

Polyvagal Theory **Workbook**

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THE POLYVAGAL THEORY

A Practical and
Effective Workbook

THE POLYVAGAL THEORY

“ THINK OF THE VAGUS AS BEING PART OF A MAJOR SURVEILLANCE SYSTEM. ”



WHAT IS THE POLYVAGAL THEORY?

Whether you realize it or not, we are constantly reading social cues in our environment to know what is dangerous, whom we can trust, and how we can interact within our environment.

We observe facial expressions, tones of voice, bodily movements, and more. In addition, we are constantly busy observing and interacting with the world and others as part of our human experience.

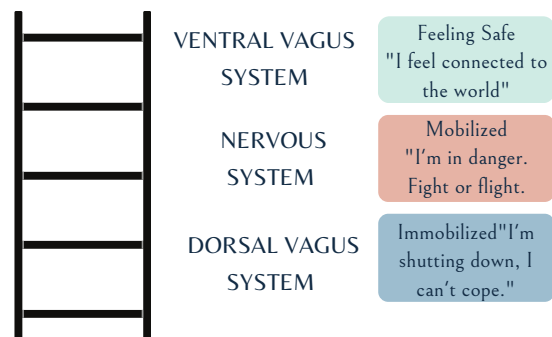
The vagus nerve is a part of our body's Surveillance System, a complex structure that gathers information from all over our body and coordinates activity. Our neural circuits read danger cues in our environment as neuroception. Through this process of neuroception, we are experiencing the world in a way in which we are involuntarily scanning situations and people to determine if they are safe or dangerous.

As part of our autonomic nervous system, this process is happening without us even being aware that it is happening. Just as we can breathe without intentionally telling ourselves to take a breath, we can scan our environment for cues without telling ourselves to do so. The vagus nerve is of particular interest during this process of neuroception.

THE POLYVAGAL LADDER

The polyvagal theory was developed by Stephen Porges, based on research on the vagus nerve, a nerve with several branches that wanders from the brain to the internal organs below the diaphragm and up into the face. The Polyvagal Ladder is based on the fact that our Vagus Nerve regulates both our trauma threat responses and the system of our body and brain that calms us down and helps us return to a relaxed state where we can be “safe and social.” The polyvagal ladder exercise involves imagining our nervous system as a ladder, with the ventral vagal at the top, sympathetic in the middle, and dorsal at the bottom. As we go through life engaging with the world, there are inevitably those moments when we will feel safe and others in which we will feel discomfort or danger.

THE POLYVAGAL LADDER



Polyvagal theory suggests that this space is fluid for us, and we can move in and out of these different places within the hierarchy of responses. The Polyvagal Ladder explains that when we are immobilized, we can't get back into the safe and social zone until we go through the sympathetic activation because part of what brings us out of that immobilized state is getting more sympathetic activation.

TRAUMA : When a person endures trauma, it is one experience, an intense event, or repeated trauma, and their body experiences physiological changes. These changes can affect their reactions and responses in situations throughout their lives. For example, some people will interpret uncertainty in their environment as dangerous, activating their fight, flight or freeze responses.

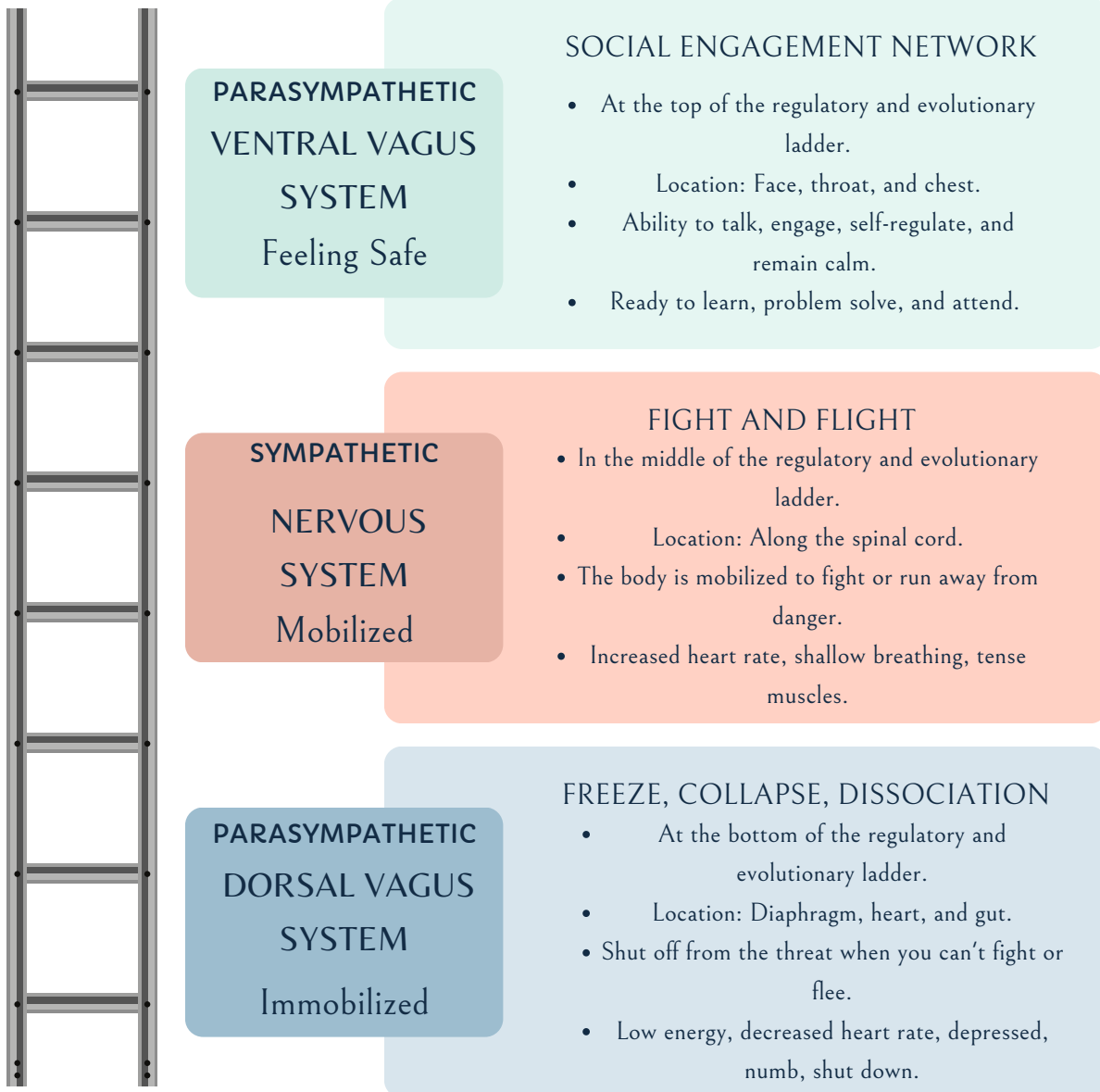
After experiencing trauma, the body often remains alert to search for danger. Because of this, people remain more likely to engage in a defense response like mobilization or immobilization in response to a less extreme trigger. As a result, the body finds it difficult to return to a regulated state where it can utilize its social engagement system. The Polyvagal theory exercises attempt to restructure the mind-body reactions due to this trauma.

EXERCISES:

- Deep Breathing
- Applying Cold Water to the Body
- Mindful Physical Activity
- Vocalizations
- Reminiscing on Pleasant Memories
- Playful Experiences
- Meditation
- Loud gargling with water
- Positive social connection

THE POLYVAGAL LADDER

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THE AUTONOMIC NERVOUS SYSTEM: BALANCING THE VAGAL COMPLEXES AND THE SYMPATHETIC RESPONSE

The autonomic nervous system (ANS) is an intricate network of nerves that plays a critical role in managing our body's involuntary functions. It consists of two main branches: the sympathetic nervous system (SNS) and the parasympathetic nervous system. Within the parasympathetic system, there are key elements known as the dorsal vagal complex and the ventral vagal complex, which are coordinated through the vagus nerve. Here, we explore the characteristics and functions of these elements, their roles in physiological and psychological responses, and the underlying mechanisms of their activation.

Characteristics and Functions

The dorsal vagal complex, a component of the parasympathetic nervous system, is primarily responsible for the "rest and digest" functions. It is chiefly characterized by its role in immobilization and energy conservation. This complex is evolutionarily older and is particularly involved in regulating metabolic processes and reducing metabolic demand during states where energy preservation is crucial.

1. Immobilization: The dorsal vagal complex can induce a state of reduced motor activity, often observed in situations that require energy conservation.

2. Conservation of Energy: By slowing the heart rate and promoting digestion and recovery processes, this complex ensures that the body's resources are directed towards healing and maintenance.

Activation

The dorsal vagal complex becomes activated in response to perceived threats that are deemed inescapable or overwhelming. In such scenarios, the body can enter a shutdown mode, characterized by reduced metabolic activity and, sometimes, a state of hypo-arousal. This response can be protective, preventing further harm in dire situations. However, inappropriate or prolonged activation might contribute to pathologies such as dissociation or a depressive-like state.

THE SYMPATHETIC NERVOUS SYSTEM

Role in Fight-or-Flight Responses

The sympathetic nervous system is often associated with the body's "fight-or-flight" response. It prepares the body to either confront the threat or flee from it by:

1. Increasing Heart Rate and Blood Pressure: To deliver more oxygen to vital organs and muscles.

2. Dilating Airways and Pupils: To enhance oxygen intake and visual acuity.

3. Energy Mobilization: Through processes like gluconeogenesis and glycogenolysis, providing immediate energy to muscles.

Consequences of Prolonged Activation

While acute SNS activation is essential for handling immediate threats, chronic activation can lead to detrimental health effects:

1. Chronic Stress: The persistence of high cortisol levels due to prolonged SNS activation contributes to adverse health outcomes like obesity, diabetes, and cardiovascular diseases.
2. Mental Health Impacts: Continuous stress responses can contribute to mental health disorders such as anxiety and depression.
3. Suppression of Immune Function: Long-term SNS activity can suppress the immune system, leading to increased vulnerability to illnesses.

THE VENTRAL VAGAL COMPLEX

Importance of the Social Engagement System

The ventral vagal complex is more sophisticated and enables finer social and environmental interactions. It forms the basis of the social engagement system, which is crucial for:

1. Facial Expression and Communication: This complex aids in facial muscle control and vocal modulation – important components of non-verbal communication.
2. Self-Regulation and Calmness: It promotes states of calm and social accessibility, facilitating improved interactions with others.

How It Supports Connection and Safety

The ventral vagal complex fosters secure, compassionate connections, contributing to a sense of safety and belonging:

1. Promoting Safety Cues: Through calmness and nurturing behaviors, it assists in establishing environments where individuals feel protected and valued.
2. Enhancing Social Bonds: Facilitating adaptive social behaviors through warm and responsive engagement strengthens interpersonal connections.

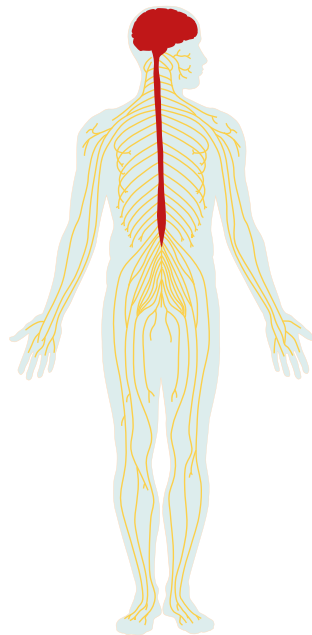
In summary, understanding the role of the vagal complexes alongside the sympathetic nervous system provides deep insights into how our bodies balance between gearing up for action and settling down for recovery and connection. Preservation of these balanced states is fundamental to maintaining both our mental and physical health, underlining the intricate coherence between the physiological and psychological realms.

THE AUTONOMIC NERVOUS SYSTEM'S ROLE

When an individual is confronted with a traumatic event, the autonomic nervous system (ANS) plays a pivotal role in managing the body's immediate response. The ANS is responsible for regulating involuntary body functions and is divided into two main components:

Parasympathetic Nerves

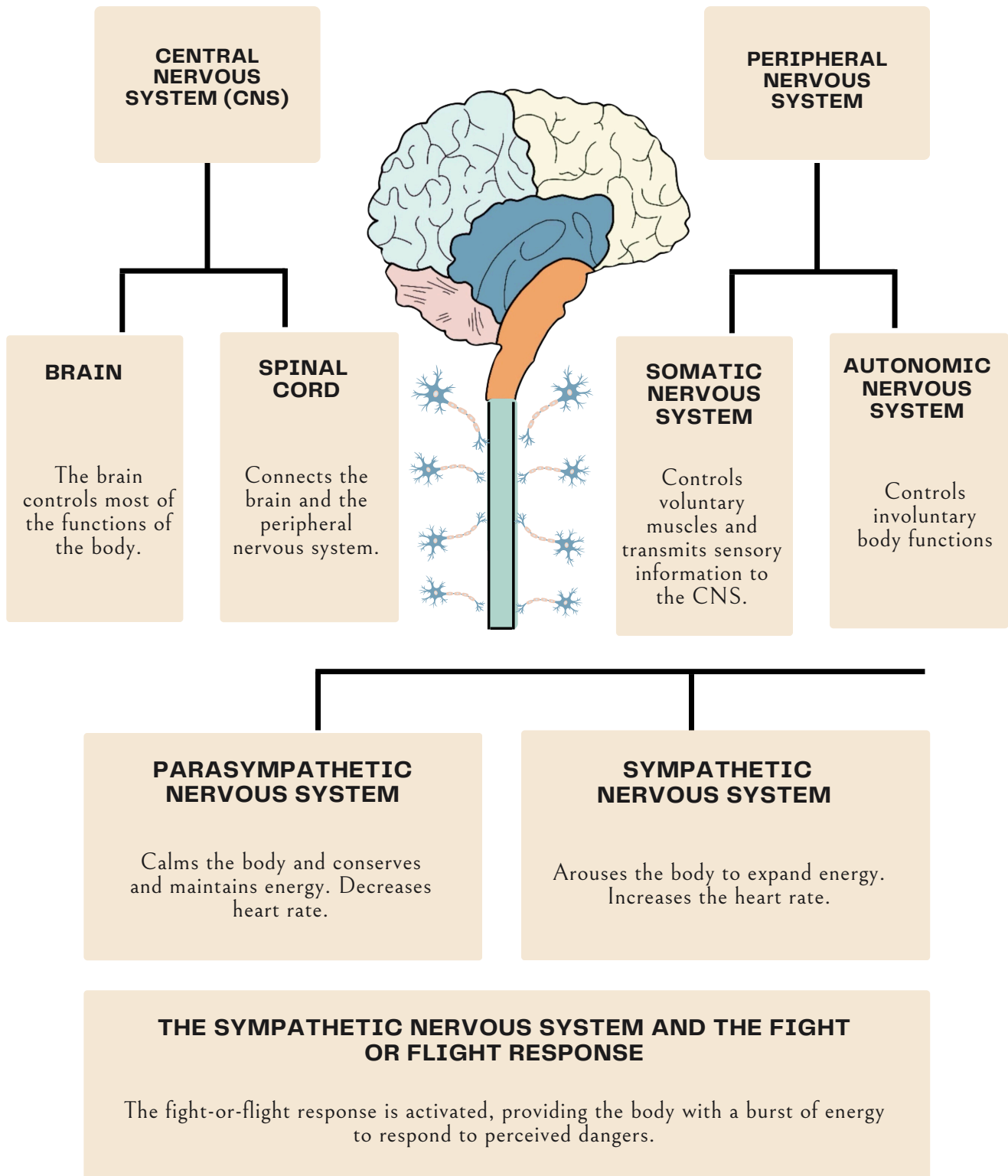
- Constricts pupils:
- Decreases heart rate:
- Decreases blood pressure:
- Constricts bronchioles:
- Stimulates digestion:
- Stimulates salivation:
- Stimulates bile release:
- Promotes reproductive
- Contracts urinary bladder:
- Secretion in the exocrine .



Sympathetic Nerves

- Dilates pupils:
- Increases heart rate:
- Increases blood pressure:
- Dilates bronchioles:
- Inhibits digestion:
- Releases stored glucose:
- Induces sweating:
- Constricts blood vessels in non-essential areas:
- Stimulates the adrenal medulla:
- Relaxes urinary bladder:
- Causes piloerection:

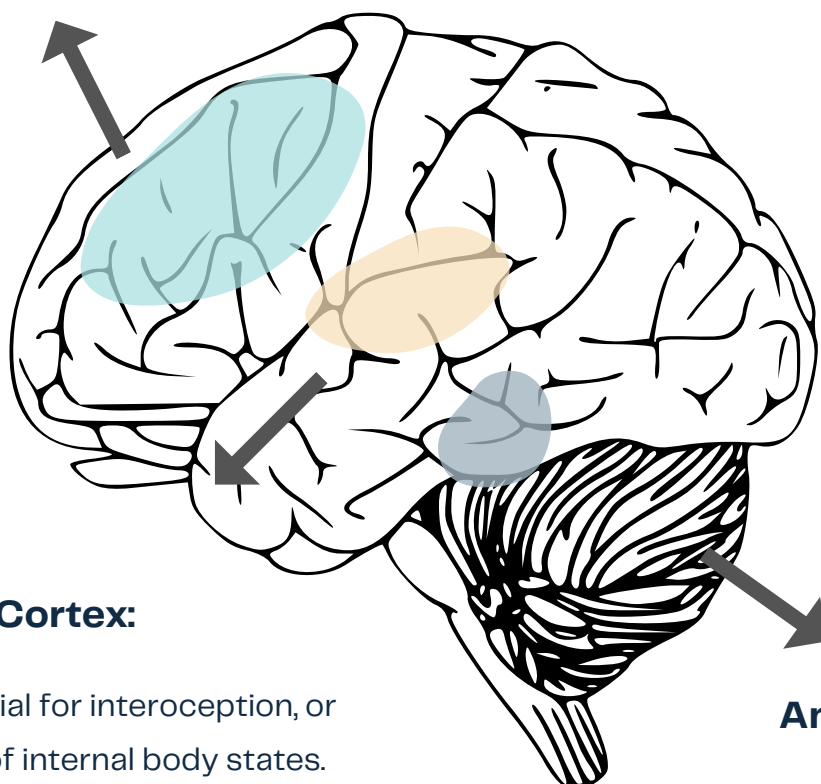
THE AUTONOMIC NERVOUS SYSTEM'S ROLE



THE ROLE OF THE BRAIN STRUCTURES

Prefrontal Cortex:

This area of the brain is necessary for regulation, helping individuals consciously process and manage inputs from the lower brain centers and formulate adaptive responses.



Insula Cortex:

The insula is crucial for interoception, or the perception of internal body states. Interoception contributes to emotional awareness and is actively engaged in somatic therapy, allowing clients to access and integrate buried emotional content.

Amygdala

These areas are central to the emotional processing of sensory information. They mediate how emotions are felt in the body—it's where sensory inputs are transformed into emotive responses.

WINDOW OF TOLERANCE

Each of us has a specific threshold for stress and trauma; this threshold can be explained as our Window of Tolerance developed by Dr. Dan Siegel. The wider your window, the greater your tolerance for stressful events and demanding situations. The narrower your window, the lower your tolerance for stressful situations and hardship. The width of your window is not fixed, though, and it's been shown that persistent stress and trauma shrink your window while safe connection and healing widen your window of tolerance.

SYMPATHETIC SYSTEM ACTIVATED: STATE OF HYPERAROUSAL

- Feelings of extreme anxiousness with possible panic attacks.
- Feel overwhelmed and out of control.
- Want to fight or run away.



DYSREGULATION

- Feelings of frustration and agitation increase.
- Uncomfortable feelings start to increase but still in control.



PARASYMPATHETIC SYSTEM STIMULATED (VENTRAL VAGAL NERVE) WINDOW OF TOLERANCE

- Feel present, calm and safe.
- In total control.



Stress
Trauma
triggers
Anxiety
Rejection
Abandonment

↓
THINGS
THAT
SHRINK
YOUR
WINDOW
↑

↑
THINGS
THAT
CAN
EXPAND
YOUR
WINDOW
↓

Mindfulness
Grounding
exercises
Gratitude
Positive self
talk
Deep
breathing

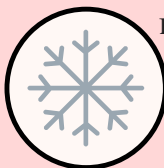
DYSREGULATION

- Getting close to the stage of shutting down.
- Uncomfortable feelings start to increase but still in control.



PARASYMPATHETIC SYSTEM ACTIVATED (DORSAL VAGAL NERVE): STATE OF HYPOAROUSAL

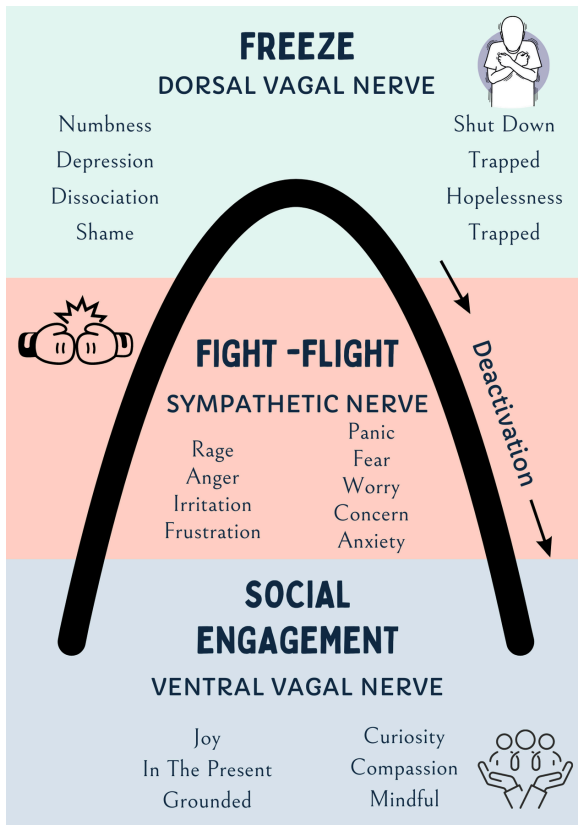
- Feel physically numb and frozen.
- Feel disconnected and zoned out.
- Lethargic and no energy



SURVIVAL MODE OF WORRY

THE FIGHT OR FLIGHT RESPONSE IS DESIGNED TO AID SURVIVAL IN DANGEROUS OR THREATENING SITUATIONS.

Without the ability to feel worried, humans wouldn't have survived. Back in the caveman days, when we were hunters and gatherers, worry and stress would alert us to potential life-threatening dangers, such as being face-to-face with a saber-tooth tiger. In the caveman days, the 'fight or flight' mode kept them alive, as they would either dash away from the tiger or fight it for survival. In the modern world, this response can still serve us well and help us survive dangerous situations, such as quickly responding to a car coming your way on the footpath by running out of its way.



When we feel a sense of potential danger and fear, our body instinctively goes into protective mode to keep us safe.

The Polyvagal Theory considers the fight-flight-freeze responses within the realm of psychotherapy. When a person feels safe, they are in a position to have a higher cognitive function. Higher functions shut down if they sense danger (real or perceived). When this happens on a chronic basis, it is as if your brain gets stuck in the “on” position. It’s “on” for fight or flight or freeze. In other words, it’s difficult to even imagine safety, e.g.

- You will misread the cues you are receiving from other people
- You’re more likely to assume others are being aggressive or threatening
- Anger will be perceived all around you
- When correct social cues are absent, it becomes nearly impossible to self-regulate.

Over time, this trend will create a dangerously false perception. You’ll see all people as a source of danger. This keeps the involuntary cycle going. You can’t fight. You can’t flee. That’s when “freeze” kicks in. You shut down. The Polyvagal Theory factors into this kind of shutdown. It empowers you to address your source of trauma and anxiety with the goal of helping you feel safe again.

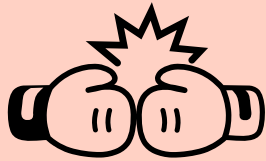
FREEZE

DORSAL VAGAL NERVE



Numbness
Depression
Dissociation
Shame

Shut Down
Trapped
Hopelessness
Trapped



FIGHT - FLIGHT

SYMPATHETIC NERVE

Rage
Anger
Irritation
Frustration

Panic
Fear
Worry
Concern
Anxiety

Deactivation

SOCIAL

ENGAGEMENT

VENTRAL VAGAL NERVE

Joy
In The Present
Grounded

Curiosity
Compassion
Mindful



COUNSELLOR *Kristi*

COPING SKILLS TO HELP EMPOWER INDIVIDUALS TO MONITOR THEIR PHYSIOLOGICAL STATE

Polyvagal theory, developed by Dr. Stephen Porges, describes the role of the autonomic nervous system in managing stress and emotion through three primary states: the ventral vagal complex (social engagement), the sympathetic nervous system (fight-or-flight), and the dorsal vagal complex (shutdown/freeze). Coping skills aligned with polyvagal theory focus on enhancing social engagement, managing stress, and shifting physiological states to support well-being. Here are 30 coping skills grounded in polyvagal theory:

1. Deep Breathing Exercises: Activate the ventral vagal complex by taking slow, deep breaths to promote relaxation.
2. Mindfulness Meditation: Practice being present to increase awareness and calm the mind, facilitating a shift to a state of safety.
3. Progressive Muscle Relaxation: Systematically tense and relax muscle groups to release tension and engage the parasympathetic system.
4. Grounding Techniques: Use sensory experiences like feeling the ground beneath your feet to stay connected to the present moment.
5. Social Connection: Engage in meaningful interactions with friends or loved ones to promote the social engagement system.
6. Humming or Singing: Stimulate the vagus nerve and promote vagal tone through vocalization.
7. Gentle Movement or Yoga: Engage in slow, intentional movement to enhance body awareness and facilitate regulation.
8. Nature Walks: Spend time in natural settings to experience calming sensory inputs and promote well-being.
9. Warm Bath or Shower: Use warm water as a soothing sensory experience to trigger relaxation.
10. Pet Interaction: Spend time with pets to foster feelings of safety and connection.

COPING SKILLS TO HELP EMPOWER INDIVIDUALS TO MONITOR THEIR PHYSIOLOGICAL STATE

11. Art or Creative Expression: Engage in creative activities to express emotions and shift into a more grounded state.
12. Laughter and Humor: Use laughter to engage the social nervous system and reduce stress.
13. Listening to Music: Choose music that evokes positive emotions or relaxation.
14. Visualization: Practice positive imagery that invokes feelings of safety and calm.
15. Body Scan Meditation: Increase interoceptive awareness by mentally scanning the body for tension or discomfort.
16. Cultivate Gratitude: Practice gratitude journaling or reflection to shift attention to positive aspects of life.
17. Cold Water Splash or Exposure: Brief exposure to cold can improve vagal tone and increase alertness transition.
18. Structured Routines: Maintain routines to create predictability and stability, especially during stress.
19. Breathing with Slow Exhalation: Focus on longer exhalations to promote parasympathetic activation.
20. Tracking Positive Interactions: Acknowledge and recall positive social interactions to strengthen social bonds.
21. Limit Sensory Overstimulation: Create a calming environment with fewer stimuli during overwhelming moments.
22. Sleep Hygiene: Prioritize good sleep practices to support nervous system regulation and recovery.
23. Eat Balanced Nutrition: Proper nutrition impacts mood and physical resilience, informing autonomic function.

COPING SKILLS TO HELP EMPOWER INDIVIDUALS TO MONITOR THEIR PHYSIOLOGICAL STATE

24. Boundaries and Assertiveness: Practice setting clear boundaries to create safe, healthy relationships.
25. Gentle Self-Talk: Use compassionate and supportive internal dialogue to soothe and calm the self.
26. Body-Oriented Therapies: Explore therapies such as somatic experiencing to process and release stored trauma.
27. Mind-Body Awareness Skills: Develop practices that increase body-mind connection, like tai chi or qigong.
28. Heart Rate Variability Biofeedback: Use technology to improve emotional and physiological self-regulation.
29. Resurrection of Past Joyful Memories: Reflect on past experiences that invoked joy and connection.
30. Therapeutic Support: Engage with trained therapists familiar with polyvagal-informed interventions for personalized guidance.

These coping skills can empower individuals to monitor their physiological state, use deliberate strategies to influence the nervous system, and ultimately facilitate a sense of safety, connection, and well-being.