# Understanding Eating Disorder Behaviors Through a Polyvagal Lens

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# Learning Objectives

- Participants will describe a basic understanding of the Polyvagal Theory, including characteristics of each of the 3 nervous system states (Ventral Vagal, Sympathetic, and Dorsal Vagal)
- Participants will categorize common eating disorder behaviors within the 2 selfprotective nervous system states
- Participants will discuss how eating disorder (ED) behaviors function as misguided attempts for self-regulation, perpetuating nervous system dysregulation and the use of behaviors

# Autonomic Nervous System

- This system (nerve network) is responsible for regulating involuntary bodily processes like heart rate, respiration, digestion, and pupil contraction
- This system operates on an unconscious level. We don't tell our body how or when to digest food or breathe— *it just does it*
- This system is involved in taking cues from the outside world and altering the body's internal state based on those cues
- One of it's functions acts as an inborn surveillance system "is this safe?"
- It's not just our conscious thoughts that drive our behaviors, it's also our *physiology*

# Neuroception: how your brain decides if your world is safe

- "Detection *without awareness*" or "how neural circuits distinguish whether people or environments are safe, dangerous, or life-threatening." (Porges, 2007).
- Instantaneous + subconscious
- Inner worlds, outer worlds, and in relationships
- Reptilian brain / has nothing to do with your thinking brain
- Scans our environments and shifts us into a state of connection or protection
- "Faulty neuroception": defense systems are activated in a safe environment / feels safe in an actual dangerous environment

# The Parasympathetic System, expanded

- For a long time, scientists believed that the autonomic nervous system had two branches: Sympathetic Branch (fight/flight response) and Parasympathetic Branch (freeze/collapse response) + 2 responses
- 1994 Dr. Stephen Porges published his Polyvagal Theory, claiming a 3rd nervous system response connected to the parasympathetic branch that has to do with human connection/attachment
- Our understanding of the Parasympathetic System was expanded
- "Feed and Breed" / "Rest and Digest" (regulates more mundane bodily processes)
- System of immobilization AND system of connection

# The Vagus Nerve

Ventral: Front

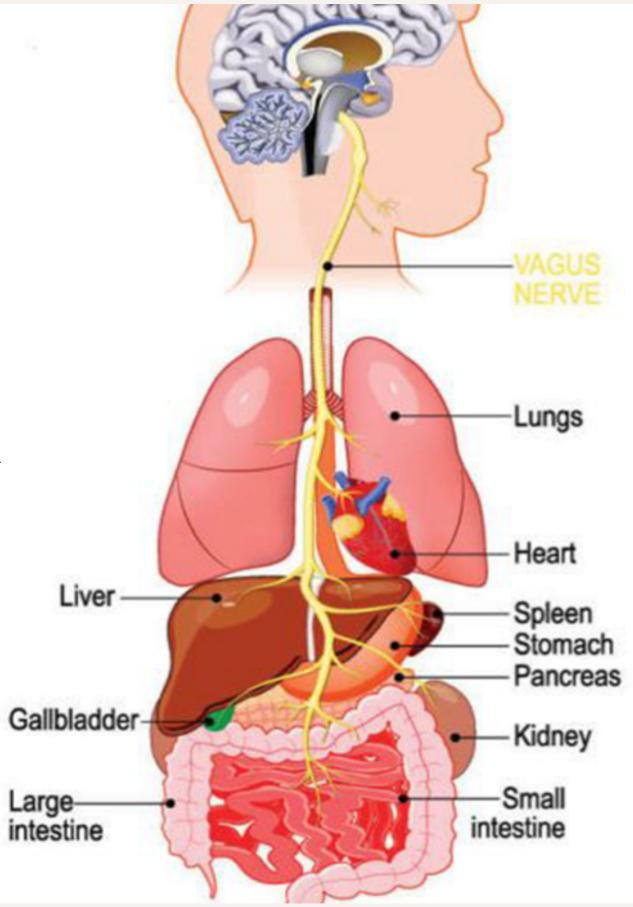
Dorsal: Back

"Love Nerve": higher vagus nerve activity when showing compassion/empathy

"Gut feelings"

Downward: through lungs, heart, diaphragm and stomach

Upward: to connect with nerves in the neck, throat, eyes, and ears

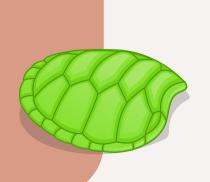


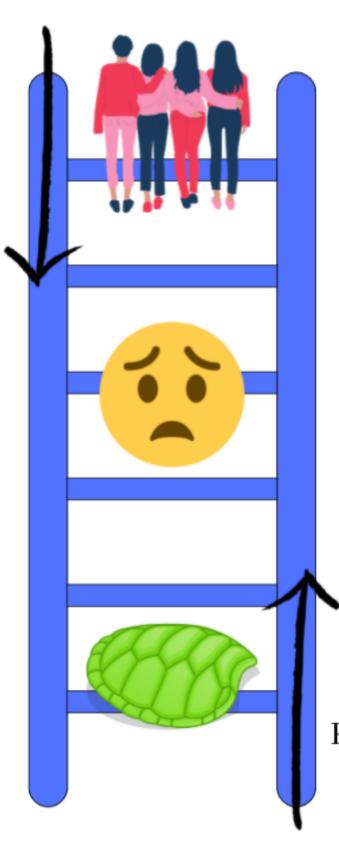
Social response. This response activates the Social Engagement System (or Ventral Vagal Complex). This system is activated when the body senses safety in the environment. This enables us to be connected in social relationships, grounded, and present-focused.



Sympathetic "fight or flight" response. This system is activated when the body senses danger. It responds by mobilizing, shifting quickly into survival mode, ready to defend itself. All of us know what it feels like when this system is activated because this is your stress-response system

Parasympathetic "collapse" response. This response activates the Dorsal Vagal System. This system is activated when the body perceives an extreme threat. It responds by collapsing (think playing dead or playing possum).





# **VENTRAL VAGAL**

Parasympathetic (myelinated)

Safe, Social, Connected

I feel connected to the world and the people around me

# SYMPATHETIC

Mobilization

(Fight or Flight)

I sense danger. I need to run away or fight back to protect myself

# DORSAL VAGAL

Parasympathetic (Unmylenated)

Immobilized/Collapse

I can't protect myself anymore. I must shut-down

•Physical sensations: Regulated and rhythmic breath, good digestion, rested and attentive, at ease, sense of calm yet energized •Thoughts: I feel safe, This is fun, I am grateful, I am being productive, I am supported, I wonder..., I feel connected, I am capable

Ventral Vagal (CONNECT)

•Feelings: Content, grounded, loved, satisfied, connected, listened too, passionate, confident, curious, mindful, creative

•Behaviors: Laughing, playing, meditating, having sex with a safe partner, walking/joyful movement, working, connecting with others •Physical sensations: Heart racing, shallow, rapid breathing, restless/jittery, increased blood pressure, adrenaline rush

•Thoughts: This is overwhelming, I'm afraid,
This is too much, I'm never going to get it all
done, Ughhhh, I'm going to be late, F\*7&, This is
a mess, I am in danger, I must control the
situation

Sympathetic (PROTECT)

•Feelings: Fearful, anxious, worried, stressed, frustrated, angry, overwhelmed, irritated, scared, panicked, disgusted

•Behaviors: Defensiveness, perfectionism, distraction/avoidance, controlling (self or others), aggressive, impulsiveness •Physical sensations: Decreased heart rate and blood pressure, decreased ability to make eye contact, low awareness of self/others, muscles go limp

•Thoughts: I'm so lost, This is hopeless, I feel helpless, I'm doomed, I can't do it, No one understands, I can't cope, Nothing matters anyways, I'll never be successful

Dorsal Vagal COLLAPSE

•Feelings: Loneliness, depressed, disconnected, fatigued, brain fogged, hopeless, helpless, trapped, ashamed, numb, dissociated

•Behaviors: Self-abandonment, excessive sleep, self-isolation, immobilization, low motivation, low agency

# The Science of Safety

Cues from the environment



Nervous system response

If my body senses safety

If my body senses danger



Ventral Vagal dominance Sympathetic or Dorsal Vagal dominance



Thoughts, physical sensations, feelings, and behaviors.

So, what does this have to do with eating disorder behaviors?

- ED behaviors show us that the body is perpetually responding to a threat (past or present) in order to feel safe (relationally or physically)
- ED behaviors = perhaps the only way a person feels "self-regulated"
- Evidence of a dysregulated nervous system; limited access to WOT
- Behaviors are a means of disconnecting from the body and distancing the Self from uncomfortable emotions/memories/sensations
- Behaviors are used when a person is *overwhelmed*, and they don't have another way to cope \*and\* when social engagement isn't safe or regulatory
- Behaviors meet NEEDS: for control, belonging, safety, connection, intimacy, etc.
- These behaviors as survival strategies and misguided attempts at regulation/coping
- Behaviors show STUCKNESS and lack of felt safety
- Help clients see that they're not a "failure" for using these behaviors but rather that these behaviors have functioned/are functioning to help them feel safe

# Nervous system dysregulation

# Eating disorder behaviors





Did the eating disorder behaviors (restriction, purging, etc) cause the body to become dysregulated or did the dysregulation cause the ED? \*It's both and they reinforce each other. When we recognize that it's both, it widens our opportunity to help clients understand themselves and it helps us utilize various modalities of healing.

### **ED BEHAVIORS**

Hyperarousal

fight, flight, freeze

\*This window is

typically very small /
narrow due to lack of
distress tolerance
skills and resources

### Window of Tolerance

I can cope with difficulty + I can regulate my thoughts & emotions

Optimal Arousal

ED BEHAVIORS

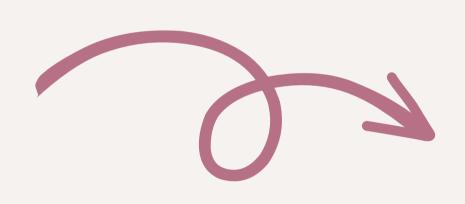
Hypoarousal

numbing, submission, apathy

@iamrachelsellers

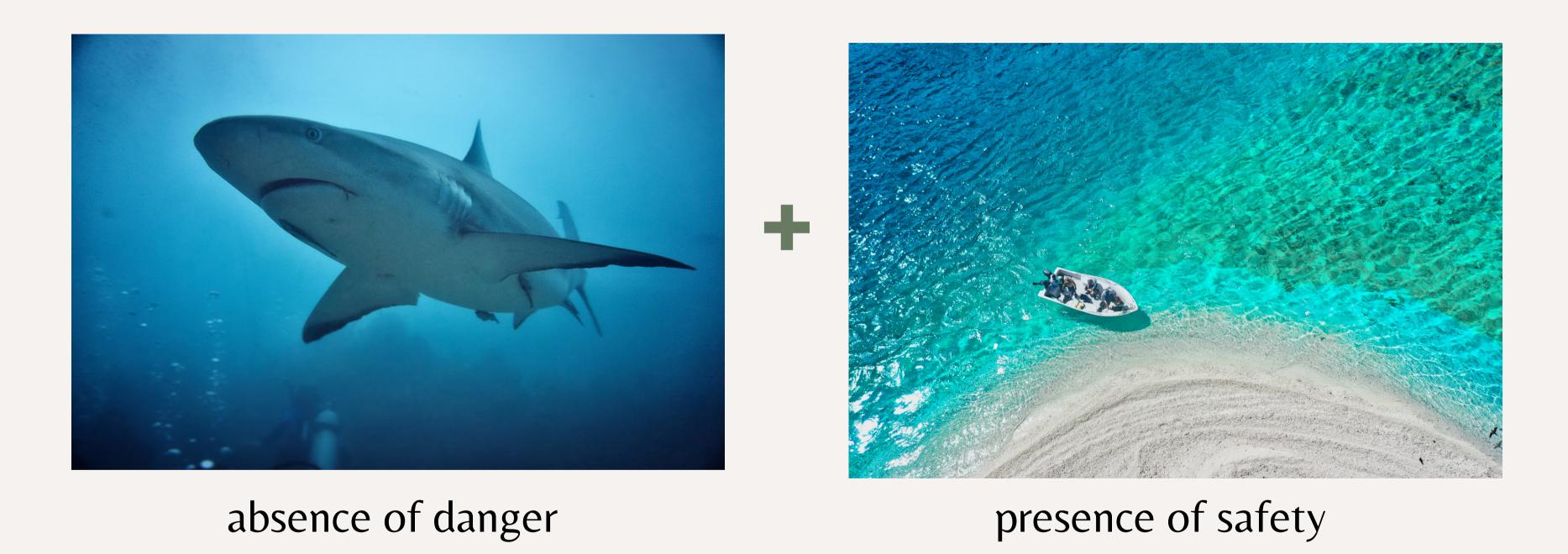
# Inside my WOT I can...

- Cope with difficulty
- Regulate difficult emotions
- Feel safe and calm
- Empathize with others
- Think clearly and rationally
- Access resiliency
- Focus on important tasks
- Consider consequence of my behaviors/actions
- Be aware of time, space, Self, and others
- Practice mindfulness
- Cope with minor stressors / life's punches
- Alert and engage



People w/ ED's
struggle
with these things
because they're
outside the WOT
most of the time!

# What exactly keeps me in my WOT?



<sup>\*</sup>Metaphor from Rachel Lewis-Marlow (Boats and Sharks: A sensorimotor psychotherapy approach to the treatment of eating disorders and trauma.

# ED behaviors as expressions of Sympathetic dominance/stuckness

- flight energy: anxiety, obsessive or disorganized thoughts, excessive exercise, food restriction, panic, food rituals, hyper-vigilance, body tension, darting eyes
- fight energy: binge/purging, chewing/spitting, anger, self-harm, clenched hands, pressured speech
- freeze: panic, inhibition in digestion, IBS, blunted affect

I'm going to run or fight back with the felt sense of discomfort, undischarged traumatic stress

# ED behaviors as expressions of Dorsal Vagal dominance/stuckness

Collapse: numbing, dissociation, self-isolation, self-abandonment, helplessness, inability to sense hunger/fullness, depressed mood, difficulties in relationships

I'm going to collapse and shut down because the felt sense of discomfort/ongoing traumatic stress has become too much to bear

# the autonomic ladder \* eating disorder edition\*

### **VENTRAL VAGAL**

(safe and social) connected, curious, grounded, present-focused, intimate

### **SYMPATHETIC**

(fight or flight)
anxiety, obsessive thoughts,
restriction, binging, excessive
exercise, purging

### DORSAL VAGAL

(freeze or collapse)

numb, dissociated, depressed, shut-down, unable to track fullness or hunger cues

people struggling with an ED are typically oscillating back and forth between these states @iamrachelsellers

# An illusion of self-regulation

- Fake Window of Tolerance
- ED behaviors feel self-regulating but perpetuate self-protection/more dysregulation
- Self-regulation: capacity for coping with/moving through difficult thoughts/emotions/physical sensations
- Behaviors are a means of escape / avoidance
- Taking a detour vs. going through the bumpy, windy road
- Behaviors make a client \*think/feel\* like they're in Ventral but you're not
- Warm fuzzy blanket metaphor

### The attachment connection

- Symptoms reflect relational challenges
- ED's evolve when social engagement is no longer safe and regulating
- I'm reaching out to behaviors versus social relationships because I don't have the flexibility or capacity to move to the top of my ladder and access my social engagement system
- Difficulty "digesting" relational support (Scatoloni)
- The ED offers a sense of belonging
- Connection between those who struggle with ED's and interpersonal difficulties
- Use ED to talk vs. words
- We have a neurobiological tendency to move towards connection to something (if it can be achieved with another human, it will be found elsewhere)

# Healing = safe connection to self and others

- Learn about your nervous system + increasing a clients ability to access their Ventral Vagal response
- "Befriend and attend"
- Our clients make sense!!
- How do I feel SAFE in this world?
- We help our clients learn to belong to safe OTHERS vs. finding belonging in their ED

"A trauma-informed approach to ED's requires practitioners to shift their attention away from the ED symptoms, to consider the mechanisms of the nervous system that are driving the symptoms. Trauma disrupts our capacity for regulation. ED behaviors serve as a creative strategy to help the individual return to a state of regulation (Porges & Furman, 2011). More accurately, the behaviors create a false perception that one is, indeed, regulated. This maladaptive response perpetuates the behaviors and the nervous system dysregulation, thereby reducing one's capacity for resiliency in the face of stress (Scataloni, 2019)."