

Trauma-Informed Care: Understanding the Quality, Quantity, and Timing of Early Life Experiences

An Overview of Dr. Bruce Perry's Research

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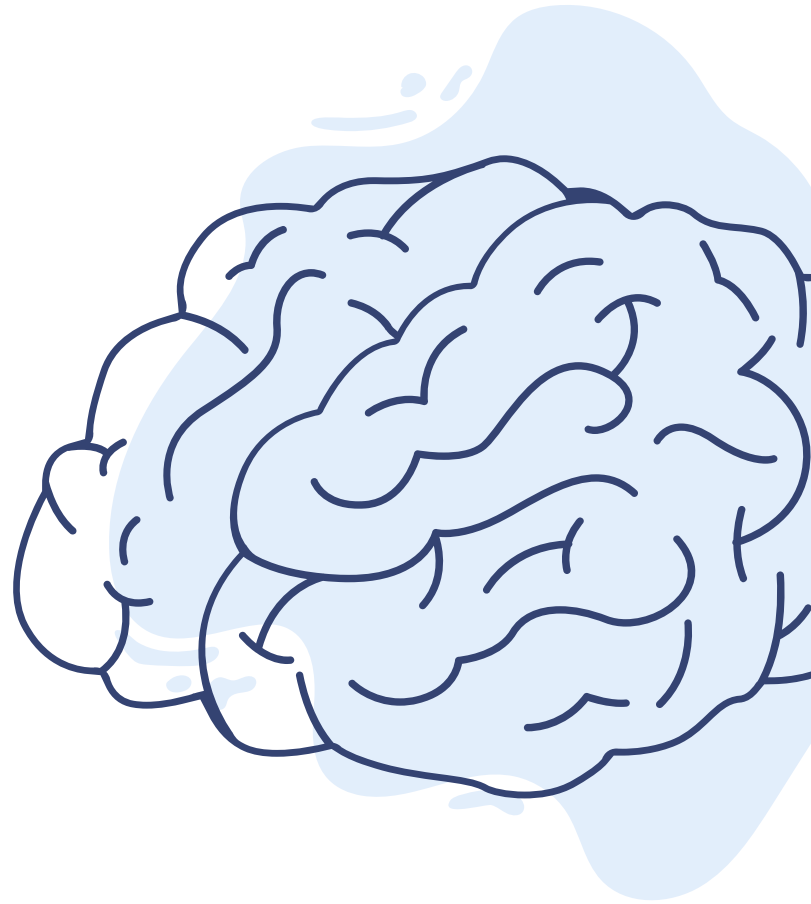
A movie poster for the film 'REMOVED'. The central image is a close-up of a young girl with long, light-colored hair. She has dark eye makeup around her eyes, which are a striking red color. Her expression is neutral and somewhat haunting. The background is a dark, textured grey. The word 'REMOVED' is printed in large, white, sans-serif capital letters across the middle of her face. Below the title, there are several award logos in white, including 'SBS', 'PINK', 'WORLD', 'CITY', and 'CITY'. At the bottom, there is a line of small, illegible text.

REMOVED



REMOVED is a production of the Australian Broadcasting Corporation. It is a production of the Australian Broadcasting Corporation. It is a production of the Australian Broadcasting Corporation. It is a production of the Australian Broadcasting Corporation. It is a production of the Australian Broadcasting Corporation.

Brain Break



ADVERSE CHILDHOOD EXPERIENCES INCLUDE:



ADVERSE CHILDHOOD EXPERIENCES HAVE BEEN LINKED TO:



Who is Dr. Perry?

- Bruce D. Perry, M.D., Ph. D. is a child psychiatrist, neuroscientist, and pioneer in childhood trauma research.
- Principal of the Neurosequential Network, senior fellow of The Child Trauma Academy and an adjunct professor of psychiatry at the Northwestern University in Chicago, IL.



Revised and Updated Edition

"Fascinating and upbeat...Dr. Perry is both a world-class creative scientist and a compassionate therapist."—Mary Pipher, PhD

THE BOY WHO WAS RAISED AS A DOG

*And Other Stories from a
Child Psychiatrist's Notebook*

What Traumatized Children
Can Teach Us About Loss,
Love, and Healing

BRUCE D. PERRY, MD, PhD,
and MAIA SZALAVITZ



why empathy is essential—
and endangered

BORN FOR LOVE

Maia Szalavitz

Bruce D. Perry, M.D., PH.D.

AUTHORS OF *The Boy Who Was Raised as a Dog*

"Empathy, and the ties that bind people into relationships, are key elements of happiness. *Born for Love* is truly fascinating."

—Gretchen Rubin, author of *The Happiness Project*

WHAT HAPPENED TO YOU?

CONVERSATIONS ON TRAUMA,
RESILIENCE, AND HEALING



BRUCE D. PERRY, MD, PhD
OPRAH WINFREY

THE BRAIN IS EXTREMELY COMPLICATED!!!

- “If everything there is to know about the brain is a mile, we’ve gone about two inches in our understanding of it.”-Dr. Perry
- The human brain is comprised of 80 to 100 billion neurons and ten times as many glial cells
 - Each neuron has anywhere from 200 to 2,000 synaptic connections
 - Each synapse fires at about 80 times per minute
 - The complexity goes beyond human comprehension



Human Biology: Born for Love

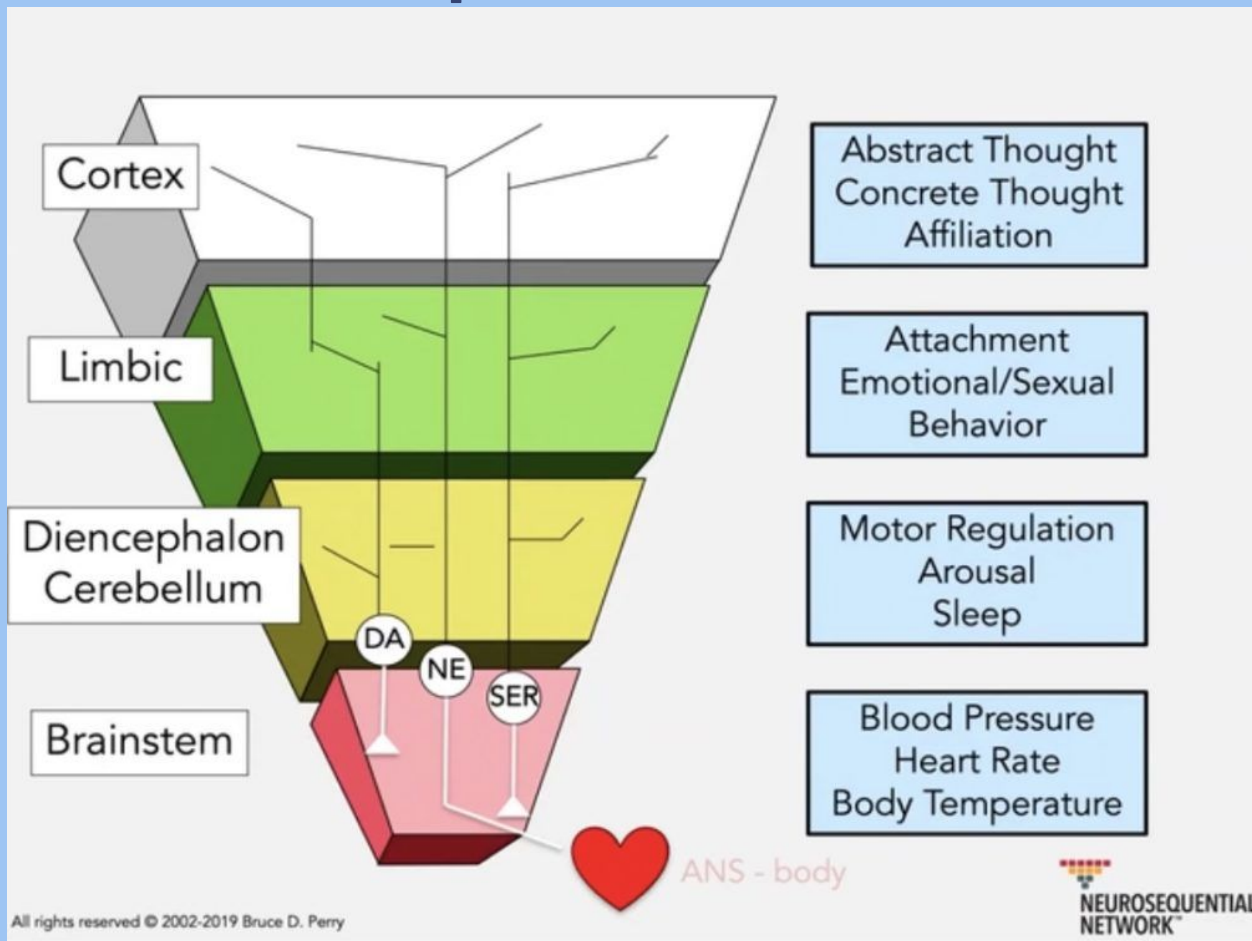
- For thousands of generations, we lived in multi-generational, multi-family groups with an average size of 40 individuals.

- The typical caregiver to child ratio was 4:1



- The average child now grows up in an environment where they get about 1/24th the relational interactions than the average child did 50,000 years ago.

The Neurosequential Model of the Brain



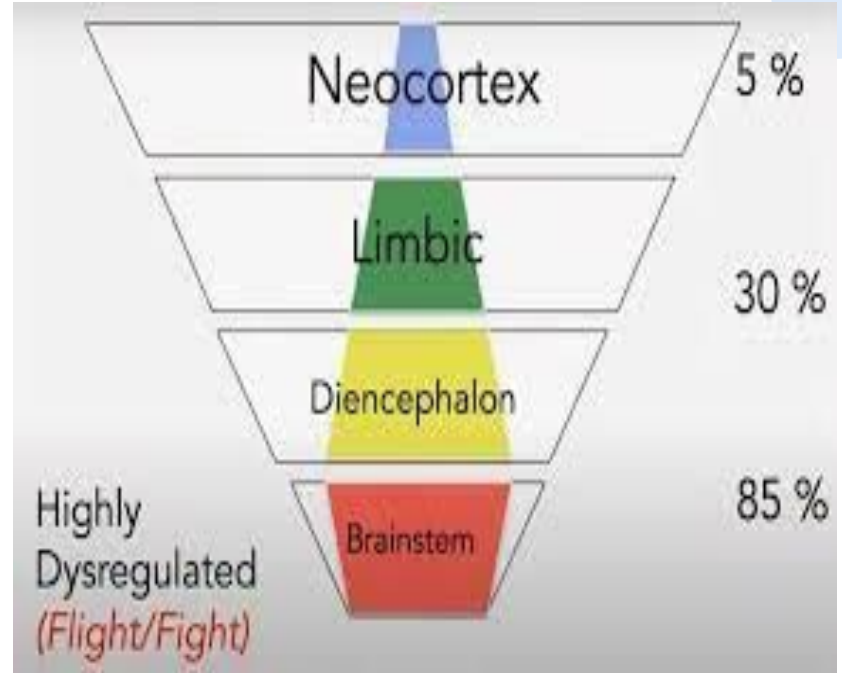
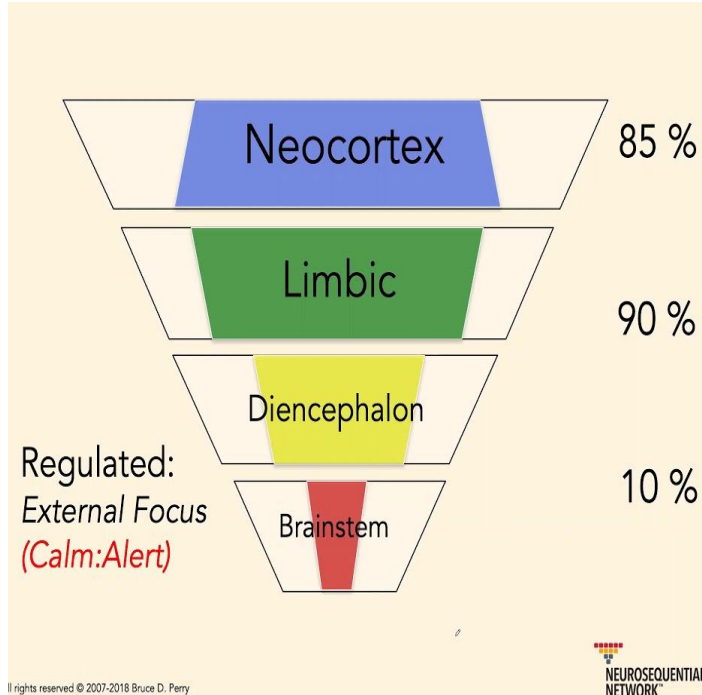
State Dependent Functioning

Flock, Freeze, Flight, Fight Continuum

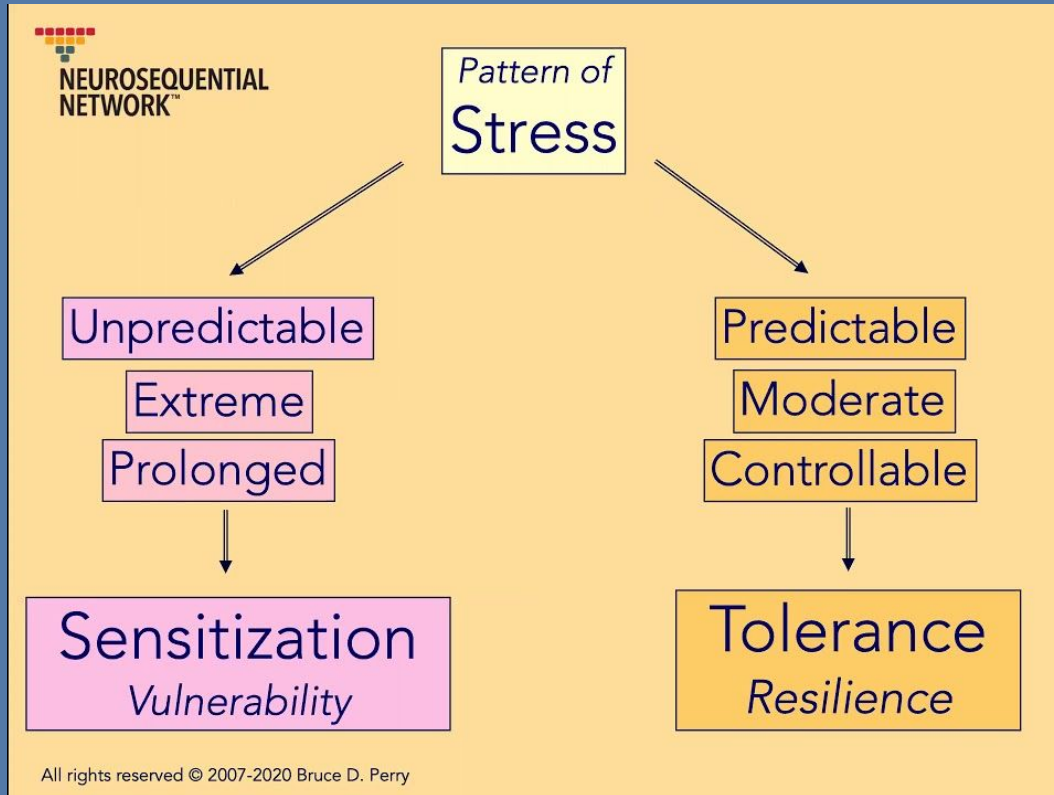
Traditional Fight/Flight	Reflect	Flock	Freeze	Flight	Fight
Primary <i>secondary</i> Brain Areas	NEOCORTEX <i>Subcortex</i>	SUBCORTEX <i>Limbic</i>	LIMBIC <i>Midbrain</i>	MIDBRAIN <i>Brainstem</i>	BRAINSTEM <i>Autonomic</i>
Cognition	Abstract	Concrete	Emotional	Reactive	Reflexive
Mental State	CALM	ALERT	ALARM	FEAR	TERROR



State Dependent Functioning

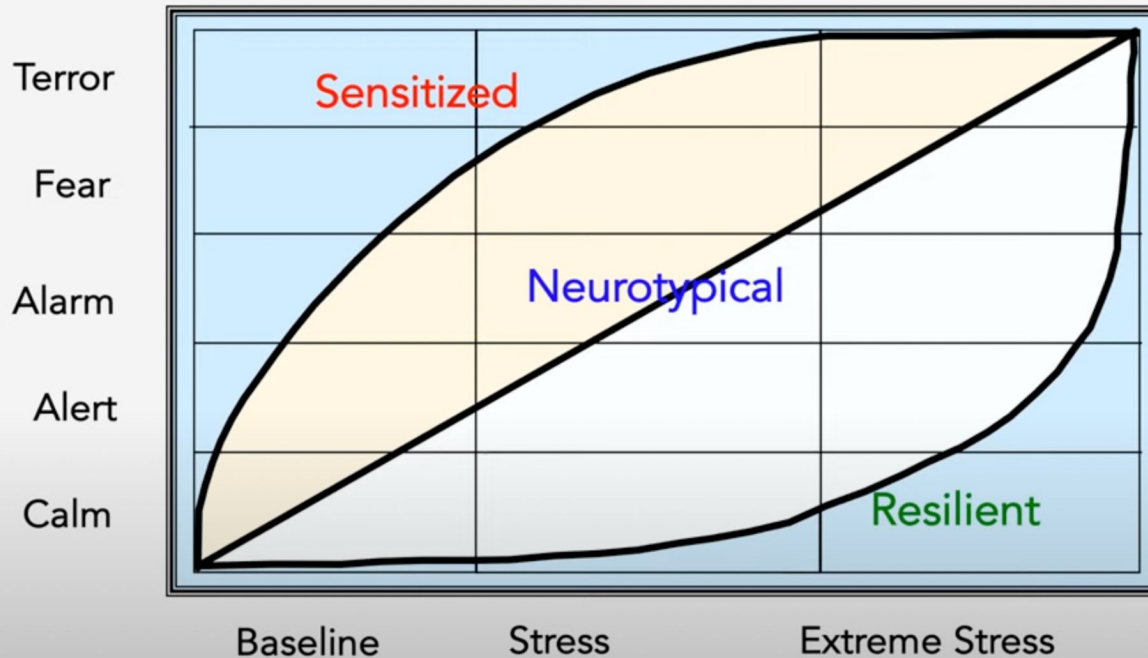


Stress and Brain Development



Stress and Brain Development

Differential "State" Reactivity
Arousal Dominant





Stress and Brain Development

- **Stress:** “A demand on one or more of our body’s many physiological systems.” -Dr. Perry
- Equilibrium
- Stress is essential for healthy development and building resilience.



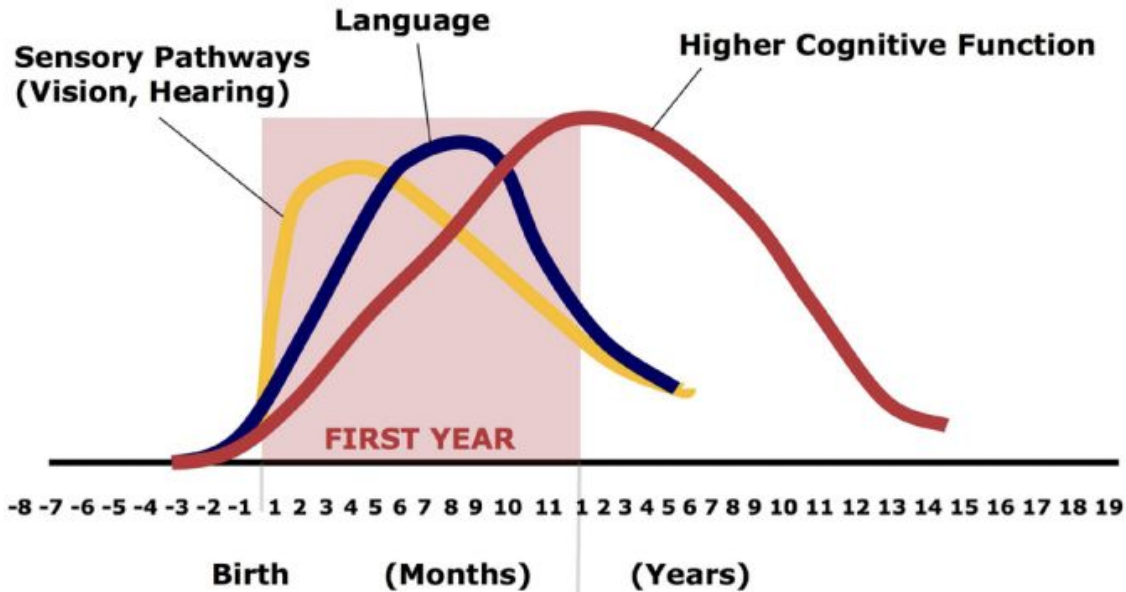
Neuroplasticity Decreases Over Time

- **Neuroplasticity:** the brain's ability to change as a result of experience.
- The rate of production of neurons decreases with age.
 - During the third trimester of pregnancy, an infant develops approximately 20,000 neurons per second. Adults typically develop 300 to 400 new neurons per day.
- The brain is about 85% developed by four years of age.



Human Brain Development

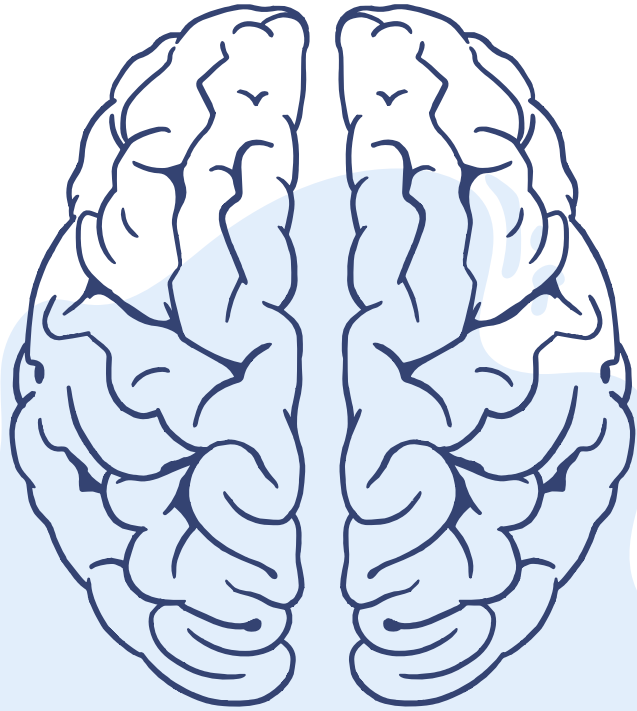
Neural Connections for Different Functions Develop Sequentially



Emotional Contagion

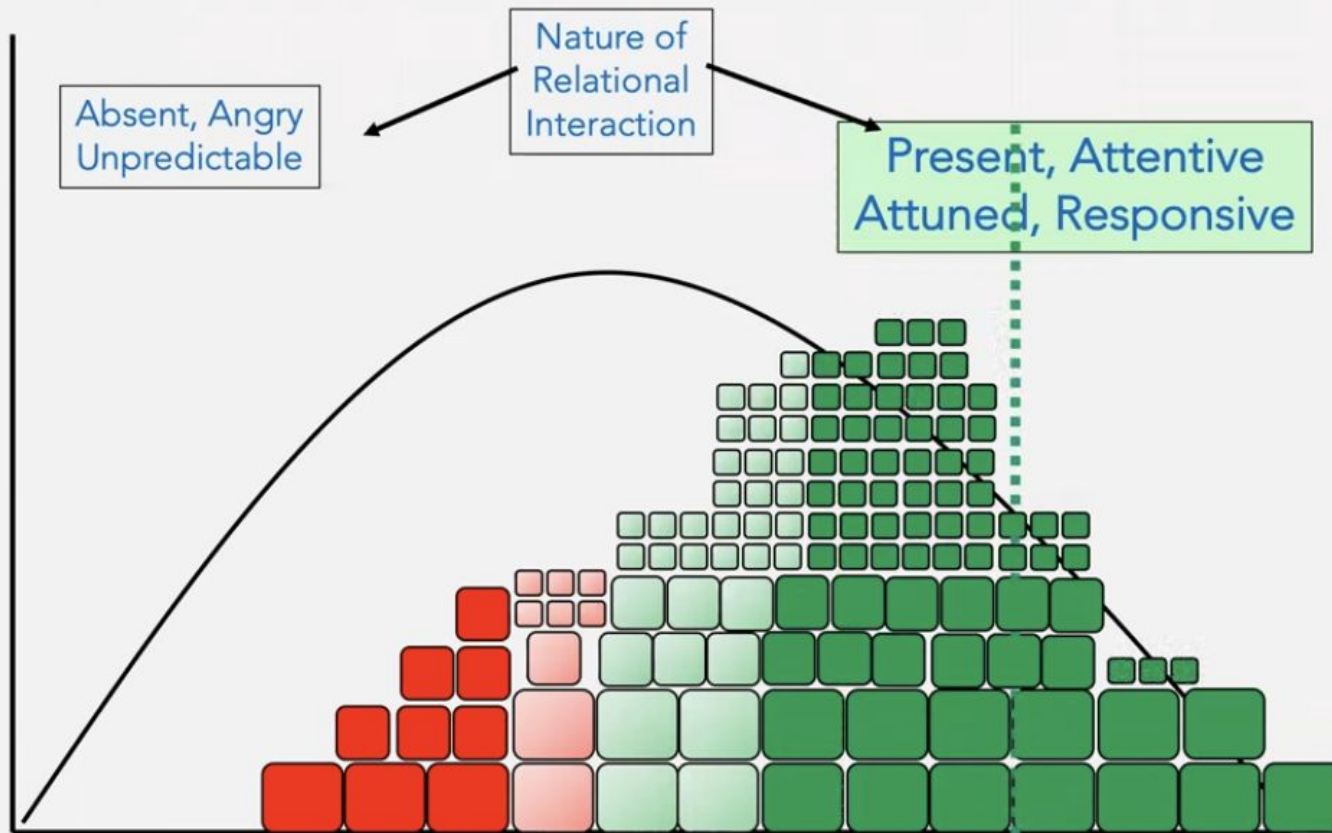
- We are “contagious” to the emotions and behaviors of those around us
 - Stress response and reward neural networks are intertwined with our relational connections and experiences
 - Our brain is constantly monitoring if we belong or if we are under threat
 - Implications of technology



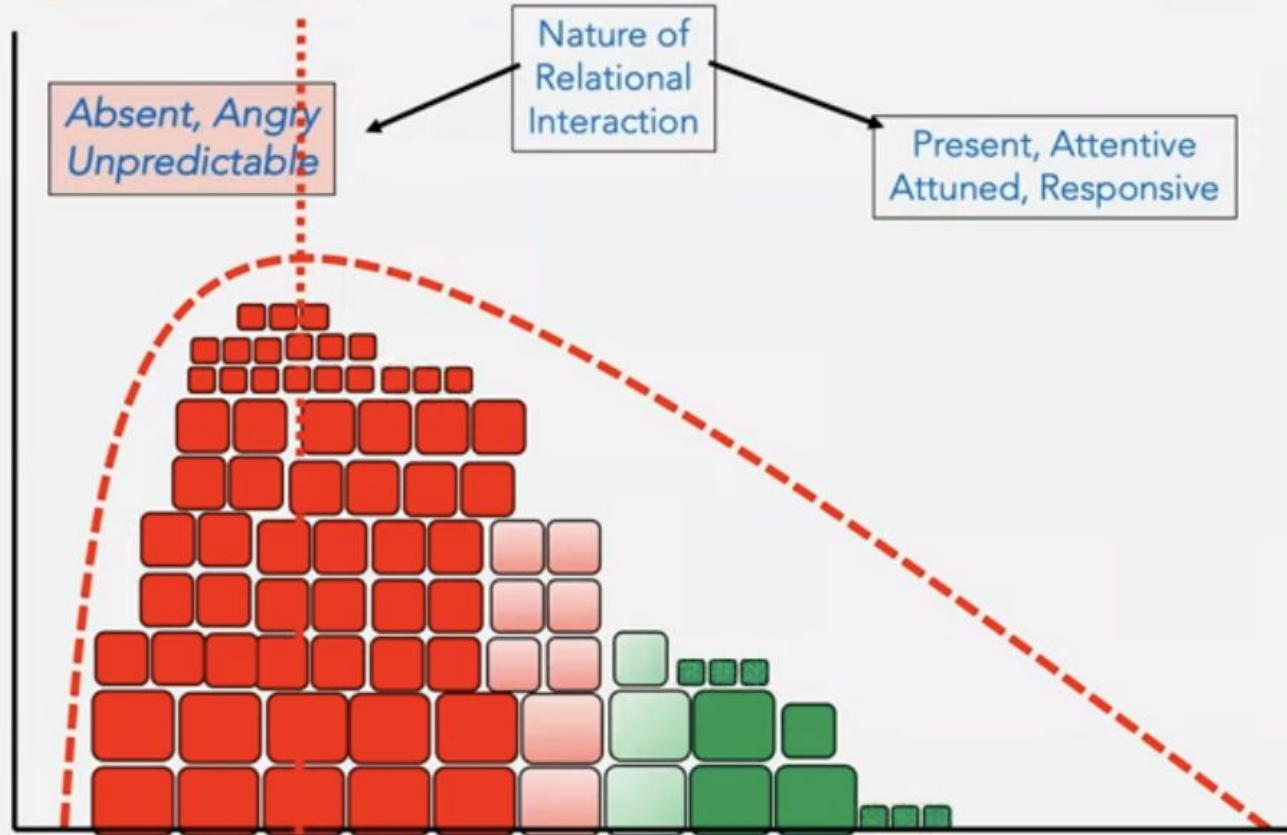


**The quantity, quality,
and timing of early
life relational
interactions
drastically impact an
individual's stress
response system.**

Early Relational Experiences Shape our Relational "Templates"

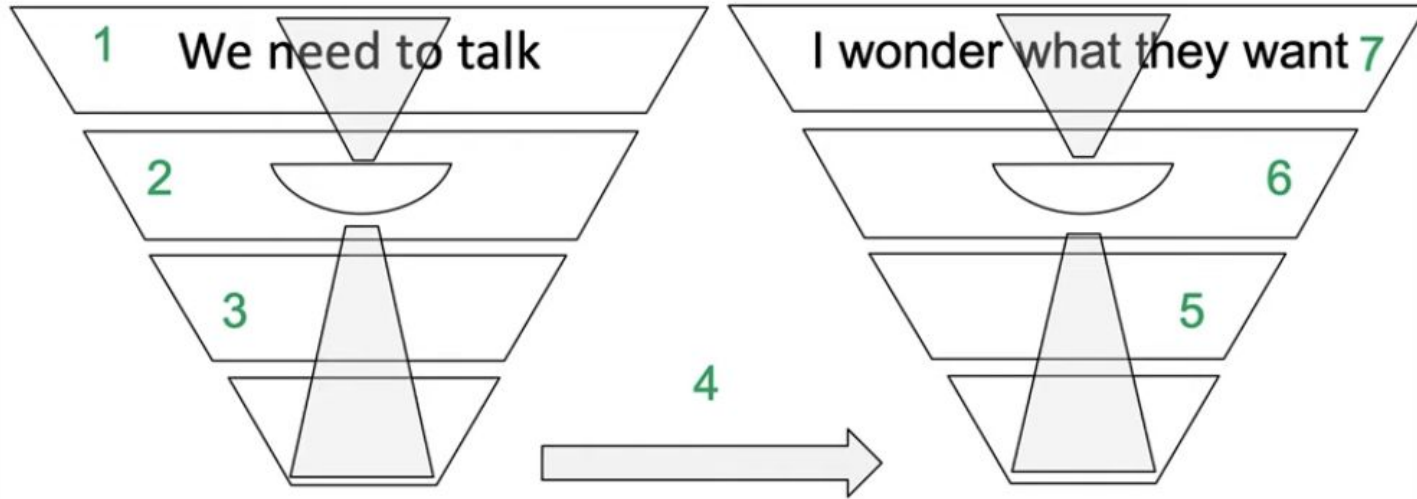


Early Relational Experiences Shape our Relational "Templates"



Complexities of Communication

From Cortex to Cortex



Facial
Expression

55%

Mehrabian, 1971



Tone of
Voice

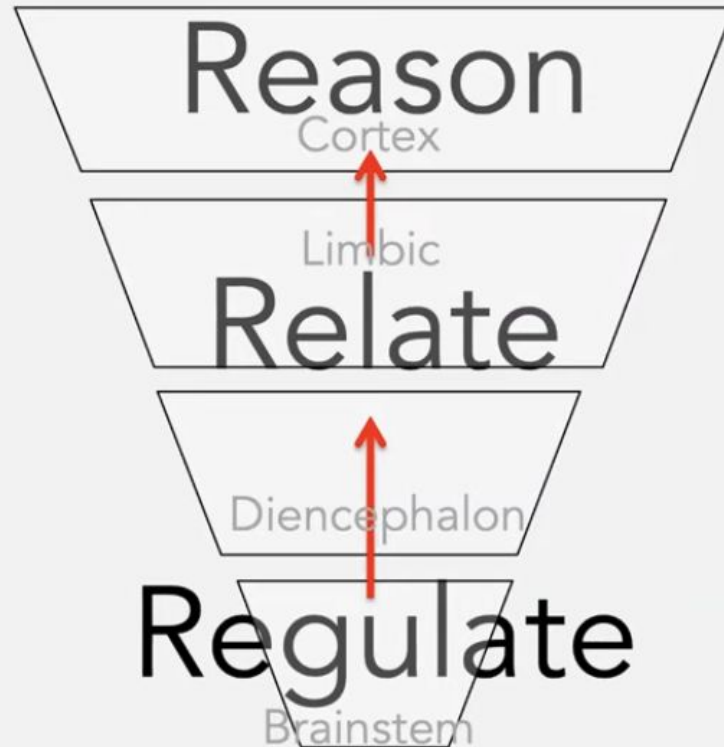
38%



Words

7%

Sequence of Engagement

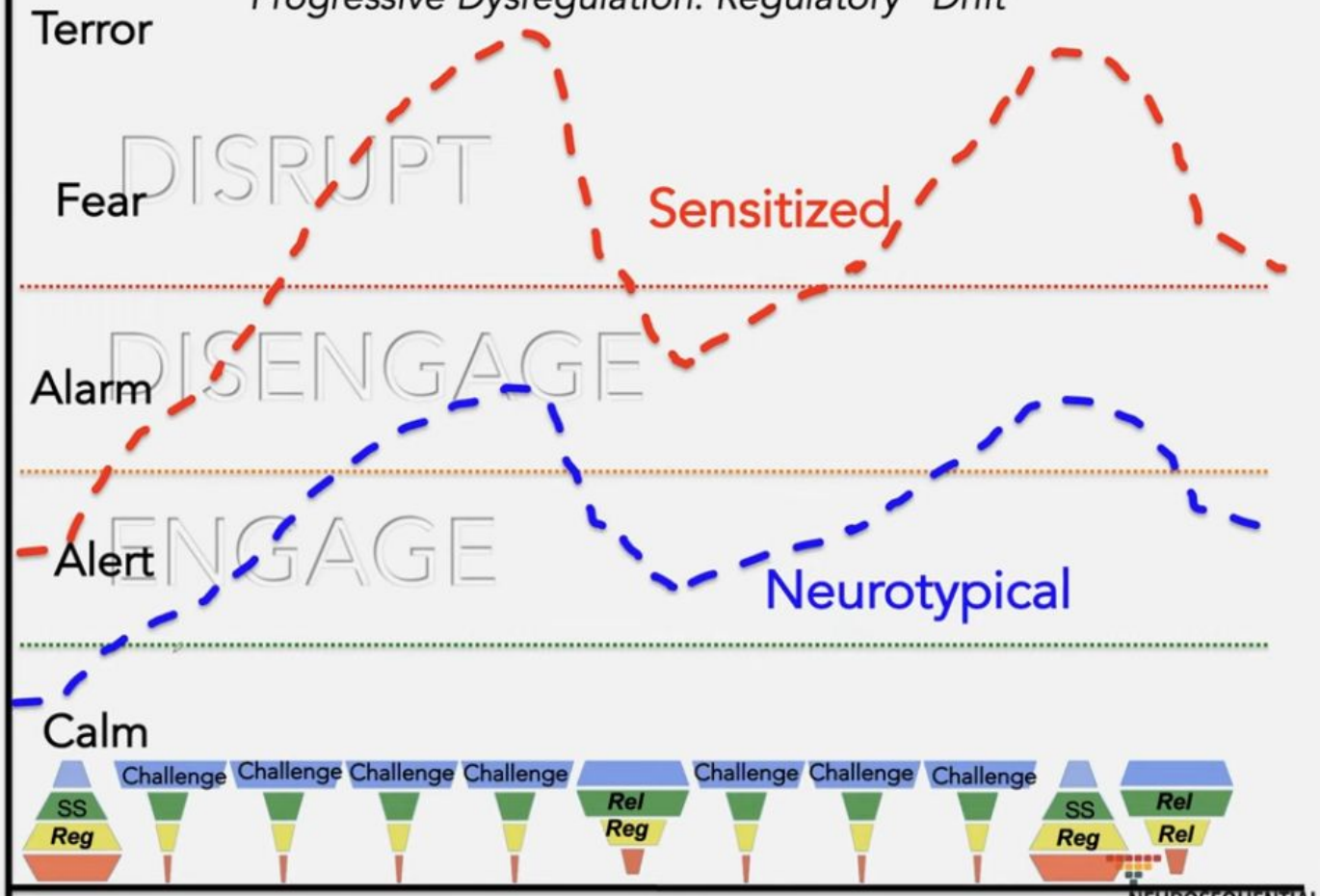


Dosing and Spacing

- A “dose” of stress = anything novel that triggers our stress response system.
- A “regulatory dose”= any form of relational or somatosensory regulation to relieve stress. Regulatory doses can occur in seconds.
- Therapeutic moments

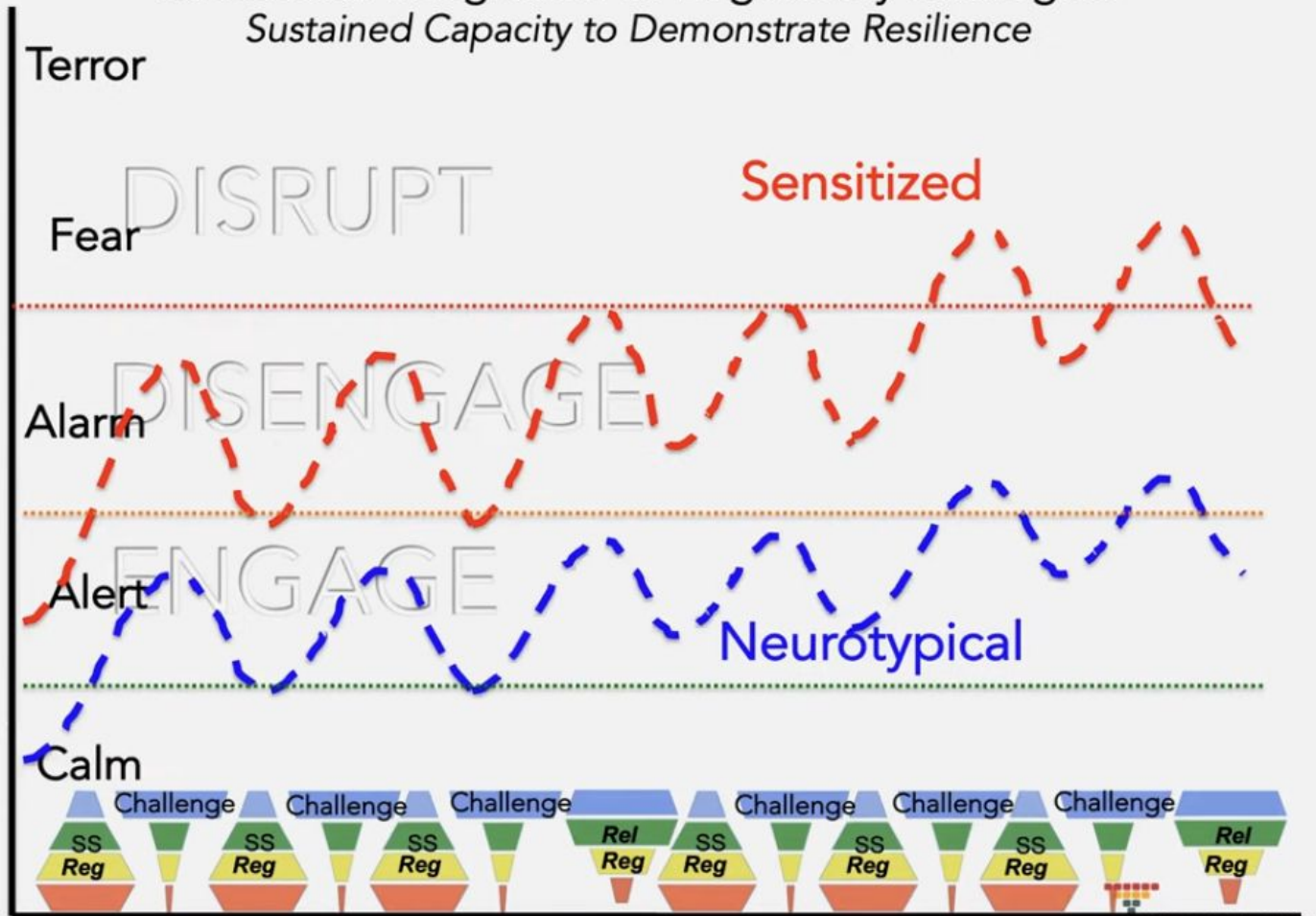
Minimal Daily Dosing of Regulatory Strategies

Progressive Dysregulation: Regulatory "Drift"

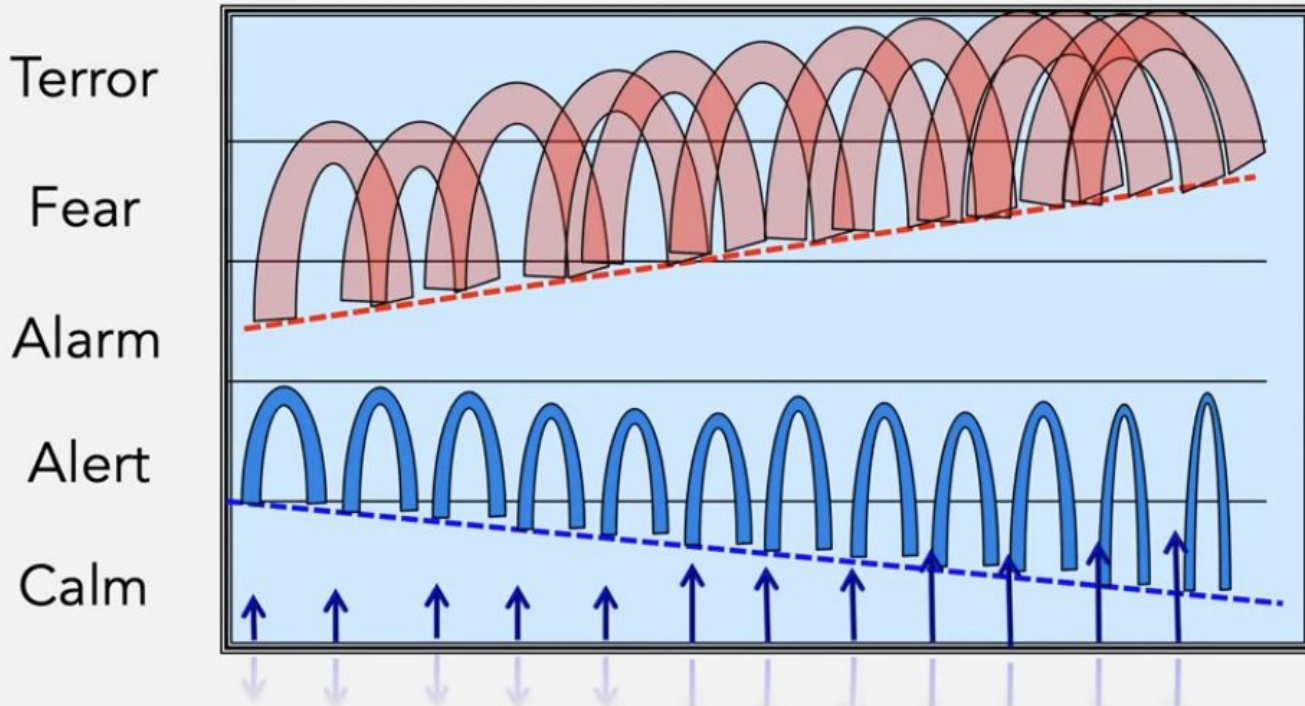


Successful Integration of Regulatory Strategies

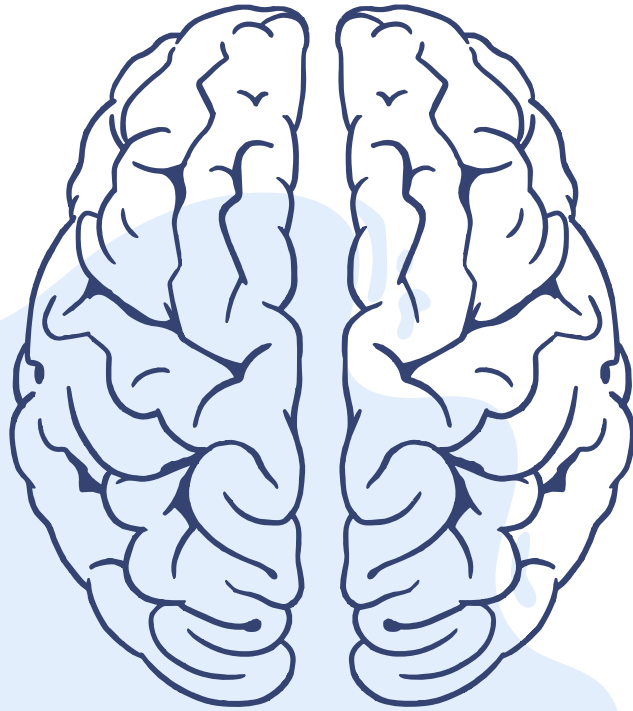
Sustained Capacity to Demonstrate Resilience



"One size" does not fit all



An optimal dose, pattern and spacing for a neurotypical child can further sensitize a dysregulated child



**What
does all
of this
mean?**

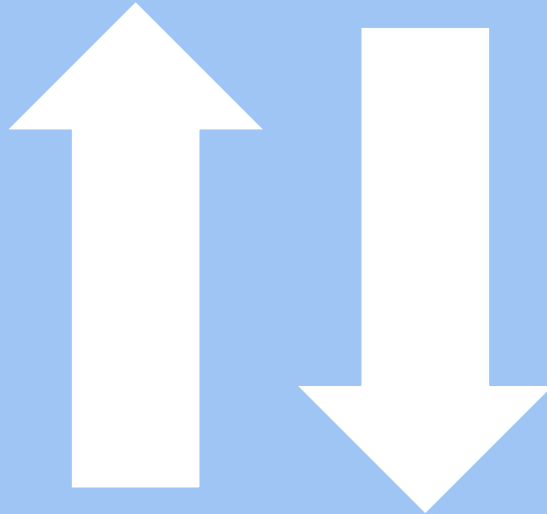


Regulation!
Regulation!
Regulation!

Regulation Strategies: The Power of Rhythm

- **Bottom-Up**

- Patterned-rhythmic engagement
- Working from brainstem upward



- **Top-Down**

- Changing thought patterns to regulate mood (i.e., Cognitive Behavioral Therapy)
- Working from cortex downward

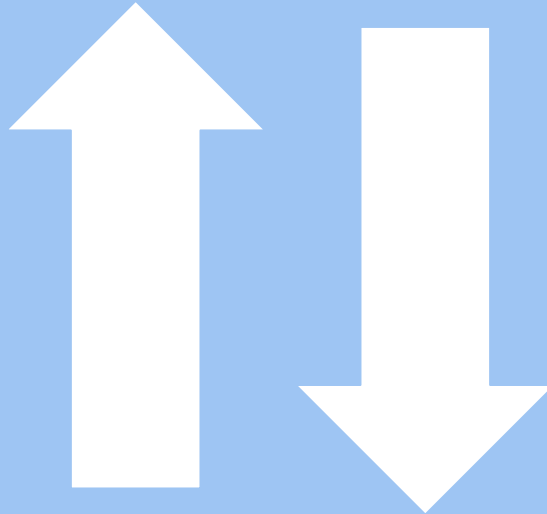
Regulation Strategies: The Power of Rhythm



Regulation Strategies: The Power of Rhythm

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Regulation Strategies

ZONES OF REGULATION!

Blue	Green	Yellow	Red
 A blue character with large glasses and a white sweater, looking down with a sad expression.	 A blue character in a yellow dress, dancing joyfully with arms raised.	 A purple character with a long nose and a red bow tie, looking frustrated with a squinted eye.	 A red character with a fire-like head, shouting with clenched fists.
<p>Sick Sad Tired Bored Moving Slowly</p>	<p>Happy Calm Good to Go Focused Ready to Learn</p>	<p>Frustrated Worried Silly/Wiggly Anxious Excited</p>	<p>Mad/Angry Mean Yelling/Hitting Out of Control I Need Time and Space</p>

TOP DOWN

Talking

Meditation

Gratitude, Loving Kindness

Mindfulness, Awareness

& Attention

(Regulation of Thoughts

Intention Setting

Thinking

Planning

Questioning

Goal Setting

Journaling

Positivity

Manifesting

Food & Water

Interoception

Breathing Techniques

Posture

Movement

- VN, Eyes, Tap, Dance, Yoga, Energy

Touch & Massage

Sound

Voice

- Sing, Hum, Chant

Smell

- Aromatherapy

Co-Regulation

Animal/Pet Therapy

Play

BOTTOM UP



Examples

LAZY 8 BREATHING

Start with an 8 on its side. Starting in the middle, go up to the left and trace the left part of the 8 with your finger while you breathe in. When you get to the middle of the 8 again, breathe out while you trace the right part of the 8 with your finger.



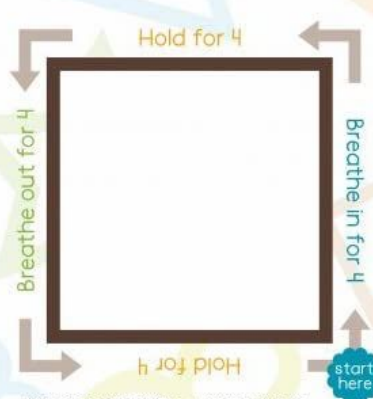
TRIANGLE BREATHING

Start at the bottom left of the triangle. Follow the sides around the whole triangle to complete one deep breath.



SQUARE BREATHING

Start at the bottom right of the square, and follow the arrows around the whole square to complete one deep breath.



STAR BREATHING

Start at any "Breathe in" side, hold your breath at the point, then breathe out. Keep going until you've gone around the whole star.



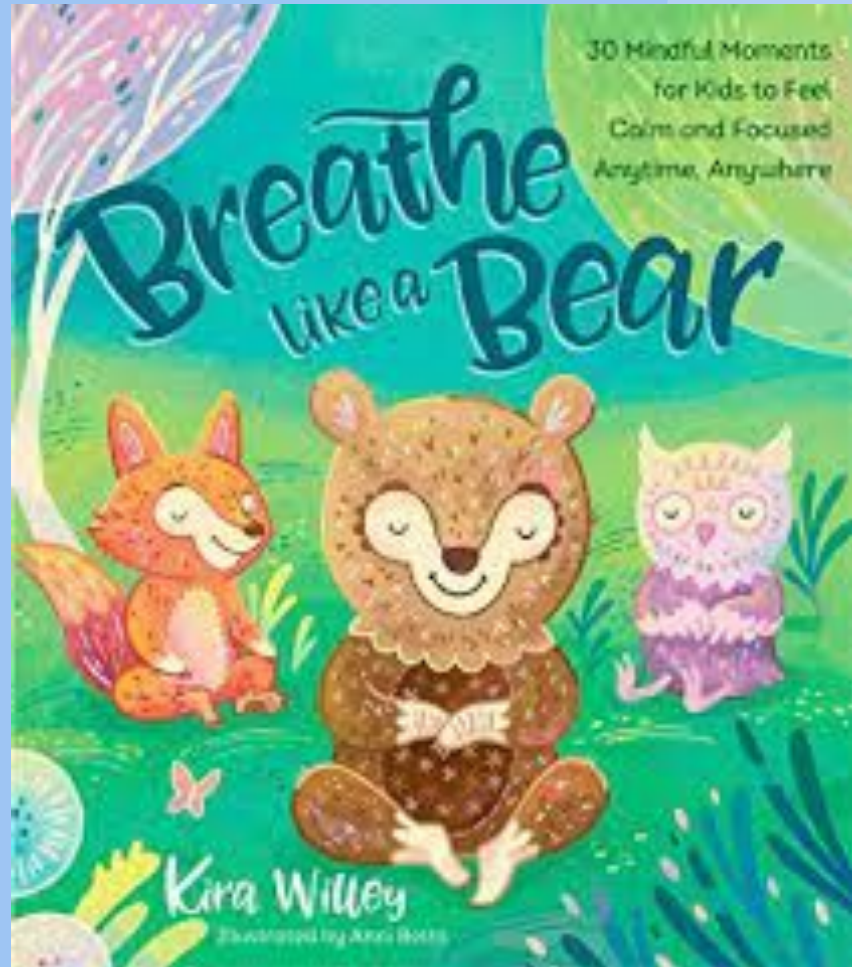
Examples



Examples



Examples



We will leave you with this...

“The more healthy relationships a child has, the more likely he will be to recover from trauma and thrive. Relationships are the agents of change and the most powerful therapy is human love.”

— Bruce D. Perry, *The Boy Who Was Raised as a Dog: And Other Stories from a Child Psychiatrist's Notebook*





SOURCES

<https://www.youtube.com/watch?v=7crm3JcVfJs>

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What Happened to You? Conversations on Trauma, Resilience, and Healing. By Bruce D Perry and Oprah Winfrey