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# TREATING THE CAUSE, NOT JUST THE SYMPTOMS OF TRAUMATIC STRESS

Focusing on the Nervous System

# **A LITTLE ABOUT THE NERVOUS SYSTEM**

**OUR BODIES FUNDAMENTAL GAS AND BREAK  
SYSTEM**

# AUTONOMIC NERVOUS SYSTEM

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- ✗ Made up of two branches
  - + Sympathetic
  - + Parasympathetic
- ✗ “Survival over all else”



# SYMPATHETIC BRANCH

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- ✗ Sympathetic branch
  - + Pathway that prepares us for action
  - + Responds to cues of danger
  - + Triggers the release of adrenaline
    - ✗ Provides the “gas” for our system
  - + Prepares us for fight or flight
  - + May be experienced as “anxiety” or “agitation”
  - + May experience the world as overwhelming and/or chaotic

# PARASYMPATHETIC BRANCH

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## ✕ Parasympathetic branch

- + “Rest and Digest”
- + In charge when all is well and we feel safe and settled
- + Allows us to rest, relax
- + Promotes digestion and metabolism

This is the “brake” of our system

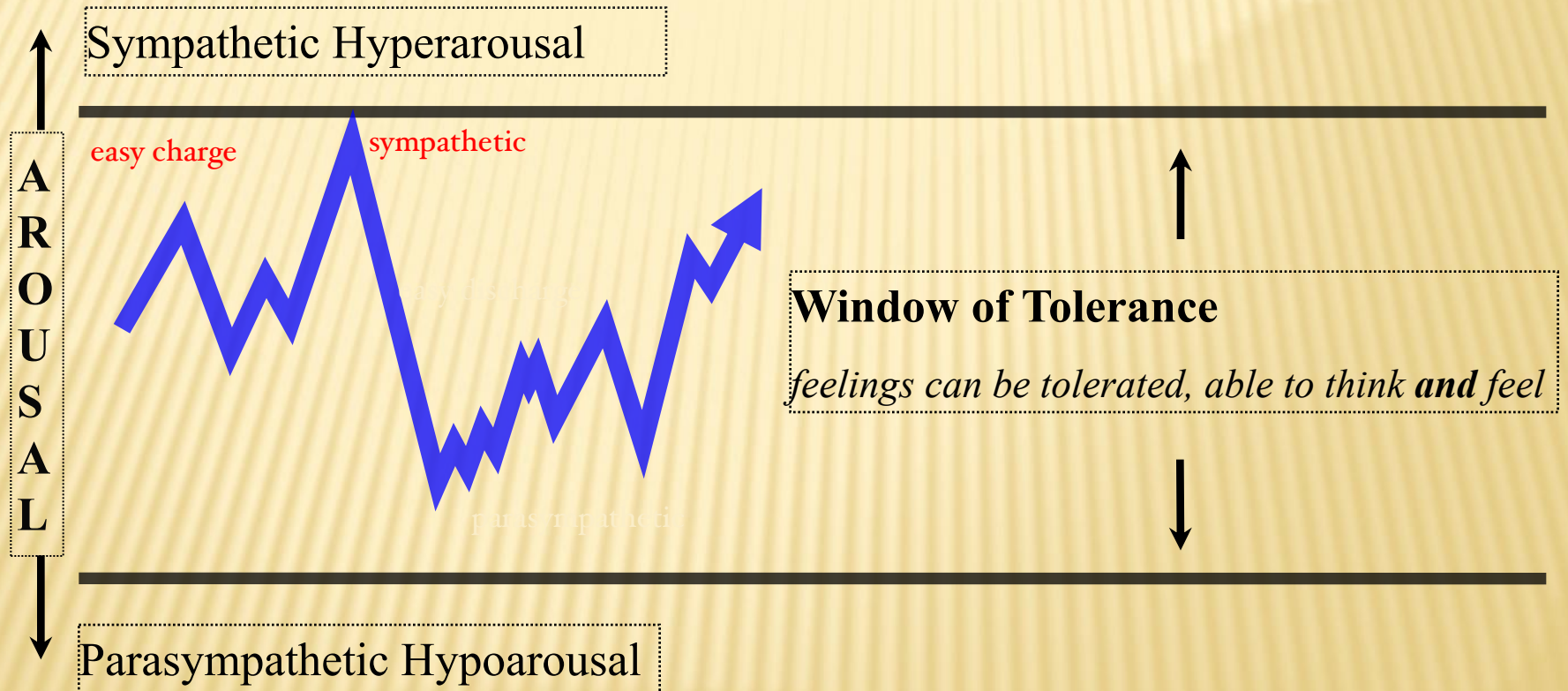
# AUTONOMIC NERVOUS SYSTEM

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- + Works almost exclusively out of our awareness
  - × Except for breath
- + Goal #1 – to survive
- + Goal #2 – help the body to deal with stress efficiently and run smoothly



# Autonomic Arousal is Designed to Adapt to **Brief** Environmental Demands



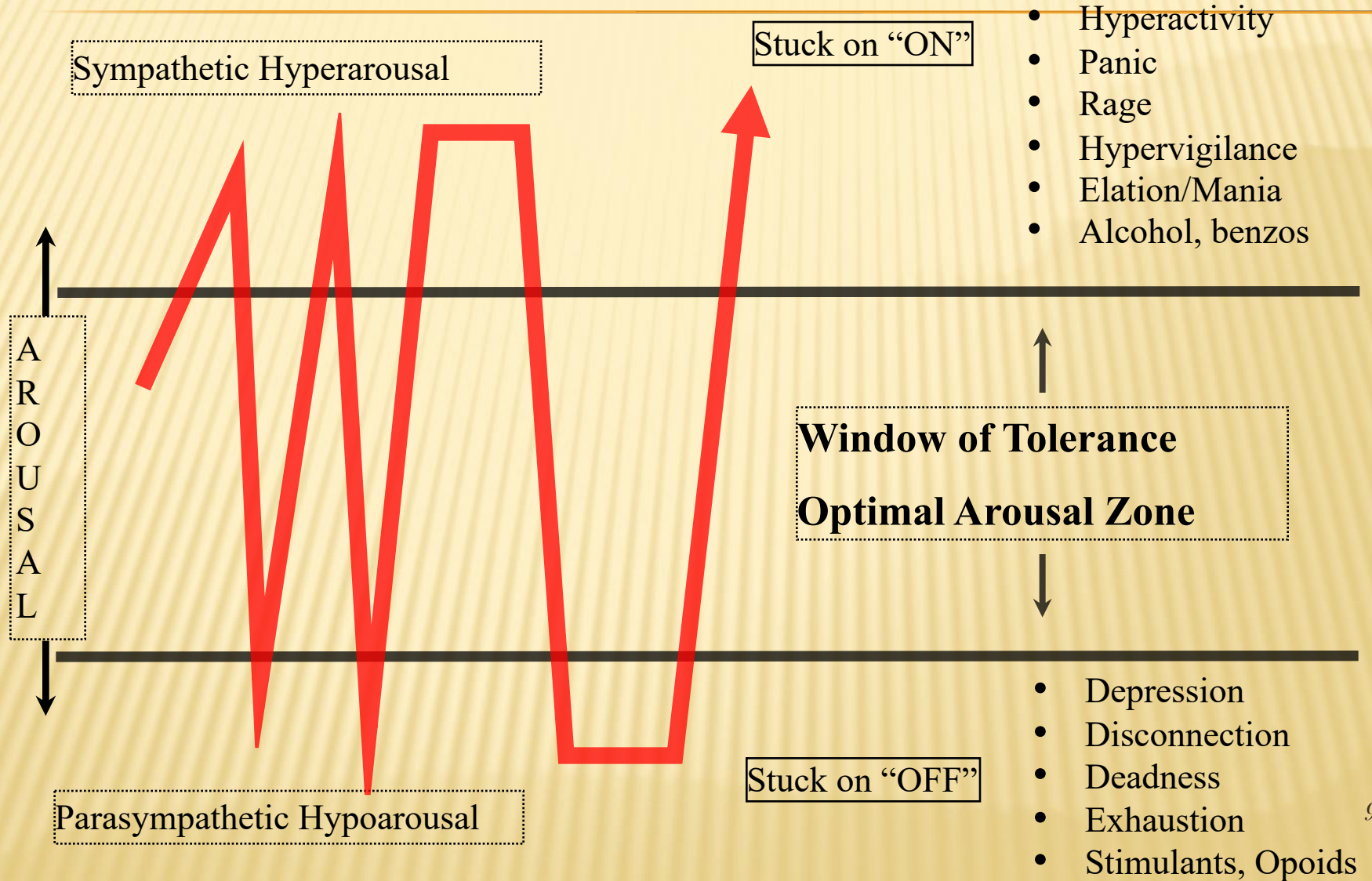
# STRESS IMPACTS US PHYSIOLOGICALLY

- ✖ The physiological impact is supposed to be very short term
  - + To get us out of the situation (f/f)
  - + And then very quickly return to baseline

What if stress is ongoing or unrelenting?



# Autonomic Adaptation to a Threatening World



## LIVING EXPERIENCES

- ✖ Anxiety
- ✖ Panic attacks
- ✖ Anger
- ✖ Inability to focus
- ✖ Difficulty with follow through
- ✖ Distress in relationships

## HEALTH

- ✖ Heart disease
- ✖ High blood pressure
- ✖ High cholesterol
- ✖ Sleep problems
- ✖ Weight gain
- ✖ Memory issues
- ✖ Headaches
- ✖ Chronic neck, back and shoulder tension
- ✖ Stomach problems
- ✖ Compromised immune system

# SYMPATHETIC STATE

# DORSAL VAGAL STATE

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- ✗ Part of the parasympathetic branch
- ✗ When all else doesn't work, the “primitive vagus” takes us into shutdown, collapse and disassociation
- ✗ Self description might be alone, foggy, hopeless, too tired to think and act, feeling as if the world is dark.
- ✗ Mind and body has moved into conservation mode – appropriate when we are under life threat, but extremely detrimental when long term



## LIVING EXPERIENCES

- ✗ Disassociation
- ✗ Memory problems
- ✗ Depression
- ✗ Isolation
- ✗ No energy

## HEALTH

- ✗ Chronic fatigue
- ✗ Fibromyalgia
- ✗ Type 2 diabetes
- ✗ Stomach problems
- ✗ Weight gain
- ✗ Low blood pressure

# DORSAL VAGAL STATE

# STRESS IMPACTS US PHYSIOLOGICALLY

- ✗ If the stress is ongoing
  - + Creates the need for “management strategies” to reduce the distress
    - ✗ Addictions
  - + Long term it results in wear and tear on the body
    - ✗ Autoimmune disorders, cancer, heart disease, “strange” symptoms

# IN THE CASE OF TRAUMA

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- ✘ Too much, too fast, too long
- ✘ Without the opportunity to stop and feel the overwhelm and feel it discharge (shaking, crying) along with support (hand on the shoulder, calming words)
- ✘ LOTS of energy – without the above opportunity – it gets stuck, the body shuts it down.



# TYPES OF TRAUMA

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## × 1. Acute

- + Results from a single event – overwhelms the person's ability to cope or threatens their life.

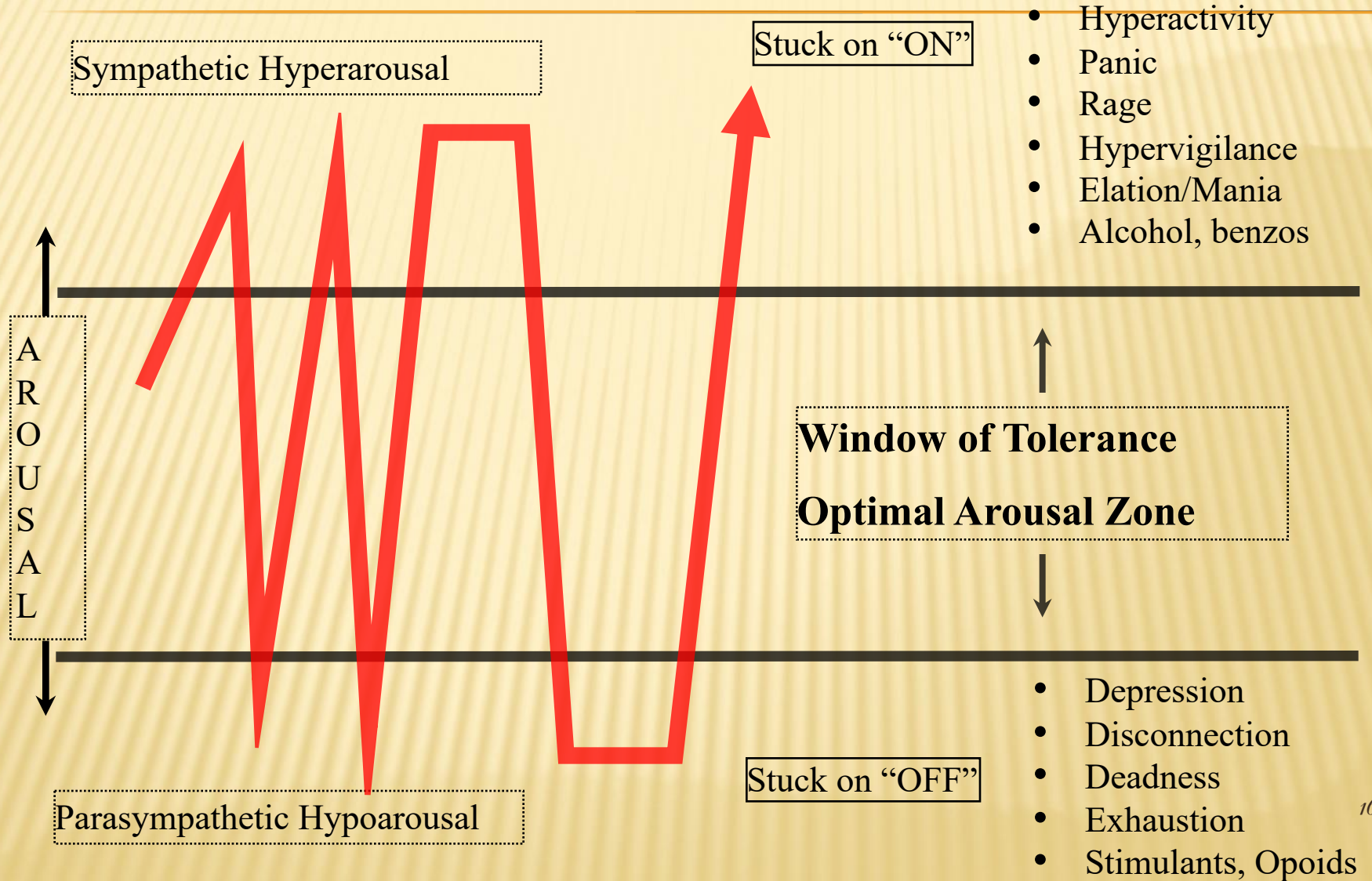
## × 2. Chronic

- + Multiple, ongoing distressing events that occur over a long period of time

## × 3. Complex

- + Exposure to varied and multiple traumatic events that occur within the context of relationships

# Autonomic Adaptation to a Threatening World



# SO – WHAT CAN BE DONE?





Cognitive	Somatic
Focus on thoughts	Focus on sensations and they body and how they influence thoughts, emotions and behaviors
Influence thoughts, emotions and behaviors	Allow sensations which then impact thoughts, emotions and behaviors
Help identify distorted cognitive maladaptive beliefs	Help increase awareness of sensations and procedural memories
Target symptoms	Target regulation to balance dysregulation
Help create more adaptive beliefs and behaviors	Help create greater control over unconscious dynamics that are creating symptoms
Rely on insight and behavioral change	Insight comes through the back door as the body shifts.

# “FELT SENSE”

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- ✗ The felt sense is an awareness of one's ever-changing sensations, energies and emotions as they occur in the body.
- ✗ Interoception – mindful body awareness
- ✗ Often a reflection of what is happening in the nervous system at the moment.
- ✗ Most of the time it is completely out of our awareness
- ✗ Until it “grabs” our attention (panic attack?)

# GOAL: STRESS RESILIENCE

- ✖ **1** : the capability of a strained body to recover its size and shape after deformation caused especially by compressive stress
- ✖ **2** : an ability to recover from or adjust easily to misfortune or change





# LEAD WITH THE BODY

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- ✘ Because stress and trauma are physiological experiences
- ✘ Our stress interventions must be physiological as well

# RESILIENCE AND TRAUMATIC STRESS

- ✗ Resilience is all about the nervous system
  - + Best case scenario is to have a nervous system that stays within a healthy range of arousal and settling without getting stuck in over or under-activation
  - + Our job is to teach ourselves how to notice when we are outside our window and develop tools to bring ourselves back in.
  - + *This happens on a sensory level. It is not a cognitive process.*

# THE LANGUAGE OF THE NERVOUS SYSTEM





# NERVOUS SYSTEM INTERVENTION

Starts with learning the language of sensations

Sensations are internal body experiences that can be described with words

“Butterflies in my stomach”

“ Tightening in my chest”

“ Shoulders feel like they are dropping”

“Cold in my core”

# SENSATION WORDS

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- × Open
- × Firm
- × Jittery
- × Expansive
- × Loose
- × Warm
- × Hollow
- × Settled
- × Cool

- × Tight
- × Dense
- × Tender
- × Light
- × Constricted
- × Tight
- × Hot
- × Light
- × Flowing

# SENSATIONS

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- ✖ Sensations come from the oldest part of our brain – the reptilian brain – which causes automatic responses before we can even think
- ✖ “Gut feeling”



# WHERE DO SENSATIONS ORIGINATE?

- ✖ Stephen Porges created the word **neuroception** to describe how the nervous system scans for cues of safety, danger and life threat.
  - + This scanning is constant
  - + It happens out of our awareness AND out of our control
  - + It happens very quickly
  - + It is our gut sense
  - + It is impacted by experiences

# WHERE DO SENSATIONS ORIGINATE?

## × Neuroception

- + The problem is that we often ignore sensations that are communicated by the neuroceptive process
  - × Which takes a toll later – poor sleep, drinking, other addictions
- + OR we overreact to them
  - × Panic attacks
  - × Hypervigilance
  - × Excessive worrying









**INTERVENTION**

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# KEY CONCEPTS OF INCORPORATING SOMATICS IN YOUR WORK

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- ✗ Caveat – What follows is reasonable and safe to do with most everyone.
- ✗ BUT – seek out supervision or oversight if you want to do more than the basics I am going to cover.



# INTERVENTIONS

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- ✖ Two possible ways to intervene:
  - + 1. Teach the nervous system to gently come down when it goes up.
  - + 2. Teach the nervous system that the world is safe.
  - + Both of these are accomplished by working with sensations.

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Teach the nervous system to gently  
come down when it goes up.

# SO HOW DO YOU WORK WITH SENSATIONS?

- ✗ Practice identifying sensations when:
  1. Things are good (a lot!)
  2. Things are slightly stressful (frequently)
  3. After a stressful event has resolved (for longer than you think necessary)





# TREATING THE NERVOUS SYSTEM

#1. It starts when things are good.

Paying attention to when we are **NOT** stressed.

We have a bias for noticing things that are wrong  
that is often what is reinforced to our brain – “danger”

We **HAVE** to bring more awareness to feelings of calm, safe, connected.

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# Practice



# THIS BUILDS RESILIENCE

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- ✖ When things are good –
  - + Notice how that feels in your body
  - + Gut, extremities, chest
  - + What is it like when they are “Ok” or “neutral” or even “pleasant”?
  - + Let it sink in
  - + Do this A LOT
  - + Communicates a pattern of safety, calm to your nervous system

# DEVELOPING A FELT SENSE OF SAFETY

- ✖ Focus on pleasant experiences and sensations
  - + Sometimes for a VERY long time
  - + Pleasant/unpleasant is out of balance
  - + Hypervigilance affects both
- ✖ Enter the body through pleasant sensations
  - + What happens in your body when you hold that blanket?
  - + Use sensory things – find what they like – then

# SAFETY, SAFETY, SAFETY

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- ✖ Develop interoception – mindful body awareness – that is grounded in pleasant or neutral sensations
  - + First – you practice; then teach
- ✖ Resourcing – taking in pleasant sensations – let them sink in just a little
- ✖ Use weight, sensory toys, color, pleasant pictures



# WHAT IS NOT SAFETY?

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- ✗ Retelling the story
- ✗ De-emphasize telling the story of the trauma
  - + Unless there appears to be relief from the telling (usually happens the first time)
- ✗ Repeating the story creates the same nervous system response (overwhelm and/or shutdown) as the original trauma, and is thus retraumatizing.



# FINDING RESILIENCE IN A STRESS EVENT

#2. Intervene for yourself when you first notice any signs of stress

Noticing sensations when things are good helps you to notice when things become slightly activated

So start noticing those

Do your fists clench, your jaw get tight, your stomach churn, your breath become faster, your chest tighten?



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# Practice

# FINDING RESILIENCE IN A STRESS EVENT

- ✖ When you notice a moderate stress response
- ✖ Notice those sensations
- ✖ Then notice areas that are slightly less....”And I also notice....”
- ✖ Stay with this until you feel more settled, deep breath, yawn

# FINDING RESILIENCE IN A STRESS EVENT

✕ Other techniques that can bring calm to your body:

- + Find something pleasant or orderly to look at.
- + Notice your feet
- + Soft gaze
- + Lower jaw

Then return to finding pleasant or neutral sensations



# TO HELP WITH THIS

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- ✖ Have things in your office that are pleasing – pictures of pets, children or grandchildren, pictures from vacations, mementos that have a positive feeling associated with them

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# CONNECTING BACK TO RESILIENCE

- ✖ Finally, Our nervous system needs to know when a stressful event is over
- ✖ Otherwise it may (will) hold onto activation
- ✖ Need to reset back to a settled state



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# Practice

# CONNECTING BACK TO RESILIENCE

- ✖ Check in with what sensations are present
- ✖ If there is activation or discomfort, find where there is less
- ✖ In your mind or out loud tell yourself “That’s over. I survived that”
- ✖ Watch the less activated sensations as you say that
- ✖ Let them sink in

# CONNECTING BACK TO RESILIENCE

- ✖ If you are anticipating a stressful event (like a 90 minute presentation)
- ✖ Imagine how it will feel when it is over – what will you do? How will it feel?
- ✖ Put yourself to sleep at night with this image and the sensations that go with it.



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Teach the nervous system that the  
world is safe.

# BUT WHAT IS SAFETY?

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- ✖ Our physical, felt sense of safety in the world is VERY dependent upon receiving cues of safety
  - NOT an absence of danger
- ✖ Cues of safety =
  - + Facial expressions
  - + Voice prosody
    - ✖ And to a lesser extent -
  - + Body movements

# NEUROCEPTION

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- ✖ Stephen Porges created the word neuroception to describe how the nervous system scans for cues of safety, danger and life threat.
  - + This scanning is constant
  - + It happens out of our awareness AND out of our control
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- ✗ If danger exists – that's what we look for – self defense
  - ✗ What we pay attention to - increases

# A WORD ABOUT BREATHING

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- ✗ “Take a deep breath” is often a suggestion to someone who is stressed
  - + However, breathing in actually increases activation slightly
  - + Breathing out decreases activation
  - + So – the advice should be:
  - + “Take a slow easy breath and then blow it out slowly for just slightly longer”

# ORIENTING

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- ✖ The process of taking in sensory information
  - + Sight, hearing, tactile
- ✖ Asking what sensation might be attached
- ✖ Pleasant/unpleasant or neutral?
- ✖ If pleasant or neutral, describe and track
  
- ✖ Things to use to orient – pictures of pets, weight
- ✖ How to use weight



# HEARING

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- ✗ A word about hearing
  - + Next class reading: #1 self care recommendation – Limit your exposure to auditory stimuli
  - + Sound signals safety vs danger
    - ✗ Mid range frequency
    - ✗ High frequency
    - ✗ Low frequency

# AUDITORY HYPERVIGILANCE

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- + Porges found that many mental health disorders had auditory sensitivity in common
- + Result of an over activated nervous system
- + Results in hearing that is more attuned to sounds of danger
- + Because the nervous system's main job is to protect from danger - hypervigilance

# MUSIC AND SAFETY

## ✗ Listen to mid frequency music often

- + Disney music
- + Classical music
- + **Male Gregorian Chant Music** - <https://www.youtube.com/watch?v=W-hrBhA4XkM>
- + **Bach: Unaccompanied Cello Suites (remastered)**
  - ✗ Available at Amazon, free (streaming) for prime members
- + **Arcangelo's Chamber Ensemble**
- + **"Music to De-Stress"** album (streaming through iTunes Apple Music) – First two songs in particular
  - ✗ also available at Amazon ("Music for Concentration"), Barnes and Noble ("Music for Inspiration") and iTunes
- + **Arcangelo Corelli** music (not by any particular artist and is orchestral)
  - ✗ Available through YouTube, Amazon Music, Spotify



# SAFE AND SOUND PROTOCOL

- ✘ Filtered vocal music played through headphones



- ✘ The music is specially filtered to work the middle ear muscles in order to help the ear deliver more accurate sound information (less low frequency and more human voice)

# 2019 RESULTS FOR SSP

## ✖ Adults

- ✖ 64% showed improvement in depression and 69% anxiety scores
- ✖ 72% improvement in trauma symptoms (100% at 3 months)

## ✖ Children

- ✖ 69% improvement in depression
- ✖ 64% improvement in anxiety
- ✖ 67% improvement in trauma symptoms
- ✖ 60% improvement in self regulation (75% at 3 months)
- ✖ 67% improved social skills (100% at 3 months)
- ✖ 75% improved behavioral skills (100% at 3 months)

# #1 TAKE HOME

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- ✖ Find activities, visuals, tactile things that are pleasant to you
- ✖ Practice noticing the sensations
- ✖ Then let them “sink in”
- ✖ Over and over and over



Practice, Practice, Practice

# **SOMATIC TOOLS**

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# NOTICING SENSATION

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- ✗ Become familiar with the language and feeling of sensation.
- ✗ Check in with yourself at random times – especially when you are with a pet, with a favorite blanket, looking at something of beauty
- ✗ What do I notice internally?
- ✗ Use the word list to help with describing.
- ✗ Is there a texture, color or shape to what I'm noticing?
- ✗ Is there movement?

# NOTICING SENSATION

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- ✖ It will happen that you notice unpleasant sensations
- ✖ The best thing to do is describe “it feels like a burning” and then find an area of your body that feels less burning – say 10% less.
- ✖ Stay with that for awhile – 60 seconds or so
- ✖ Then go back to the original sensation and notice what, if anything has changed (ns takes care of it)
- ✖ If nothing has changed – orient to pleasure



# TRACKING SENSATION

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- ✘ Later after some practice at noticing and naming you can practice tracking
- ✘ What happens if you name a pleasant or neutral sensation and then just watch it to see what happens?
- ✘ Does it shift or change or stay the same?
- ✘ Usually there is a shift towards MORE of something – more openness, expansion, warmth, etc.

# INTERVENTIONS AT HEARTSPACE CLINIC

- ✖ HeartMath – biofeedback that teaches how to have an impact on Heart rate Variability
- ✖ Safe and Sound Protocol – auditory intervention that address auditory hypervigilance
- ✖ Essential Workers Project – 10 free nervous system regulation sessions (or can be used for traditional talk therapy)

# HEARTSPACE CLINIC

- ✘ Nonprofit whose mission is to educate and treat trauma and stress
- ✘ Offer individual, group trainings and practice sessions
- ✘ [www.heartspaceclinic.org](http://www.heartspaceclinic.org)
- ✘ Free or low cost interventions:
  - ✘ HeartMath and Safe and Sound
    - + For Boone County residents who are children or parents of minors
  - ✘ Nervous System Resilience Sessions
    - + For anyone in the medical, mental health or educational fields





# SUGGESTED READINGS

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- ✖ Trauma is Really Strange – Stephen Haines
- ✖ Anxiety is Really Strange – Stephen Haines
- ✖ Healing Trauma – Peter Levine
- ✖ Waking the Tiger – Peter Levine
- ✖ The Mind-Body Stress Reset – Rebekkah Ladyne