



# NERVE

# NINJA

## **Mastering Your Body's Control Center**

A Presentation for Educators, Mental Health Professionals, and Medical Professionals

Presented by:

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and

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Introduce You  
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# Course Objectives

1. Identify and describe the primary nervous system states.
2. Compare healthy and unhealthy nervous systems and identify the primary causes of nervous system dysfunction.
3. Compare effective and ineffective tools for nervous system regulation.



# A Nervous What??

The Autonomic Nervous System is a component of the peripheral nervous system that regulates involuntary physiologic processes including:

- heart rate
- blood pressure
- respiration
- digestion
- sexual arousal

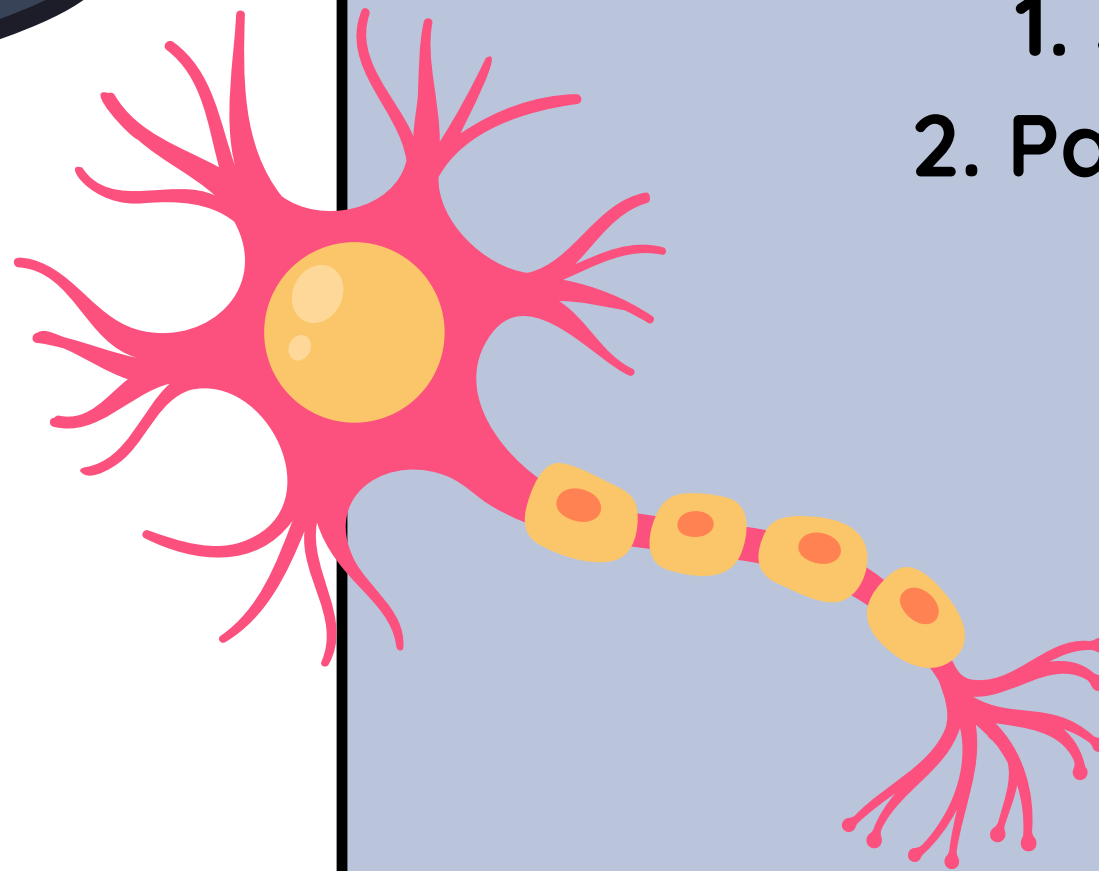


# A Nervous What??

## The Autonomic Nervous System

It contains three distinct divisions:

1. Sympathetic
2. Parasympathetic
3. Enteric





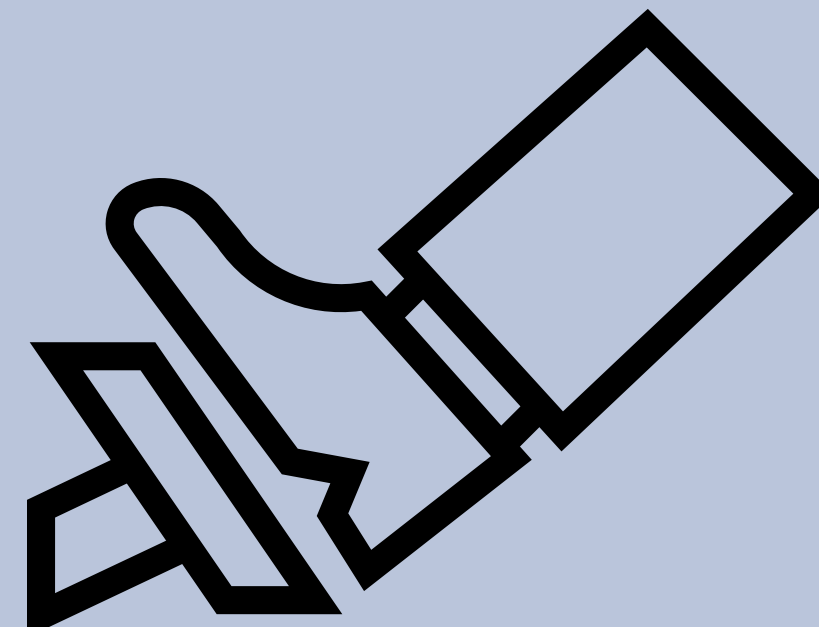
# Gas & Brake Pedals

## Sympathetic

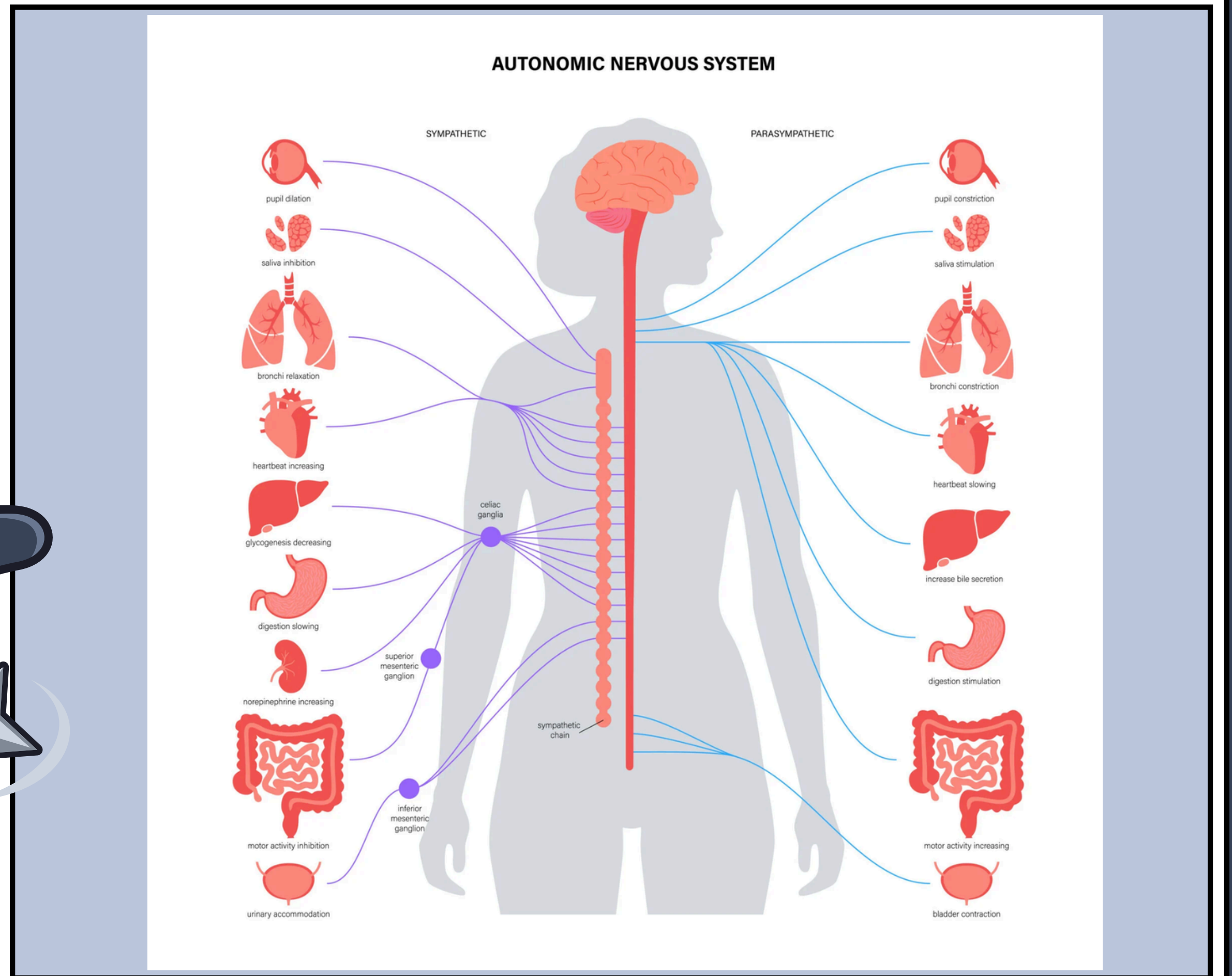
(AKA...gas pedal/fight or flight response/protection mode)

## Parasympathetic

(AKA...brake pedal/rest & digest/connection mode)



# What happens when the system is activated?



Guy-Evans, O. (2024). Autonomic nervous system: What it is and how it works. Simply Psychology. Retrieved from: <https://www.simplypsychology.org/autonomic-nervous-system.html>

Where do you primarily experience the stress response in your body?



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Click on the image to show how your body responds to stress.

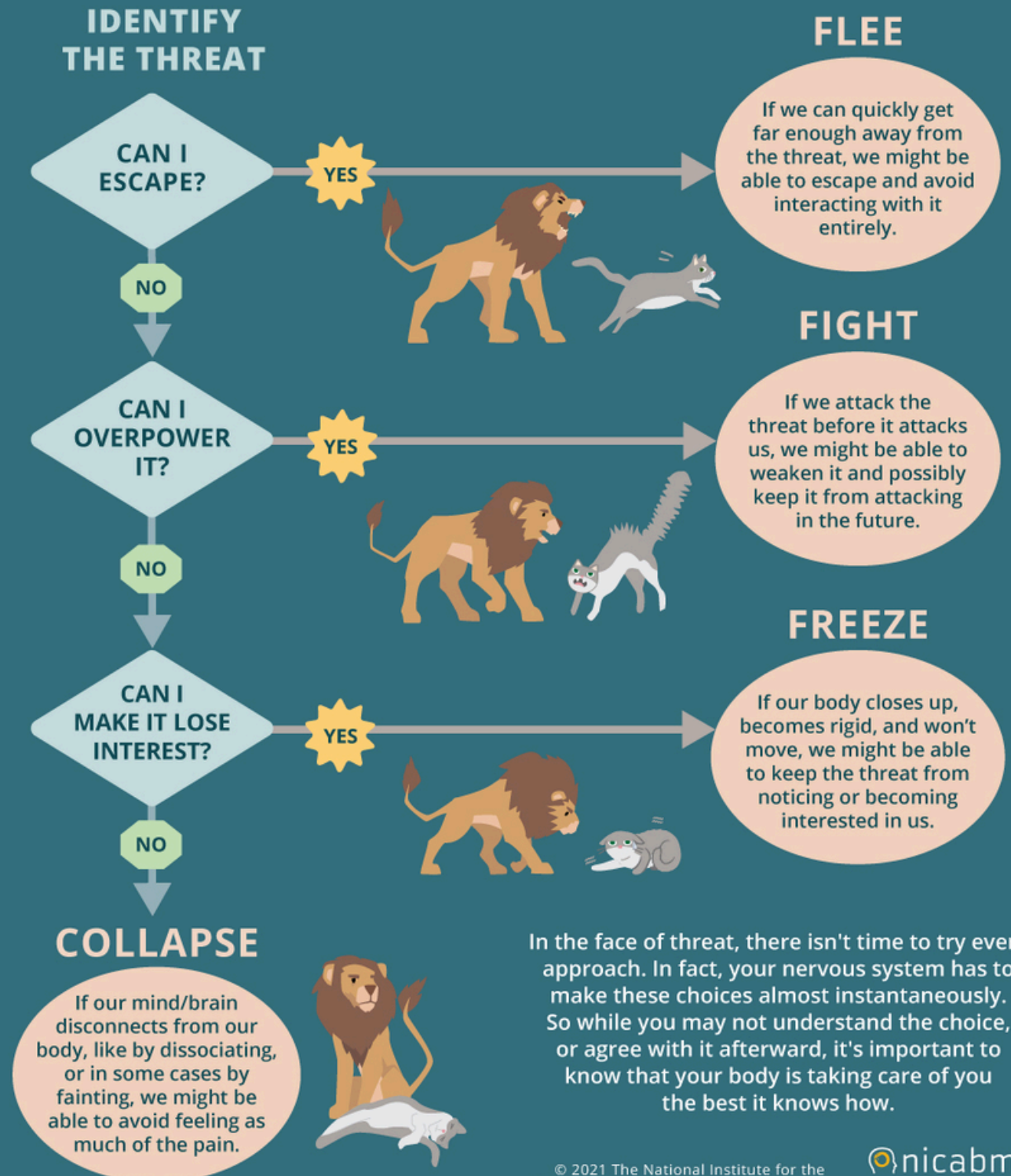
# Stress Responses



# HOW THE NERVOUS SYSTEM RESPONDS TO TRAUMA

Adapted from Ruth Lanius, MD, PhD

How does your nervous system figure out how to respond in a crisis?  
It's a split-second, unconscious process designed to choose the best option for keeping you safe.  
Here's how it works:



In the face of threat, there isn't time to try every approach. In fact, your nervous system has to make these choices almost instantaneously. So while you may not understand the choice, or agree with it afterward, it's important to know that your body is taking care of you the best it knows how.

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# Analyzing a Threat



What is your default or “go-to”  
stress response?



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# Discussion Time

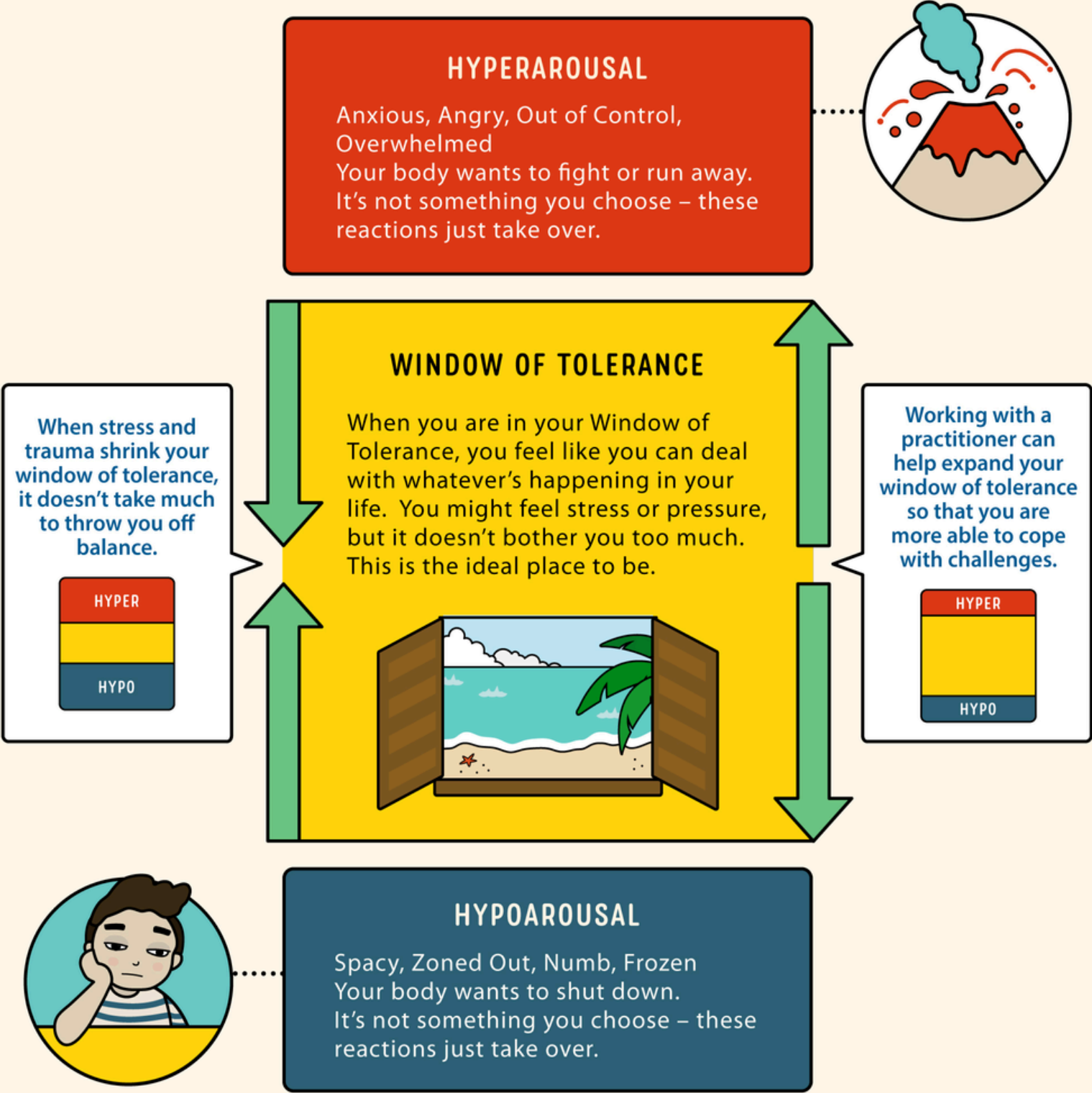
When was a time you witnessed someone else acting in one of the other stress responses?



# Window of Tolerance



## How Trauma Can Affect Your Window Of Tolerance





## Causes of Nervous System Dysfunction:

- Trauma/Injury
- Genetics/Health
- Stress/Lifestyle
- Environment

How Full Is Your Jar?



# Two States

1. **Regulated** - balance between sympathetic and parasympathetic systems; in control of emotions and behaviors
2. **Dysregulated** - sympathetic and parasympathetic systems imbalanced; lost control of emotions and behaviors



## AUTONOMIC NERVOUS SYSTEM: PRECISION REGULATION

\*\* WHAT TO LOOK FOR \*\*

	<b>LETHARGIC</b> Parasympathetic I (PNS I)	<b>CALM</b> Parasympathetic II (PNS II) <i>Ventral Vagus</i>	<b>ACTIVE/ALERT</b> Sympathetic I (SNS I)	<b>FLIGHT/FIGHT</b> Sympathetic II (SNS II)	<b>HYPER FREEZE</b> Sympathetic III (SNS III)	<b>HYPO FREEZE</b> Parasympathetic III (PNS III) <i>Dorsal Vagus Collapse</i>
		◀ "Normal" Life ▶			◀ Threat to Life ▶	
<b>PRIMARY STATE</b>	Apathy, Depression	Safe, Clear Thinking, Social Engagement	Alert, Ready to Act	React to Danger	Await Opportunity to Escape	Prepare for Death
<b>AROUSAL</b>	Too Low	Low	Moderate	High	Extreme Overload	Excessive Overwhelm Induces Hypoarousal
<b>MUSCLES</b>	Slack	Relaxed/toned	Toned	Tense	Rigid (deer in the headlights)	Flaccid
<b>RESPIRATION</b>	Shallow	Easy, often into belly	Increasing rate	Fast, often in upper chest	Hyperventilation	Hypo-ventilation
<b>HEART RATE</b>	Slow	Resting	Quicker or more forceful	Quick and/or forceful	Tachycardia (very fast)	Bradycardia (very slow)
<b>BLOOD PRESSURE</b>	Likely low	Normal	On the rise	Elevated	Significantly high	Significantly low
<b>PUPILS, EYES, EYE LIDS</b>	Pupils smaller, lids may be heavy	Pupils smaller, eyes moist, eye lids relaxed	Pupils widening, eyes less moist, eye lids toned	Pupils very dilated, eyes dry, eye lids tensed/raised	Pupils very small or dilated, eyes very dry, lids very tense	Lids drooping, eyes closed or open and fixed
<b>SKIN TONE</b>	Variable	Rosy hue, despite skin color (blood flows to skin)	Less rosy hue, despite skin color (blood flows to skin)	Pale hue, despite skin color (blood flow to muscles)	May be pale and/or flushed	Noticeably pale
<b>HUMIDITY</b>						
Skin	Dry	Dry	Increased sweat	Increased sweat, may be cold	Cold sweat	Cold sweat
Mouth	Variable	Moist	Less moist	Dry	Dry	Dry
<b>HANDS &amp; FEET (TEMPERATURE)</b>	May be warm or cool	Warm	Cool	Cold	Extremes of cold & hot	Cold
<b>DIGESTION</b>	Variable	Increase	Decrease	Stops	Evacuate bowel & bladder	Stopped
<b>EMOTIONS (LIKELY)</b>	Grief, sadness, shame, disgust	Calm, pleasure, love, sexual arousal	Anger, shame, disgust, anxiety, excitement, sexual climax	Rage, fear	Terror, may be dissociation	May be too dissociated to feel anything
<b>CONTACT WITH SELF &amp; OTHERS</b>	Withdrawn	Probable	Possible	Limited	Not likely	Impossible
<b>FRONTAL CORTEX</b>	May or may not be accessible	Should be accessible	Should be accessible	May or may not be accessible	Likely inaccessible	Inaccessible
<b>INTEGRATION</b>	Not likely	Likely	Likely	Not likely	Impossible	Impossible
<b>RECOMMENDED INTERVENTION</b>	Activate, Gently Increase Energy	Continue Therapy Direction	Continue Therapy Direction	Put on Brakes	<i>Slam on Brakes</i>	<i>Medical Emergency CALL PARAMEDICS</i>

**\*Observe client states: To modulate arousal with brakes. Adjust in yourself: To think clearly & prevent vicarious trauma & compassion fatigue.**

# Three Nervous System States

1. Dysregulation
2. Self-Regulation
3. Co-Regulation





**Group Discussion: "Share an experience where you successfully regulated your nervous system.**

**What technique did you use?"**





# Effective vs Ineffective Regulation Tools

What are some tools that  
have and haven't worked to  
help you or someone you  
know regulate?

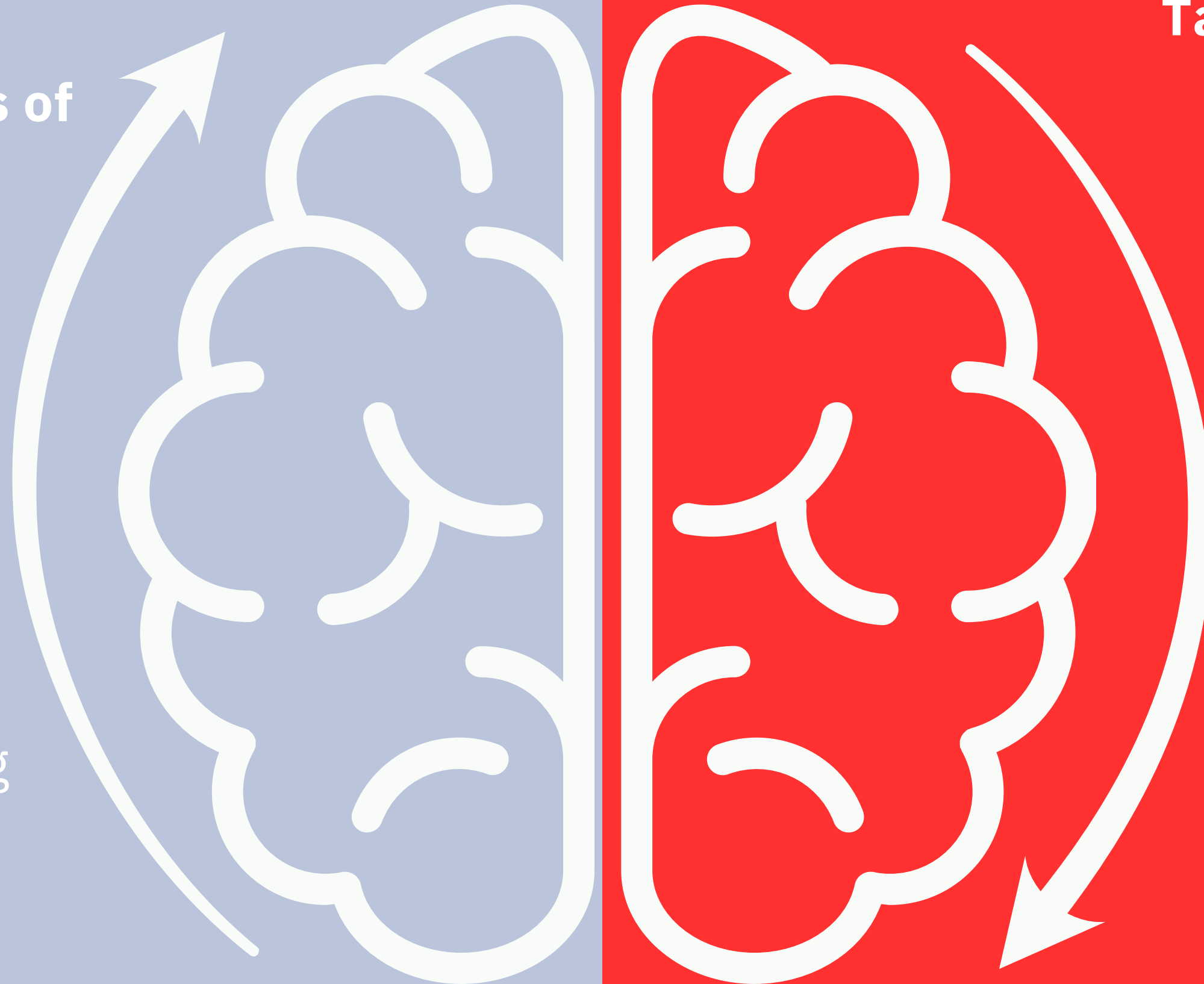


**Bottom Up  
OR  
Top Down?**

# Bottom Up vs. Top Down Nervous System Regulation

**Targets lower parts of  
the brain  
(BODY)**

Movement  
Co-Regulation  
Touch/Massage  
Breathwork  
Music/Sound  
Humming/Singing  
Food & Water  
Play



**Targets higher parts of  
the brain  
(MIND)**

Verbal Processing  
Gratitude  
Meditation  
Prayer  
Intention Setting  
Journaling  
Mindfulness  
Goal Setting  
Affirmations  
Talk Therapy



Case Scenario:

You are talking with a parent of a child with complex needs as a result of birth trauma.

The mom begins crying hysterically as she tells you the story of her daughter's birth.

What do you do?

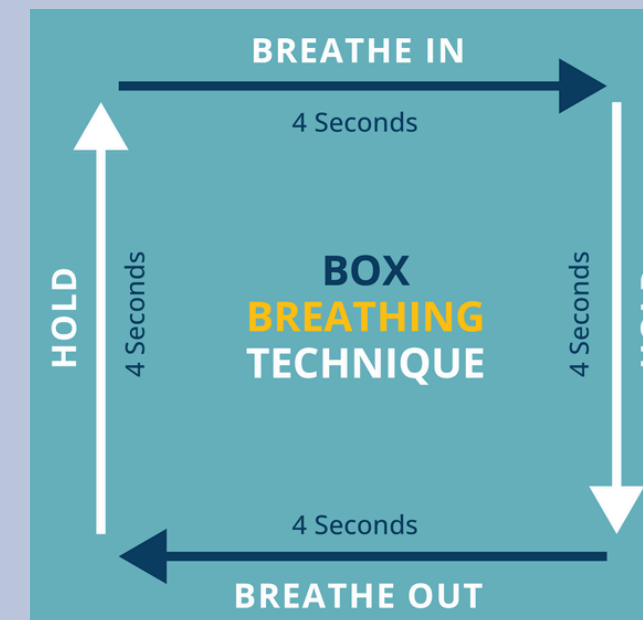


# Breathwork for Regulation

## 1. Slow Breathing:

Using less than 10 breaths per minute

## 2. Box (Tactical) Breathing:



## 3. Cyclic Sighing:

Double Inhale; Long Exhale

## 4. Alternate Nostril Breathing



## Bilateral Stimulation Techniques

1. Visual Eye Movements
2. Auditory Stimulation
3. Physical Movements
4. Tactile Stimulation



# Alpha-Stim and Touch Points



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Laboratory of Phototherapy and Innovative Technologies in Health, Nove de Julho University.

Retrieved from <https://openaccesspub.org/jbbs/article/1117>



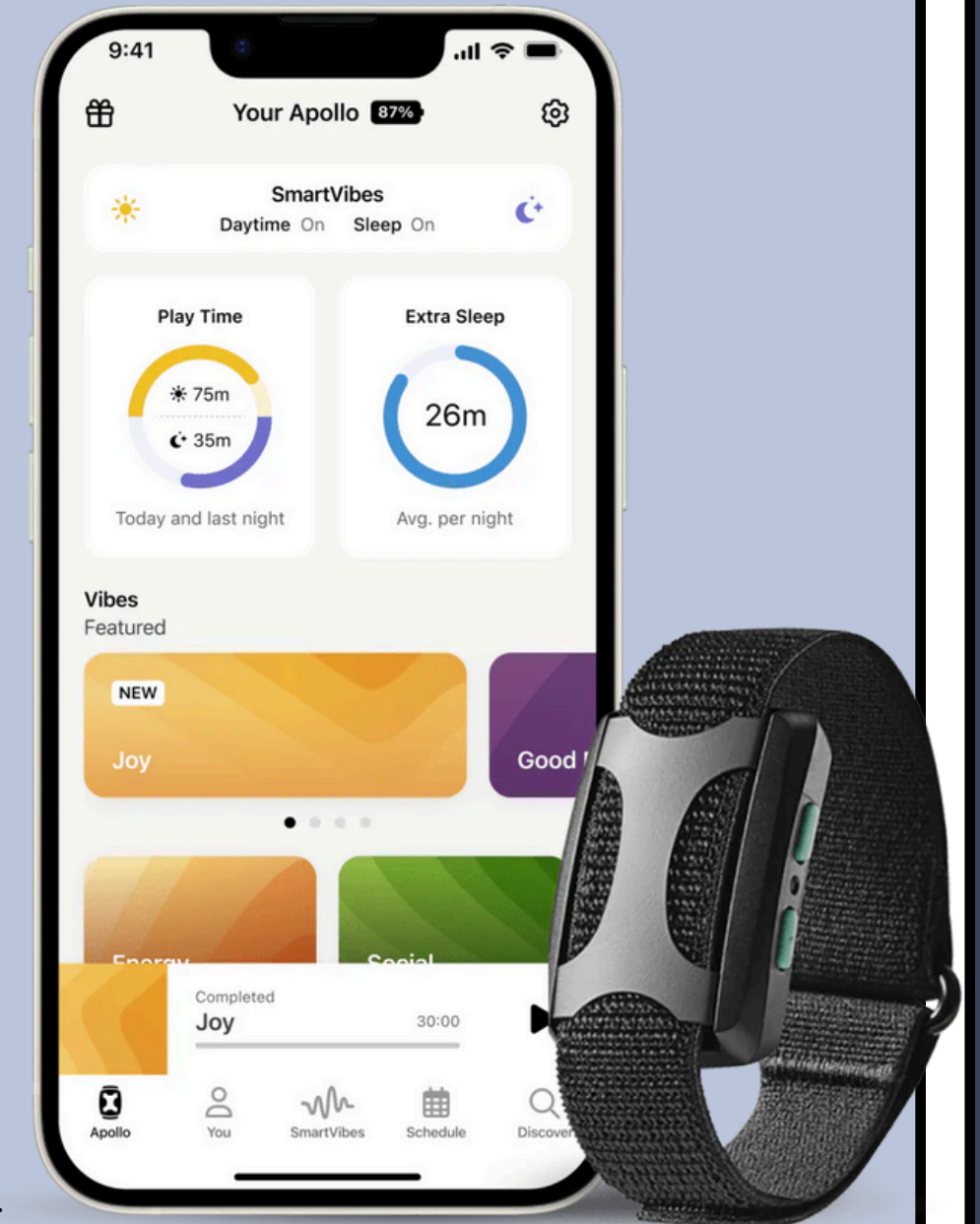
# Pulsetto and Apollo

Reduce stress & anxiety.  
Sleep soundly.

+47% Focus  
+27% Sleep  
-64% Stress & Anxiety  
+35% Mood

Here's what users reported after 15 sessions with Pulsetto.

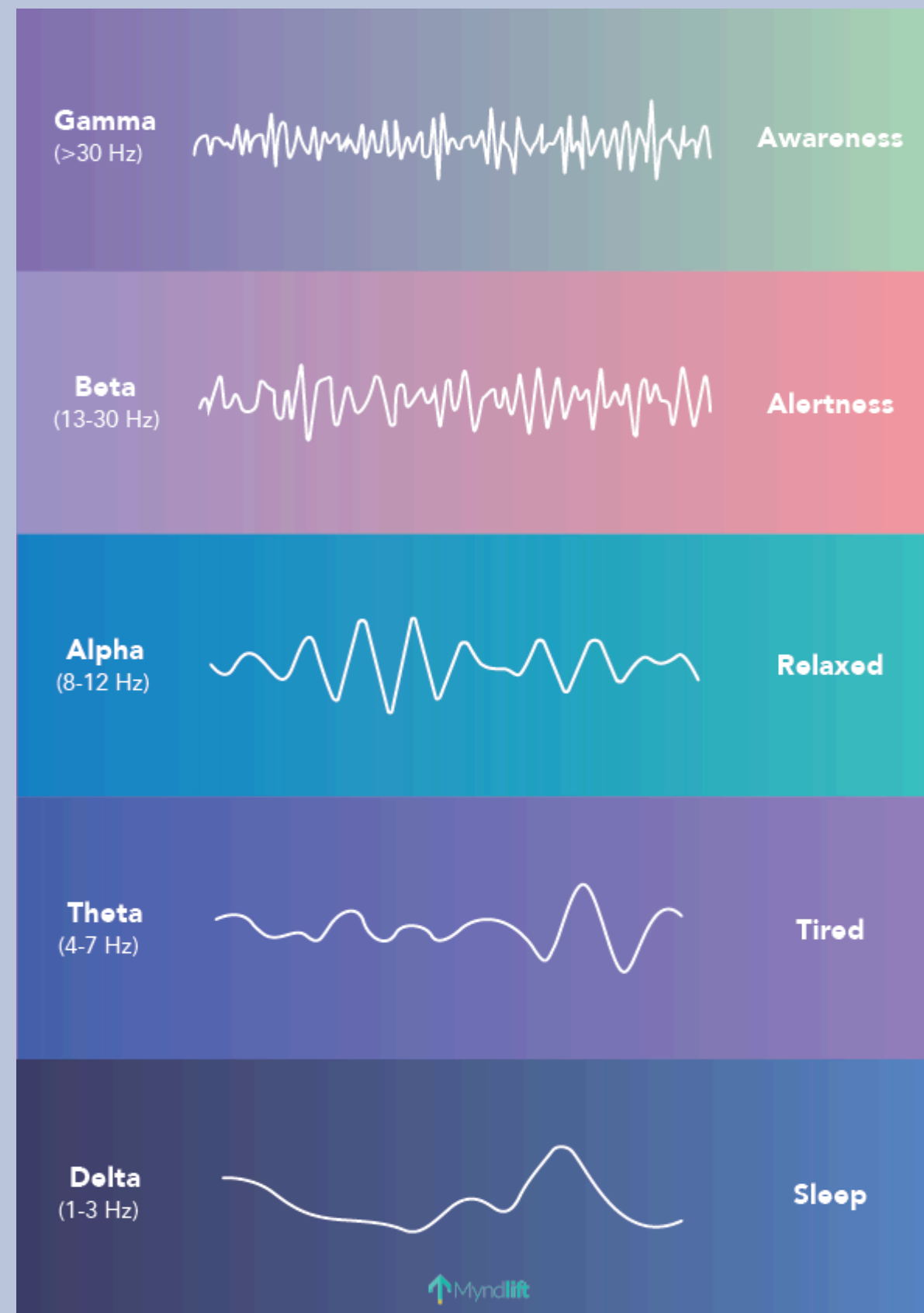
PULSETTO



Mouli, S., Palaniappan, R., Ollis, J., McLoughlin, I., Kanegaonkar, R., & Arora, S. (n.d.). Tragus based vagus nerve stimulation for stress reduction\*. Retrieved from [https://drive.google.com/file/d/1e6hBCOdJm2w\\_HWNT-Xk6lEGdB9GhozgF/view?pli=1](https://drive.google.com/file/d/1e6hBCOdJm2w_HWNT-Xk6lEGdB9GhozgF/view?pli=1) through <https://pulsetto.tech/pages/science>

Apollo Neuroscience, Inc. (2024). Peer-reviewed clinical study proven to improve HRV. Retrieved from <https://apolloneuro.com/blogs/news/peer-reviewed-clinical-study-proven-to-improve-hrv>

# Myndlift Neurofeedback





## Role Play!

3 volunteers: Parent, Child, EI Provider

Scenario: You arrive to a home visit.

Before entering, you can hear raised voices. Upon entry, you observe that the child is demonstrating disruptive behaviors and the parent is yelling with face flushed, shallow breathing and aggressive behavior.

What do you do?



## **Review:**

**3 parts to the autonomic nervous system:**

- 1. Sympathetic**
- 2. Parasympathetic**
- 3. Enteric**

**Stress Responses: Fight, Flight, Freeze,  
Fawn, Friend, Flop**

**Window of Tolerance**

**Regulated vs Dysregulated**

**Self-Regulation vs Co-Regulation**

**Tools for Regulation**

# Take-Aways?



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Rank It...



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# Questions??



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# Additional Resources

<https://www.liferenewalcounseling.org/resources.html>

[www.acceleratedresolutiontherapy.com](http://www.acceleratedresolutiontherapy.com)

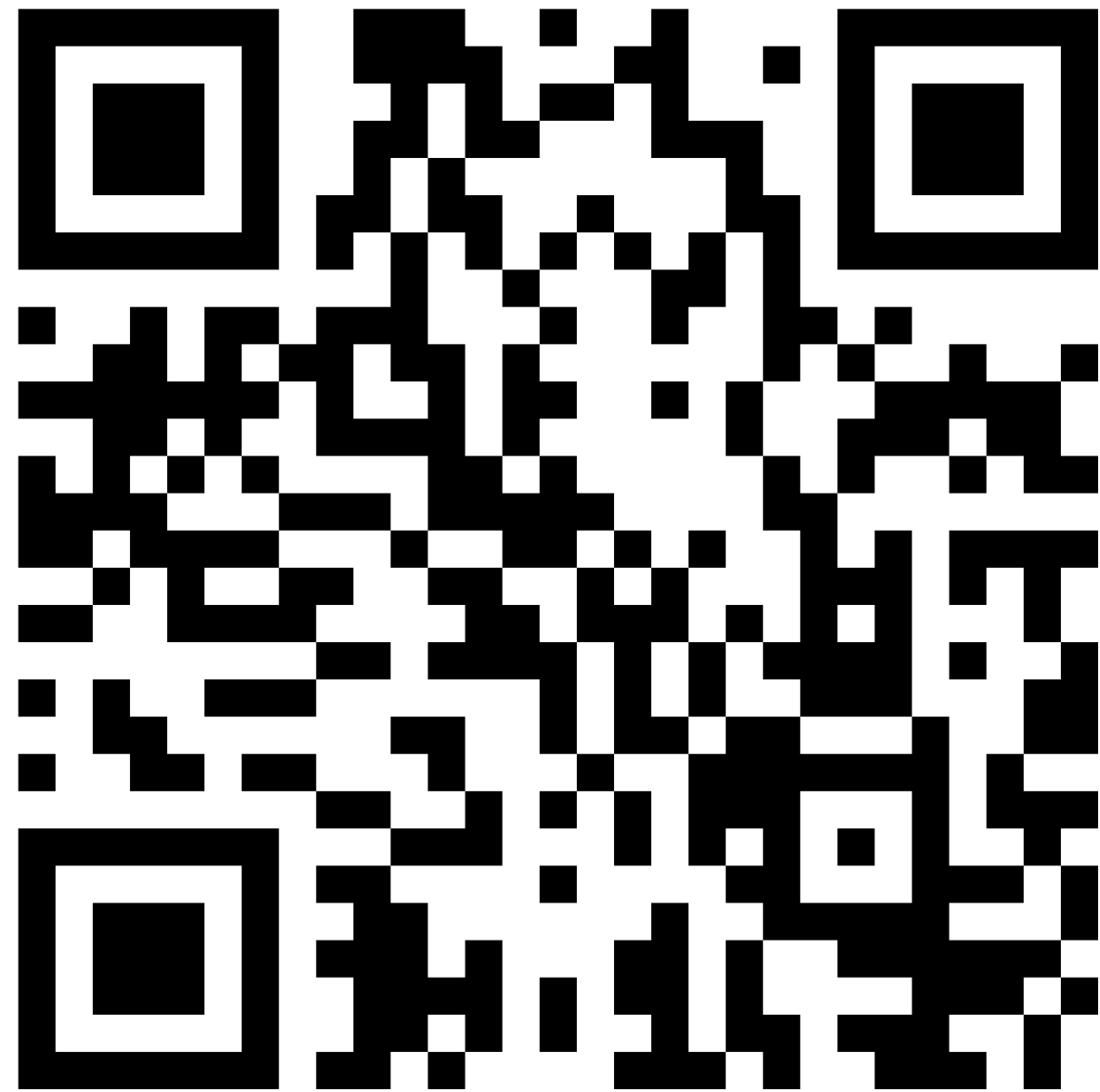
<https://veteransyogaproject.org/practice/>

<https://www.usf.edu/cbcs/mhlp/research/triad.aspx>



# Tell Us How We Did...

Yeah, it's the dreaded course evaluation...haha



<https://forms.gle/2EtAYQNJp8d23zxR6>



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