



Free Webinar

The Polyvagal Theory and Stress

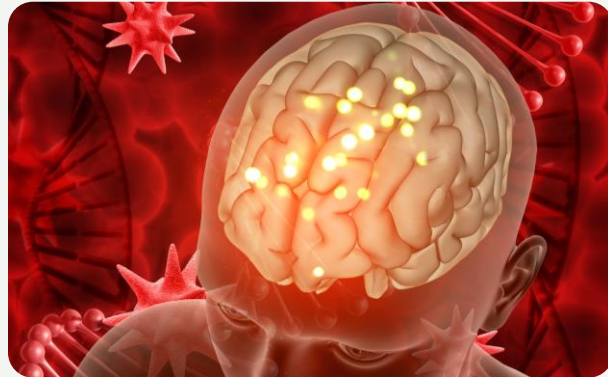
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M.A. CCC CCTP

Applying the Polyvagal Theory to
Daily Stress Management





The Polyvagal Theory and Stress



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Daily Stress Management



Introduction to Dr. Stephen Porges and the Development of the Polyvagal Theory

Introduction

Dr. Stephen Porges

is a distinguished neuroscientist and the creator of the polyvagal theory.

His groundbreaking work has transformed our understanding of how the nervous system regulates stress and social behavior.

Pioneering research on the autonomic nervous system, which began in the neonatal intensive care units (NICUs). In the 1970s.



Looking out how to improve rate of survival.

Preterm infants have maturational delays in neurobehavioral systems

facilitating early nurturing interactions and emotional connection between preterm infants and their mothers is a practicable and effective means of optimizing postnatal development in preterm infants



The polyvagal theory was developed in the 1990s.

What is The Polyvagal Theory?

Theory suggesting that the vagus nerve plays a significant role in regulating our physiological states.

How Can it Help Us Understand and Manage our Stress?

By understanding that the vagus nerve and its 3 distinct neural circuits work to influence stress responses and social behaviors.



Social Engagement System

signaling for emotion, motion, communication
Parasympathetic Ventral Vagal Complex

Aggressive Defensive System

mobilization for fight or flight
Sympathetic Nervous System

Passive Protection System

immobilization for freeze or feint
Parasympathetic Dorsal Vagal Complex

SAFE

optimal relaxation & activation (*rest, digest, relate*)
eye contact, facial expression, voice

DANGER

↑ arousal, ↑ heart rate, stress, muscle tension
fear, anger, aggression, rage

LIFE THREAT

↓ arousal, frozen activation, ↓ heart rate,
dissociated, frozen, collapsed, limp

Poly Vagal Theory

by Stephen Porges PhD

Overview of the Autonomic Nervous System (ANS)

Autonomic Nervous System (ANS)

The ANS is a control system that acts largely unconsciously to regulate bodily functions such as heart rate, digestion, respiratory rate, and pupillary response.

It consists of two main branches: Sympathetic Nervous System and Parasympathetic Nervous System

Role of the Vagus Nerve



The Vagus nerve is the longest cranial nerve, extending from the brainstem to the abdomen.



It is a key component of the parasympathetic nervous system.

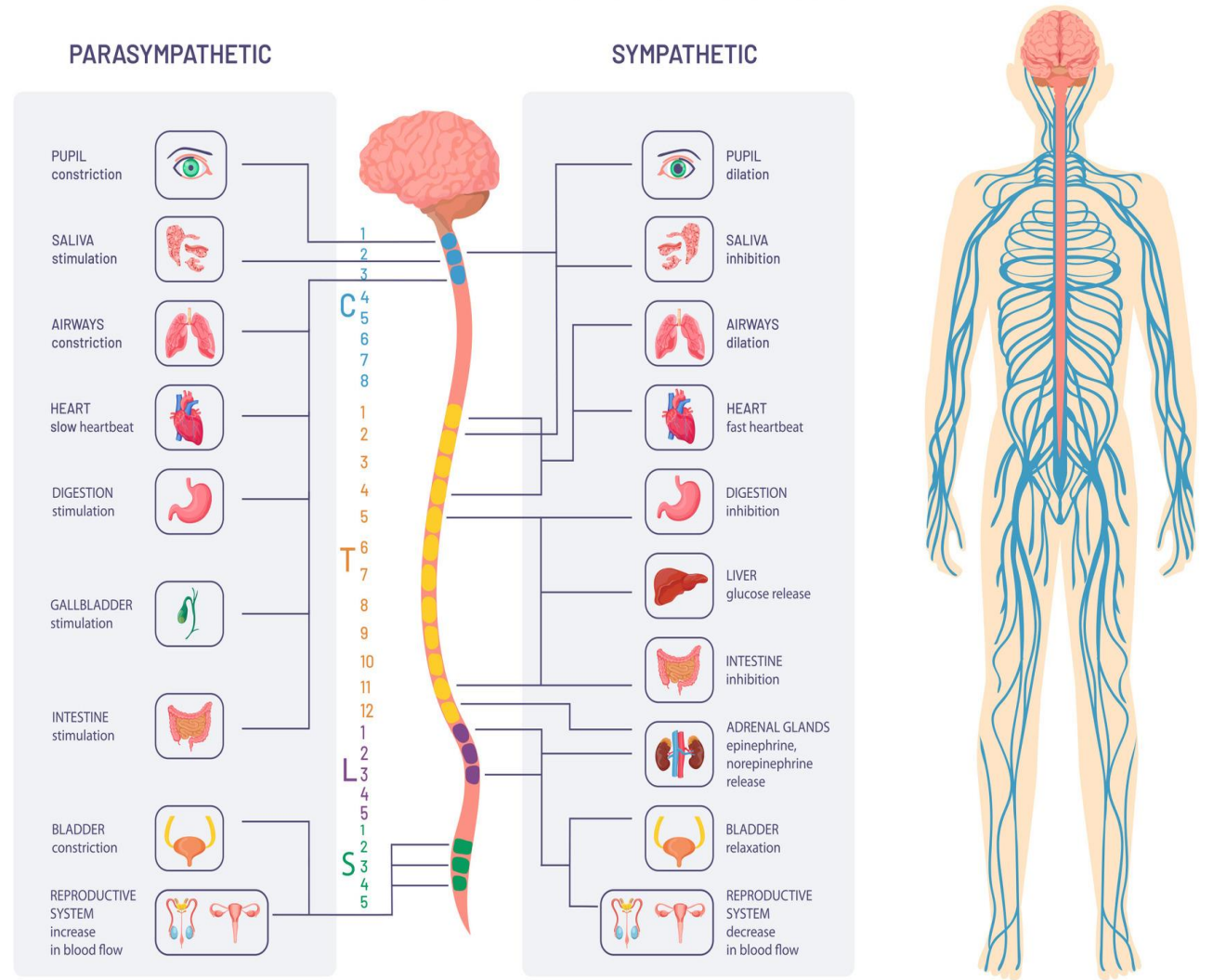


Responsible for regulating internal organ functions, such as digestion, heart rate, and respiratory rate.



Plays a crucial role in promoting a state of calm and relaxation.

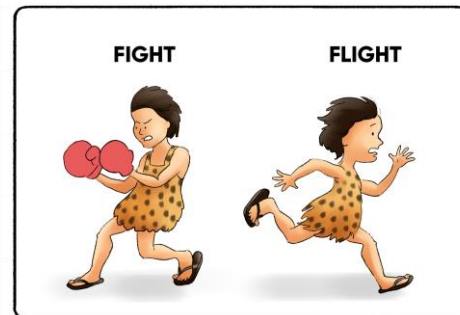
NERVOUS SYSTEM



Understanding the Sympathetic and Parasympathetic Nervous Systems (of the ANS)

Sympathetic Nervous System

- Often referred to as the "fight or flight" system.
- Prepares the body to respond to perceived threats by increasing heart rate, diverting blood to muscles, and releasing adrenaline.



Parasympathetic Nervous System

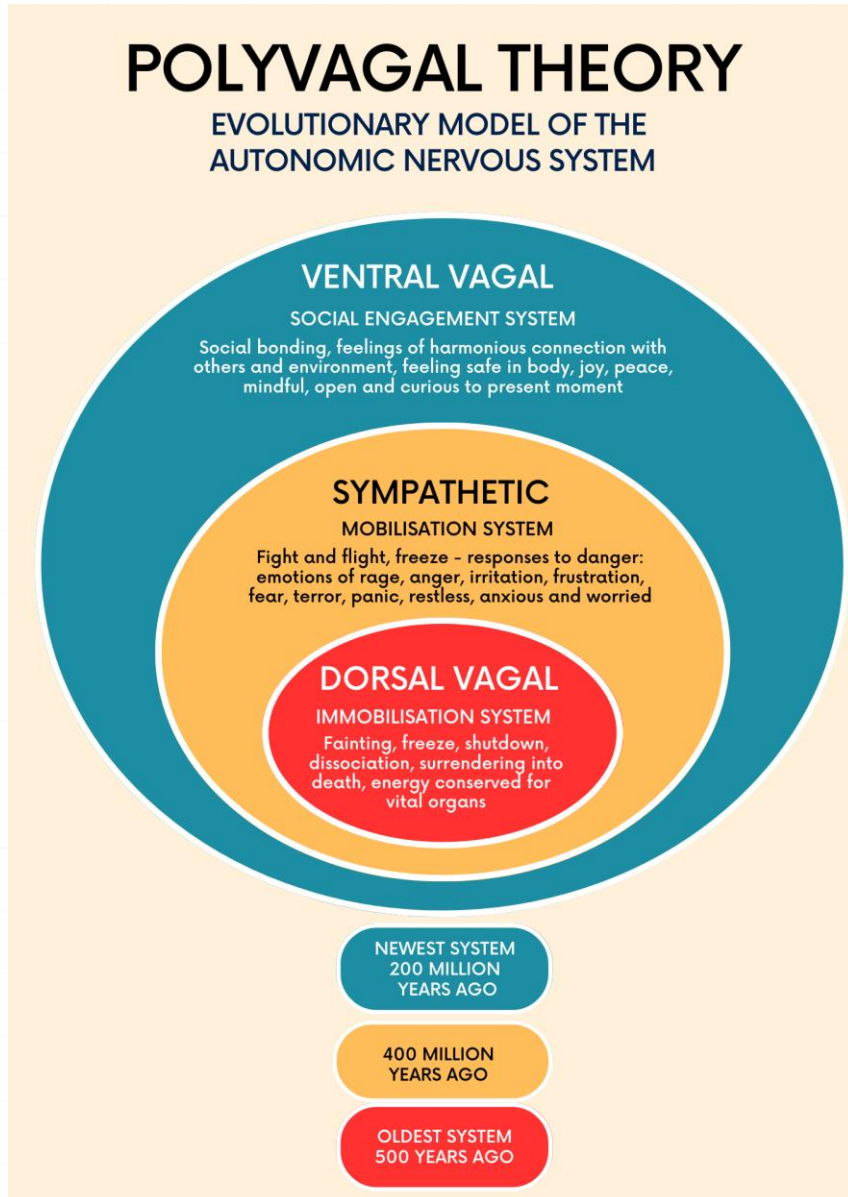
- Known as the "rest and digest" system.
- Promotes relaxation, reduces heart rate, and aids in digestion and recovery processes.



QUICK POLL

How often do you find yourself in 'fight or flight' mode during a typical week?
(Daily, Weekly, Rarely)

Evolutionary Timeline of The Vagus Nerve



Myelinated Vagus (Ventral Vagal Complex) - Approximately 200 million years ago

- Recent development found in mammals
- Associated with social engagement and emotional regulation
- Facilitates facial expressions, vocalizations, and other social behaviors
- Promotes feelings of safety and calm, enhancing social bonds and complex social behaviors

Sympathetic Nervous System - Approximately 400 million years ago

- Development introduced the 'fight or flight' response
- Prepares the body to respond to threats
- Increases heart rate, diverts blood to muscles, and releases adrenaline
- Represents adaptive evolutionary advancement for dynamic responses to danger

Primitive Unmyelinated Vagus (Dorsal Vagal Complex)

- Approximately 500 million years ago
- Earliest development of the vagus nerve
- Responsible for the 'shutdown' response in extreme stress
- Seen in primitive vertebrates like reptiles
- Engages in immobilization or "freeze" responses as a survival mechanism

V E N T R A L V A G A L C O M P L E X :

The Social Engagement System

The ventral vagal complex is a part of the parasympathetic nervous system. It is crucial for social engagement and emotional regulation.

Functions



Social Connection

Facilitates facial expressions, vocalizations, and other social behaviors.

Helps in forming bonds and maintaining relationships.



Emotional Regulation

Promotes feelings of safety and calm.

Reduces stress and anxiety by encouraging social interactions and supportive behaviors.



Dorsal Vagal Response:

Shutdown Mode During High Stress

The dorsal vagal complex is also part of the parasympathetic nervous system.

It is associated with "shutdown" responses during extreme stress or perceived life-threatening situations.

Functions



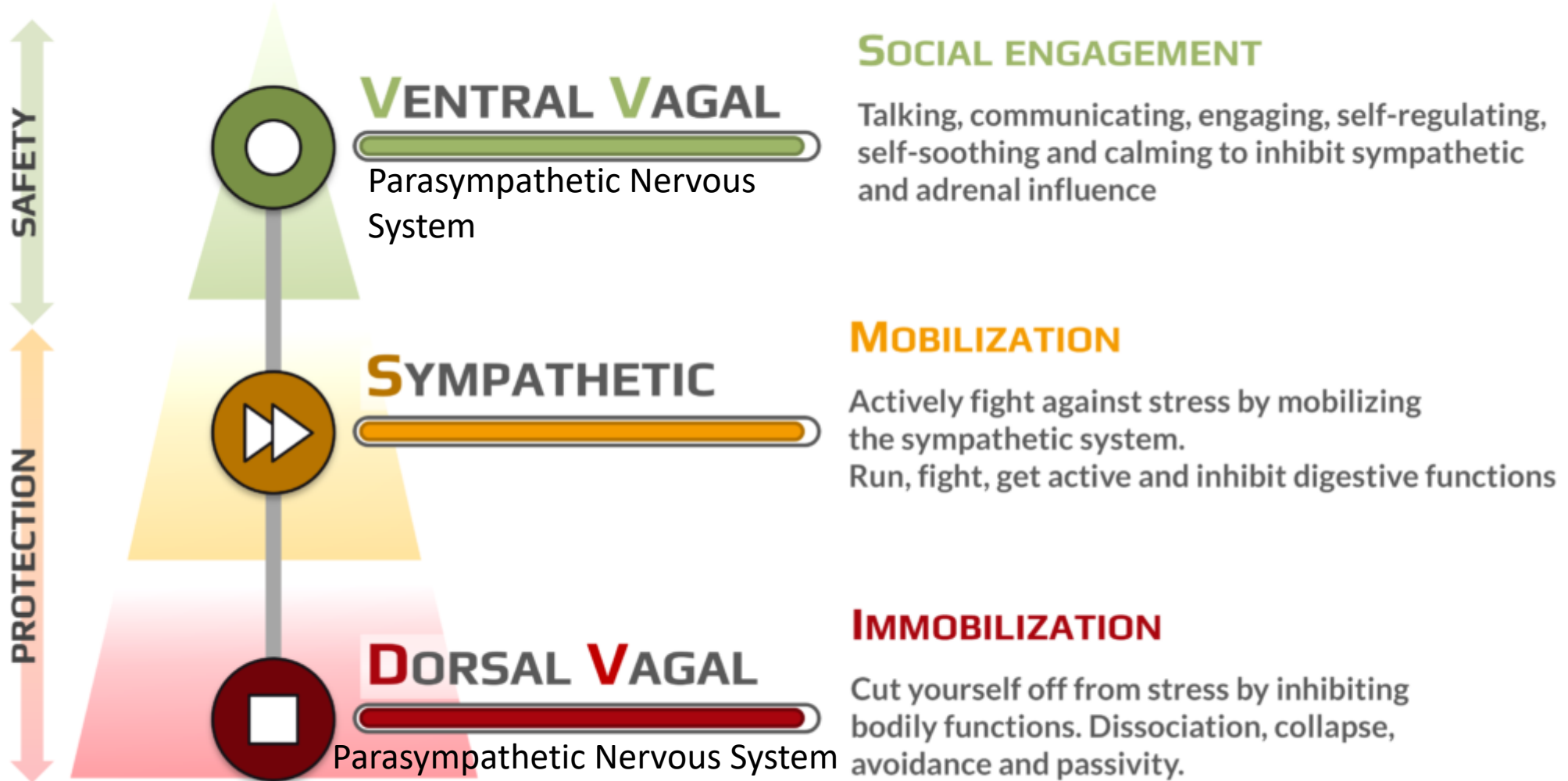
Protective Mechanism

Engages when the body perceives an overwhelming threat.

Causes a state of immobilization or "freeze" response.



AUTONOMIC HIERARCHY



From Eric Marlien, *Le système nerveux autonome de la théorie polyvagale ou développement psychosomatique*

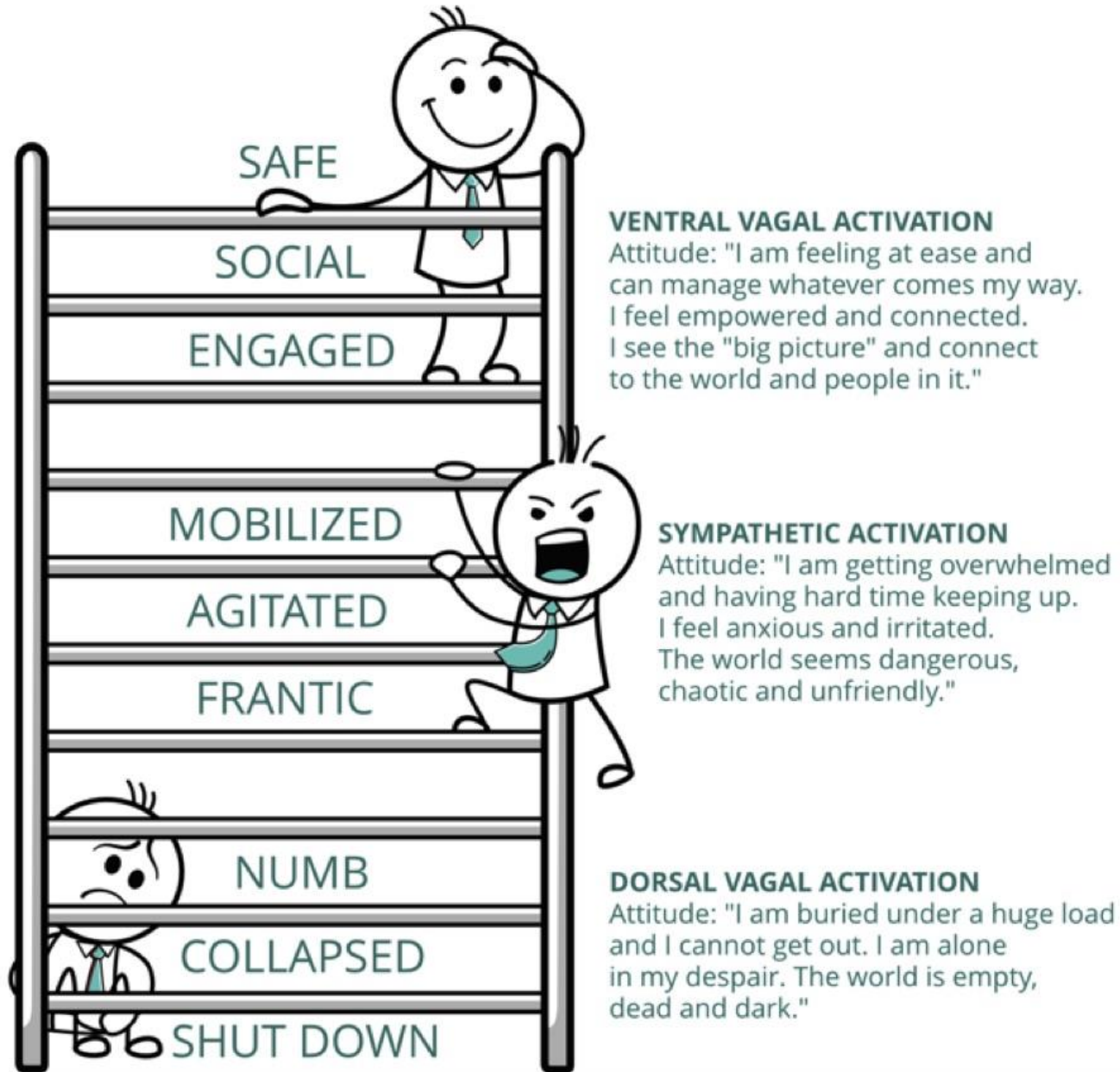
Illustration by Amy O'Neill

EFFERVE SCIENCE



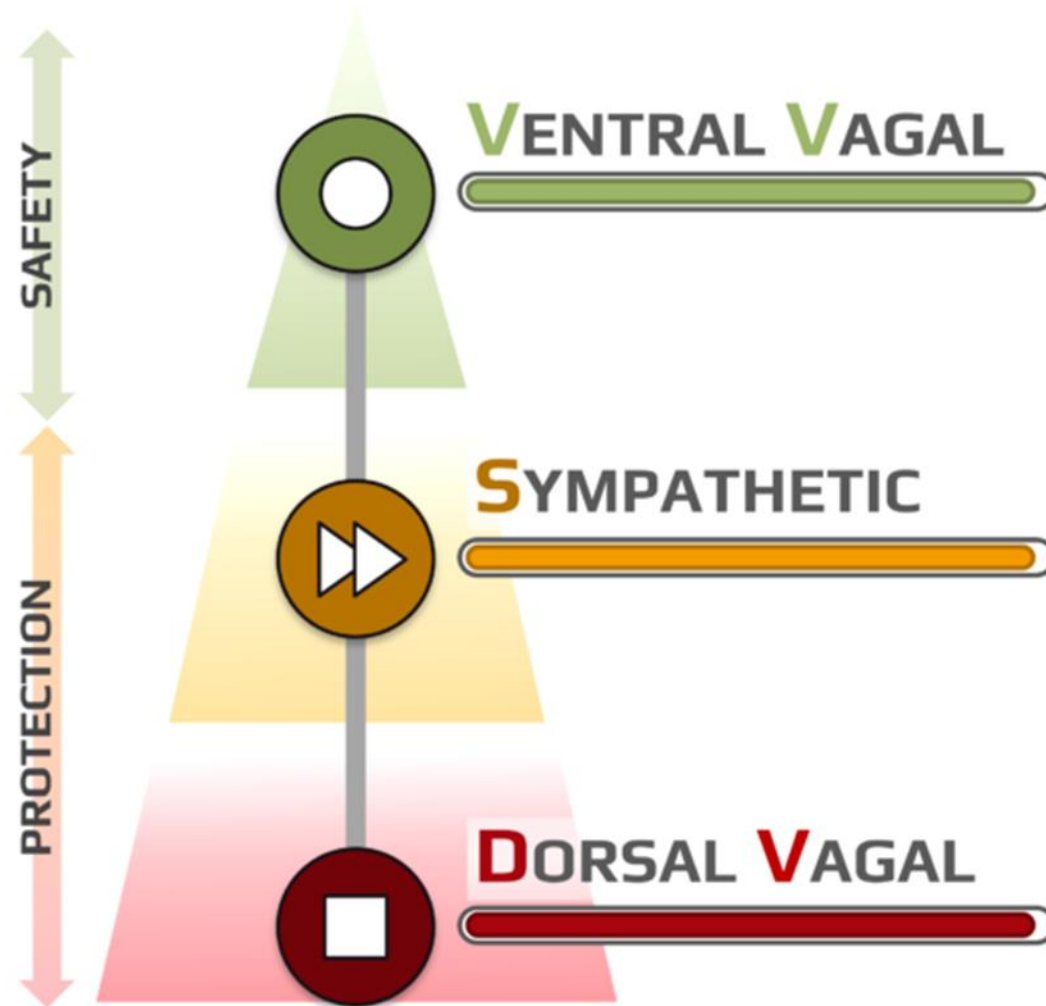
STRESS
MANAGEMENT
ACADEMY

AUTONOMIC NERVOUS SYSTEM AS A LADDER



Adapted from *The Polyvagal Theory in Therapy* by Deb Dana

AUTONOMIC HIERARCHY



SOCIAL ENGAGEMENT

- First coffee of the morning
- Watching my Frenchies play
- The Ocean
- My Low Fi Chill Playlist

- Arguing with my partner
- Walking alone at night
- A micromanaging boss
- Unexpected loud noises

- Thinking about childhood trauma
- Unresolved conflict with partner
- Grief
- Being bullied at work

From Eric Marlien, *Le système nerveux autonome de la théorie polyvagale ou développement psychosomatique*

Scenario - Based Case Studies:

Stress Responses in Different Contexts

Case Study 1

Confronting a Sudden Threat

Scenario:

Sara encounters a barking dog while jogging, triggering a fear response.

Response:

Dorsal vagal activation: Freeze response, feeling of numbness, and slowed heart rate.

Outcome:

Sara practices grounding techniques, such as feeling her feet on the ground and taking slow, deep breaths, to move out of the freeze response.

Case Study 2

Traffic Jam Frustration

Scenario:

Gisele gets stuck in a traffic jam on her way to an important meeting. She had an argument with her 20 year old daughter on her before she left for work as well

Response:

Sympathetic activation: Muscle tension, irritability, and racing thoughts.

Outcome:

Gisele uses a quick mindfulness technique, focusing on her breathing and relaxing her muscles, reducing her stress and helping her think clearly.

Real-Life Case Studies:

Stress Responses in Everyday Life

Case Study 1

Presentation Stress

Scenario:

Shea, feels extreme stress before making a presentation to her team.

Response:

Sympathetic activation: Restlessness, rapid heartbeat, and difficulty concentrating.

Outcome:

Shea uses visualization techniques to imagine a calm environment, which helps activate the parasympathetic system and improve focus.

Sources

American Psychological Association (APA). "Visualization Techniques to Reduce Exam Stress." APA.org.
JAMA Network Open. "Effects of Mindfulness and Physical Activity on Chronic Stress." JAMANetwork.com.

Case Study 2

Chronic Stress and Health

Scenario:

Alex faces prolonged work stress, affecting their health.

Response:

Chronic sympathetic activation: Persistent high blood pressure, digestive issues, and fatigue – leading to dorsal vagal activation and shut.

Outcome:

Alex incorporates daily mindfulness practices and regular physical activity to enhance vagal tone and manage stress better – they also seek support with friends and family and if need be professionals.

Breathing Exercises

to Enhance Vagal Tone

Breathing exercises can activate the parasympathetic nervous system and improve vagal tone.

Diaphragmatic Breathing

Also known as belly breathing, it involves deep breaths that fully engage the diaphragm.

Steps

- Sit/lie comfortably
- Hand on chest and belly
- Inhale through nose (belly rises)
- Exhale through mouth

Practice

5-10 minutes daily

Box Breathing

A technique used by Navy SEALs to stay calm and focused.

Steps

- Inhale through nose (4 sec)
- Hold (4 sec)
- Exhale through mouth (4 sec)
- Hold (4 sec)

Repeat

4-5 cycles

4-7-8 Breathing

A method to quickly reduce anxiety and induce sleep.

Steps

- Inhale through nose (4 sec)
- Hold (7 sec)
- Exhale through mouth (8 sec)

Repeat

4-5 cycles

Activity!

Let's all try a quick session of box breathing together.

The person you are trying to reach is practicing their breathing techniques and are not available to respond to your requests at the moment. Please try again in 15 minutes.



M i n d f u l n e s s T e c h n i q u e s

to Stimulate the Parasympathetic Response



Body Scan

- Focus on different body parts from head to toe.
- Notice sensations without judgment.

Guided Imagery

- Visualize a peaceful scene (e.g., beach, forest).
- Engage all senses in the visualization.

Mindful Breathing

- Focus on the breath.
- Notice the rhythm and sensation of each inhale and exhale.

The Calm Place – Guided Imagery



to Stimulate the Parasympathetic Response

Progressive Muscle Relaxation

- Tense and relax muscle groups
- Move from feet to head

Guided Meditation

- conducted with a guide or instructor who leads the practitioner through a series of instructions designed to relax the body and mind

Yoga

- Gentle poses to reduce tension
- Focus on breath and movement

Reflect:

- How do you currently manage stress in your daily life? Share one technique that works well for you.





Incorporating Polyvagal Theory into Daily Life

- 01 Social Engagement:
Connect with friends/family and participate in community activities.
- 02 Physical Activity:
Engage in regular exercise and incorporate activities like yoga or tai chi.
- 03 Mindfulness:
Practice daily meditation or mindful breathing.

Emotional Regulation through Polyvagal Theory

Self-Compassion

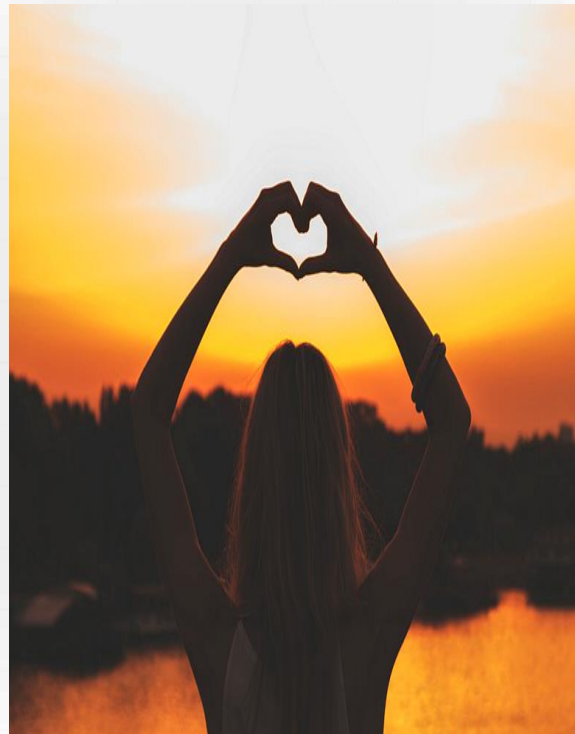
- Be kind to yourself during stressful times.
- Practice positive self-talk.

Grounding Exercises

- Use senses to stay present (e.g., notice five things you can see, four things you can touch).

Routine

- Establish a consistent daily routine by including relaxation and social time.



Take a moment
to reflect on
what we've
covered.

What's one
new thing you've
learned?

Recap: Polyvagal Theory & Stress Management

Key Points: Polyvagal Theory

- Developed by Dr. Stephen Porges.
- Explains the role of the vagus nerve in stress responses.

Nervous System States

- Sympathetic (fight or flight) and parasympathetic (rest and digest).
- Ventral vagal (social engagement) and dorsal vagal (shutdown).

Stress Management Techniques

Breathing exercises, mindfulness, social engagement, physical activity.

Keep Practicing and Learning Resources

Here are just some of the topics that will be covered at LJB Stress Management Academy

	Understanding Your Nervous System Webinars	Stress Management Practices and Exercises	Spiritual Practices to Manage Stress
1	Demystifying Stress: How Your Body Reacts	Breathe Easy: Mastering Deep Breathing for Calm	Meditation Basics: Finding Peace in Silence
2	Fight or Flight: Managing Immediate Stress Responses	Ease Your Muscles: Progressive Relaxation for Everyday Relief	Yoga for You: Stress Relief Through Gentle Movement
3	Safe and Sound: Understanding Polyvagal Theory	Endorphin Boost: Simple Exercises to Lift Your Mood	Visualize Calm: Guided Imagery for Inner Peace
4	Balancing Chemicals: Neurotransmitters in Stress	Mind Over Matter: Mindfulness for Daily Calm	Praying Peacefully: Integrating Prayer into Stress Management
5	Brain Health: Effects of Long-Term Stress	Think Through It: Cognitive Strategies to Handle Stress	Balance Your Chakras: Spiritual Practices for Alignment
6	Stress Responses: Learning Healthy Reactions	Mastering Moments: Time Management to Avoid Overwhelm	Faith in Stress Reduction: Exploring Spiritual Resilience
7	Rewire Your Response: Leveraging Neuroplasticity	Learning Your Body Signals: Intro to Biofeedback	Chanting for Calm: Using Mantras to Soothe the Spirit
8	Reading Your Body's Signals: Practical Tips	Reflect and Release: The Power of Stress-Relieving Journaling	Healing Energies: Exploring Reiki and Stress Reduction
9	The Relaxation Effect: Why It Works	Create to Cope: Using Art as a Stress Reliever	Walking Meditation: Combining Movement with Mindfulness
10	Building Resilience: Understanding and Using Your Inner Strength	Stretch and Soothe: Gentle Routines for Daily Practice	Gratitude Practices: Enhancing Life's Joys to Combat Stress

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Q&A

Feel free to email any questions you may have!

admin@ljb-stressmanagement.com



Thank You!