sometimes the sensory foundation isn't fully developed, sometimes our emotional regulation gets shaken by life's changes – what happens then? Well, we don't function quite as well. Higher brain functions such as learning, communication, and focus are dependent upon how well we are able to process incoming information at the sensory and emotional levels.



#### EVIDENCE-BASED, BOTTOM-UP SOLUTIONS THAT HELP TRANSFORM LIVES

Understanding neuroplasticity and Polyvagal Theory gives us a scientific framework that can be applied through physiological, or "bottom-up" therapies, to help change and improve how we feel, think and connect with others.

At Unyte-iLs, we develop bottom-up, non-invasive solutions that are practical and accessible. Our mission is to guide every person to train their nervous systems to be more aware, regulated and resilient so they can feel safe, happy and healthy and more effectively respond to life's challenges.

We partner with healthcare professionals, families and individuals to deliver these multisensory products in-clinic or remotely. Our programs include music, movement, breathing, meditation and language exercises that nourish the nervous system to enable meaningful and lasting changes in physiological state and quality of life.



#### GET IN TOUCH

Interested in learning more about Dr. Stephen Porges' Polyvagal Theory and Unyte-iLs programs? Our experts are always happy to chat.

TALK TO A CONSULTANT

### RESOURCES



#### UNYTE-ILS NEWSLETTER





CASE STUDIES

<u>explore</u>



#### UNYTE-ILS BLOGS & ARTICLES

READ NOW