



# Trauma Effects on Children 2025

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# Disclosure

- I have no financial interests to disclose
- I am employed by Providence St. Peter Hospital and Seattle Children's Hospital

# Trauma to children

## Physical Abuse

- Latest statistic is that 9677 children were in out of home care in the State of WA (relative placement or foster care)
- Most recent stats are that roughly 1840 children die from physical abuse/neglect in the State of WA per year—or roughly 5 children per day.
- 80% of fatal cases include one parent as the offender
- Children under 3 make up 70% of the children who perish as a consequence of abuse or neglect

# Definitions

## Toxic Stress

- Toxic stress occurs when there is a threat, and the body responds in a “fight or flight” mode
- Emergency stress hormones such as cortisol and adrenalin are released
- Bypass the thinking brain--prefrontal cortex--and activate the survival brain--amygdala and hippocampus
- Short process, elevated hormones for 4 minutes, back to baseline in 20 minutes
- Repeated and chronic stress with these elevated hormones causes the neural pathways to become efficient and predominant
- Underdevelopment of neural pathways involved in complex thought, learning, cause and effect, safety, self-soothing

## Trauma

- Same physiologic response as stress with elevation of cortisol and adrenalin, and activation of the stress pathways
- Trauma reactions may take longer to return to baseline
- Trauma response can also be prolonged
- One episode of trauma, or multiple traumas are processed based on the child’s resiliency
- Trauma can result in PTSD
- Toxic stress and trauma can cause permanent changes in many aspects of the child’s physiologic and psychologic make up

## ABUSE



Physical



Emotional



Sexual

## NEGLECT



Physical



Emotional

## HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse



Divorce

## BEHAVIOR



Lack of physical activity



Smoking



Alcoholism



Drug use



Missed work

## PHYSICAL & MENTAL HEALTH



Severe obesity



Diabetes



Depression



Suicide attempts



STDs



Heart disease



Cancer



Stroke

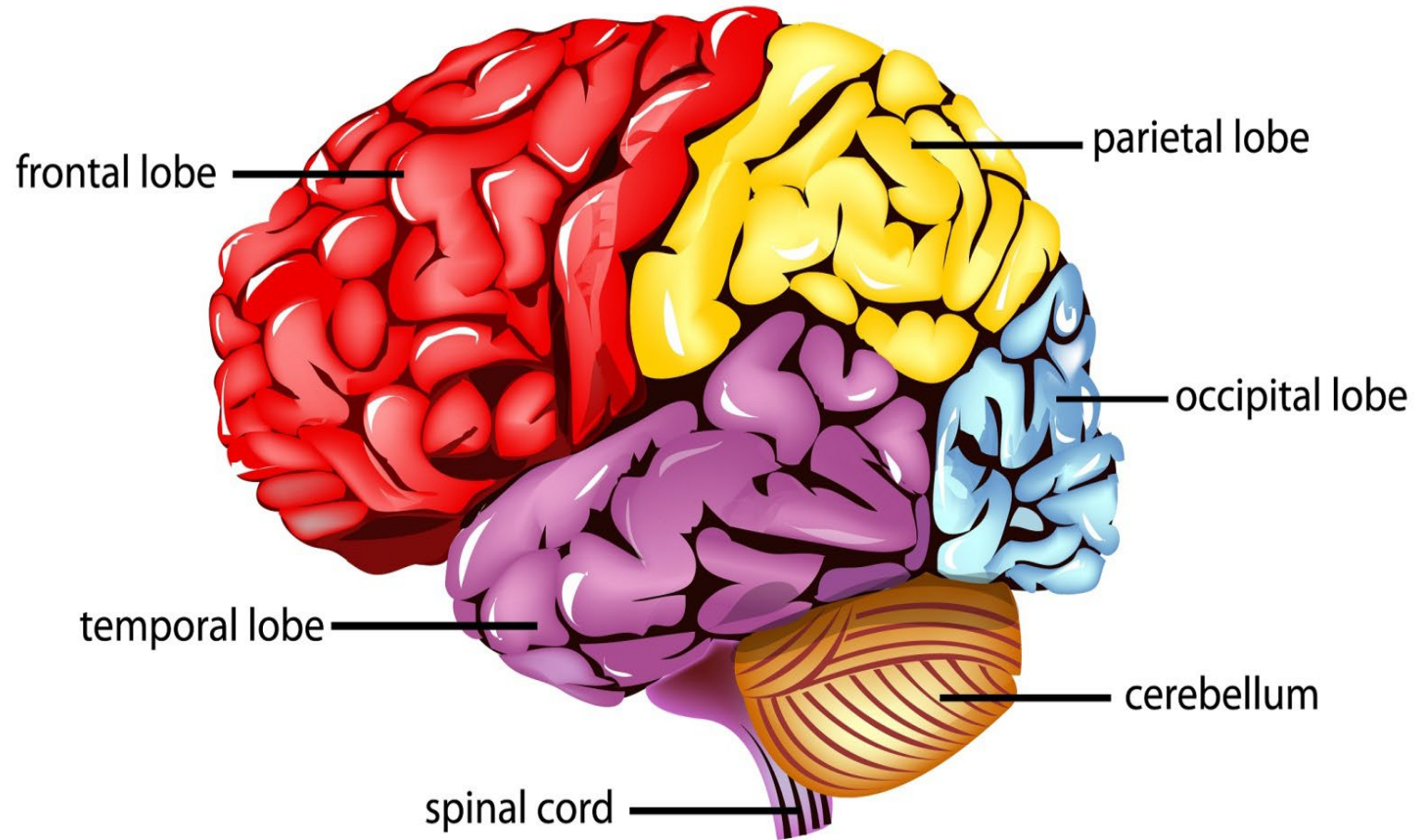


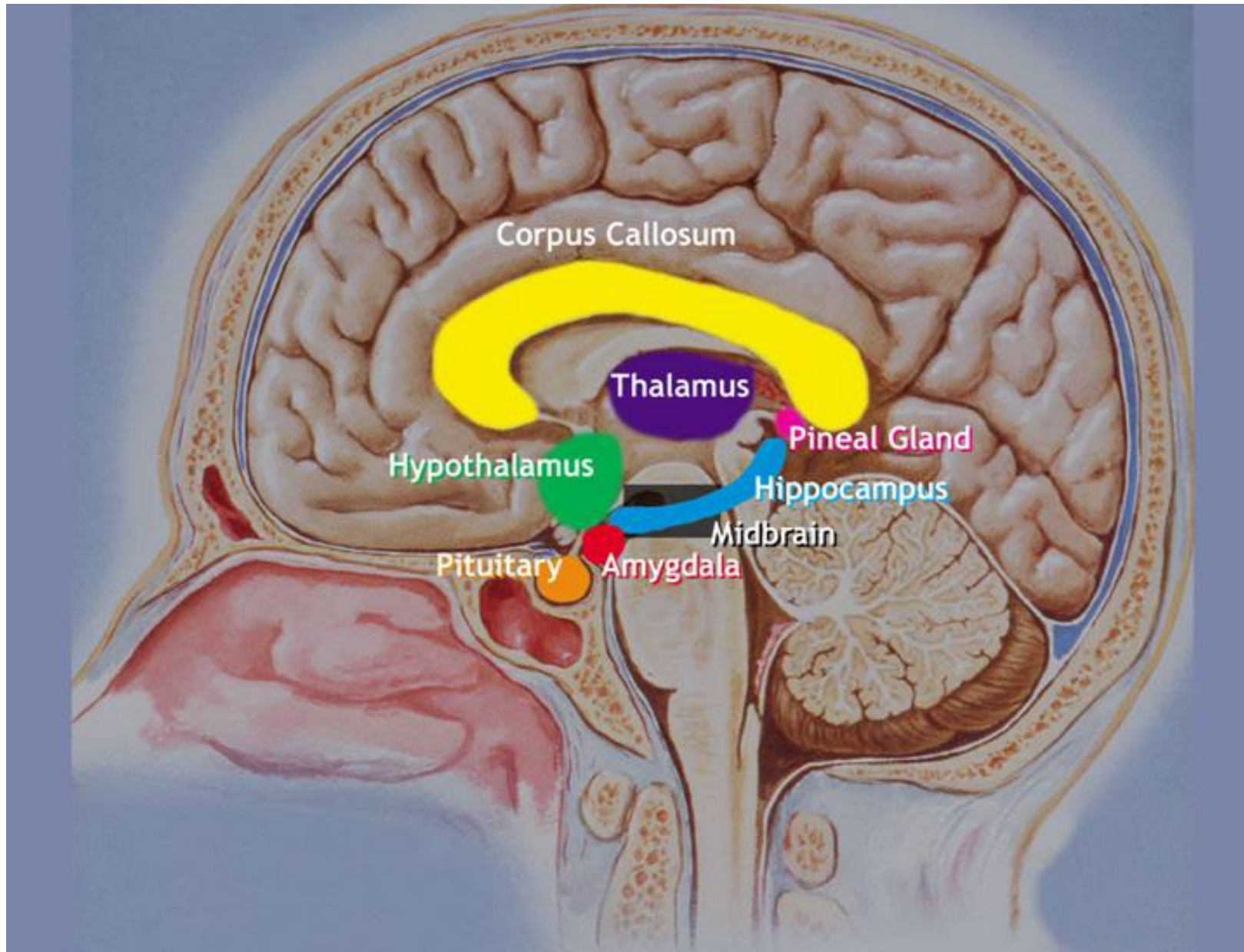
COPD



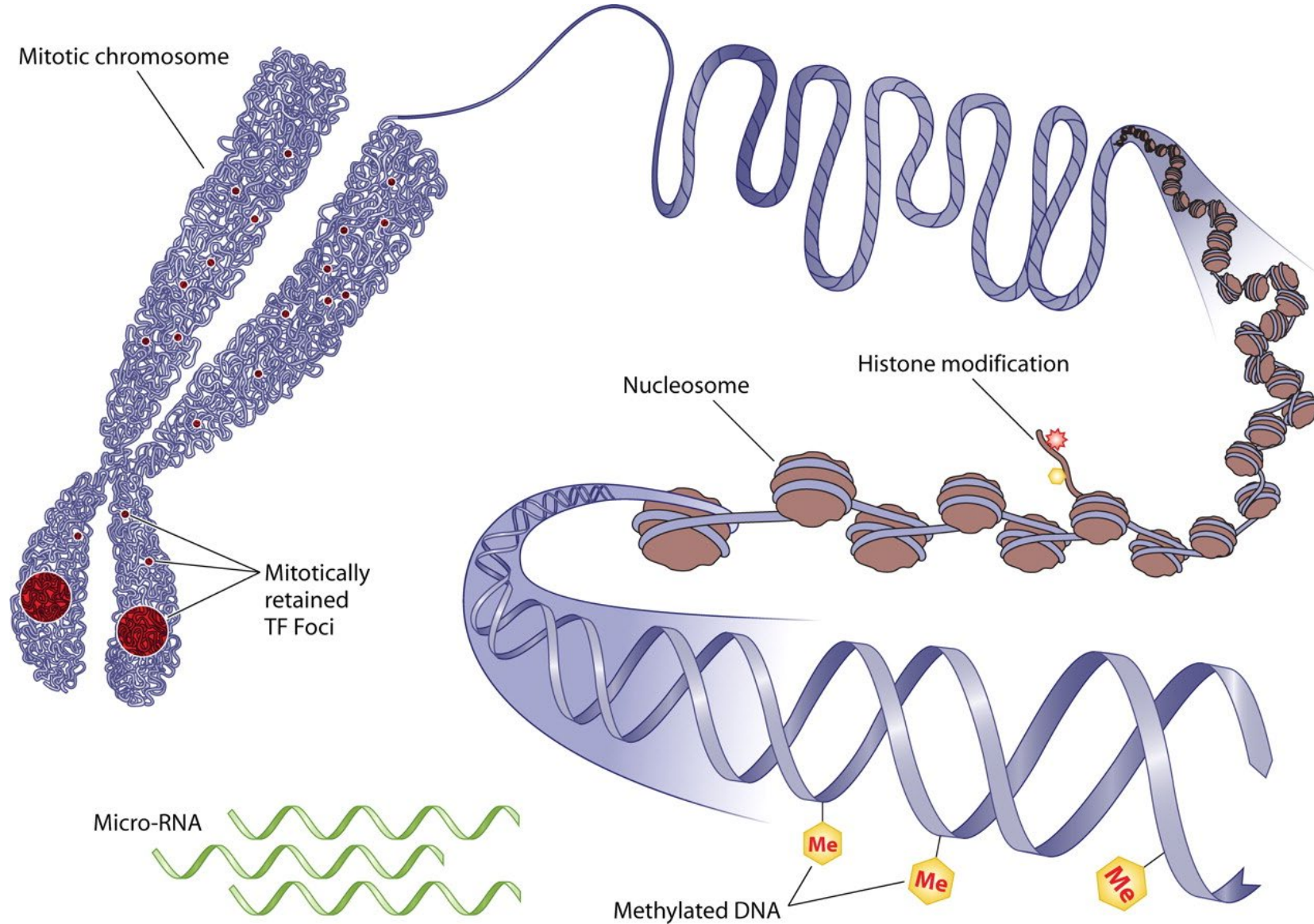
Broken bones

# Parts of the Human Brain





# Epigenetics



# Resilience

Children process stress and trauma based on many factors:

- Past episodes of toxic stress/trauma
- Relationships with adults who keep them safe, nurtured, and respond to their needs
- Innate coping mechanisms
- Ongoing toxic stress and trauma

The adult relationship can be a parent, grandparent, teacher, coach, etc.

# Resilience



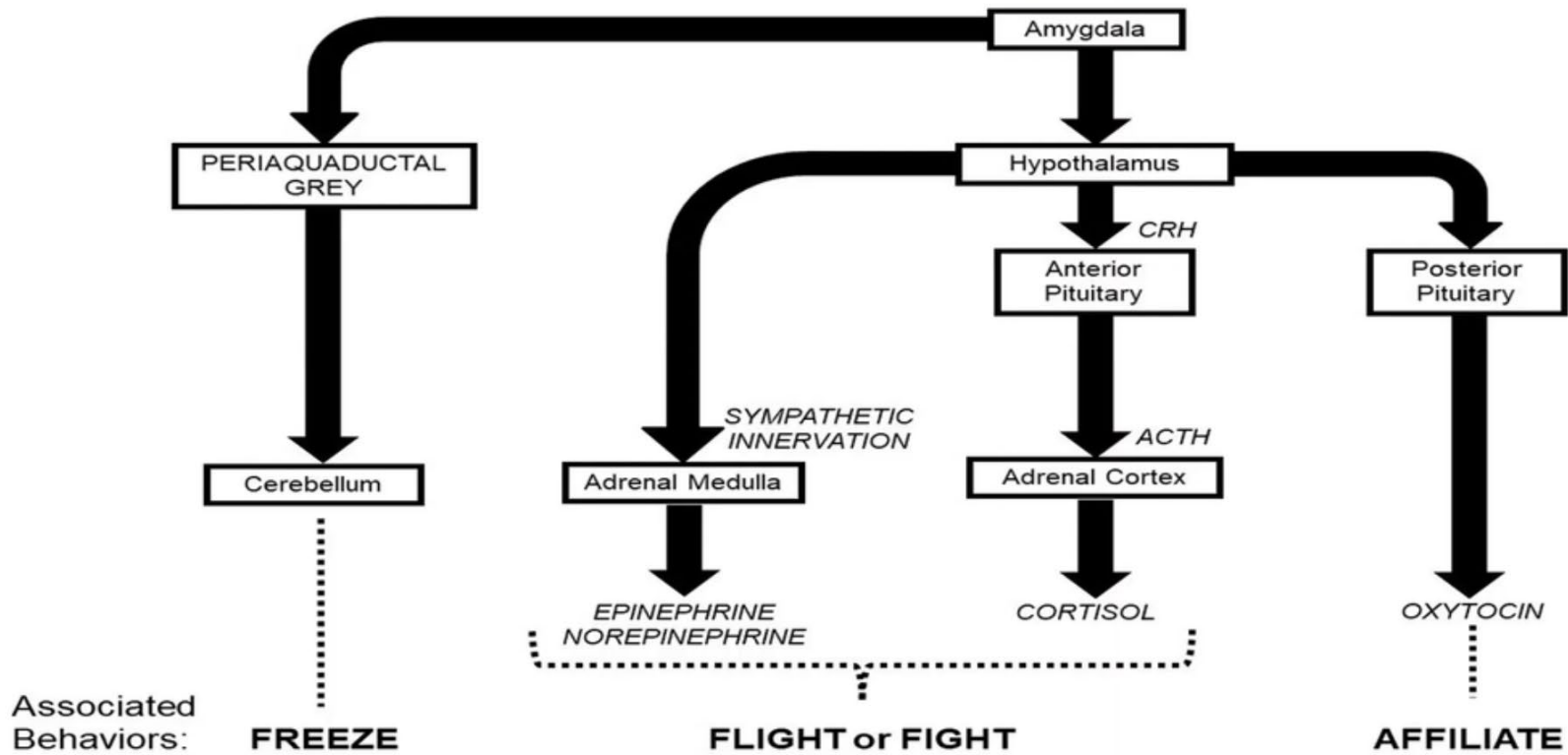
Ann Masten, PHD called this Resilience *Ordinary Magic*

- For kids, the pathways to resilience are rooted in the give and take of safe, stable and nurturing relationships that are continuous over time (attachment)
- and in the growth that occurs through play, exploration and exposure to a variety of normal activities and resources

# Put on Your Trauma Lens



# The Stress Response



Source: Garner AS, Saul RA. Thinking Developmentally: Nurturing Wellness in Childhood to Promote Lifelong Health. Itasca, IL: American Academy of Pediatrics; 2018

American Academy of Pediatrics  
DEDICATED TO THE HEALTH OF ALL CHILDREN®



# Trauma Informed Care

- **Trauma informed care means:**
- All who interact with children who have experienced toxic stress or trauma, understand their reactions.
  - Children have developed survival mechanisms
  - Their behavior is not purposefully manipulative, defiant, or avoidant
  - Hyper-vigilance and fear, shame and guilt are usual reactions to trauma
- Teachers, parents, foster parents, coaches, pastors, day care providers, medical providers, law enforcement, judicial system all need trauma training

# Trauma is triggered

- Survival mechanisms can include avoidance, dissociation, aggression
- Trauma and toxic stress activate the pathways:

<b>FIGHT</b>	aggression	behavior issues
<b>FLIGHT</b>	runaway	avoidance
<b>FREEZE</b>	dissociate	

- These pathways are reactivated every time the child is triggered:
  - sight, smell, noise, touch, environment
- Triggers can re-occur for years or the entire lifetime
- Affiliate response from a safe adult can retrain the brain

# Trauma

- Teenagers become embarrassed by their trauma symptoms, so they try to overcompensate:
  - **Memory issues**—all learning is worthless, don't try—better than failing
  - **Emotional dysregulation**—better to always be mad, than show “weakness”
  - **Trust**—no one understands, no need to share with anyone—increases vulnerability
  - **Loyalty**—if they discuss the trauma, a family member will be exposed
  - **Mental Health**—increased incidence of mental health diagnoses
  - **Suicide rate**—80% of teen suicide attempts are related to past trauma

# Memory

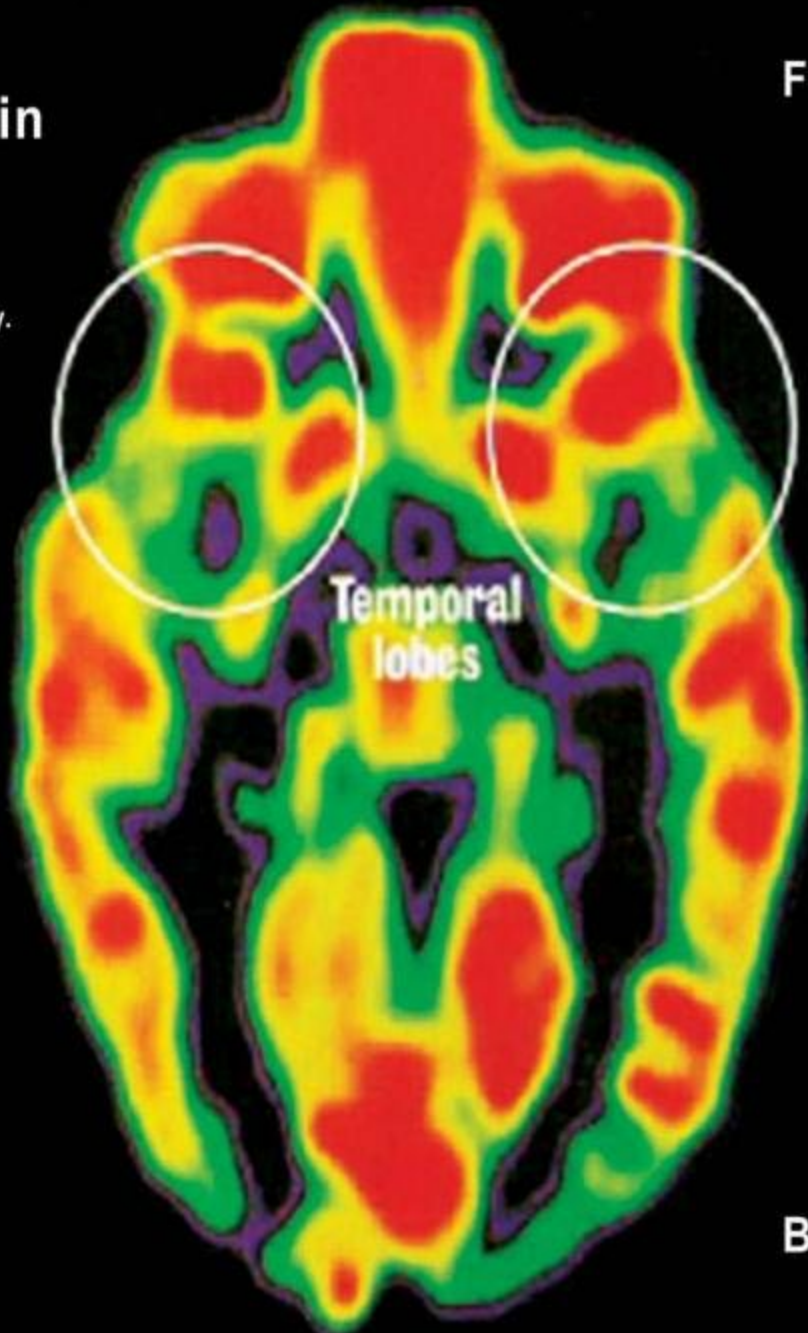
- Impacted in every case of trauma
- Severe trauma causes more memory issues
- Processing information is linked with memory issues
  - Examples: classroom activities, lockers, multiple directions from teacher/coach/staff
  - Daily chores
  - Learning new concepts/skills

# Emotions

- Trauma kids have less knowledge of emotional terms
- Confused by more than one emotion at a time
- Overwhelmed by emotional responses, unsure how to process
- Unable to talk when emotions are flooding their brain
- Fidgets, break, food, exercise will distract and then emotions can be labelled and processed later

## Healthy Brain

This PET scan of the brain of a normal child shows regions of high (red) and low (blue and black) activity. At birth, only primitive structures such as the brain stem (center) are fully functional; in regions like the temporal lobes (top), early childhood experiences wire the circuits.

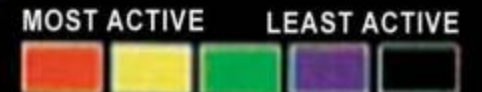
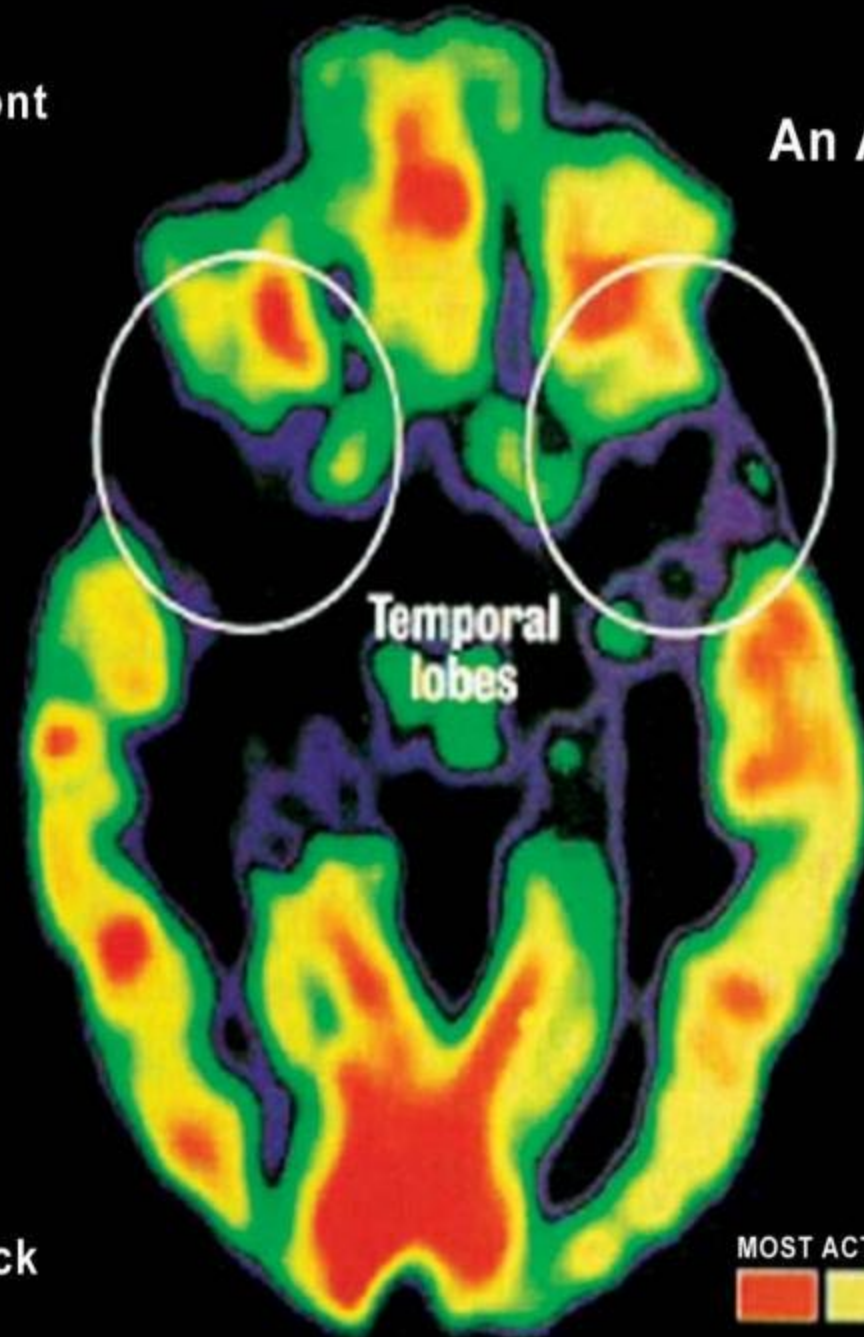


Front

Back

## An Abused Brain

This PET scan of the brain of a Romanian Orphan, who was institutionalized shortly after birth, shows the effect of extreme deprivation in infancy. The temporal lobes (top), which regulate emotions and receive input from the senses, are nearly quiescent. Such children suffer emotional and cognitive problems.



# Stress Response Dysregulation

- Emotional coaching
- Consistency and predictability
- Alter the environment
- Grounding techniques
- Nutrition, sleep, exercise
- Hormone regulation
- Trauma therapy

# The Three R's

- Reassure: stable, nurturing caregivers. Daycare, school, family
- Return to Routines: mealtimes, bedtimes, daily routines, school, daycare, positive interactions, parent space and support
- Regulate: calm stress response, identify emotions, co-regulation









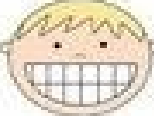







# Emotional Coaching

**List of Feelings**

						
	<b>Happy</b>	<b>Sad</b>	<b>Angry</b>	<b>Other feelings</b>		
	Calm	Ashamed	Annoyed	Afraid		
	Cheerful	Awful	Bugged	Anxious		
	Confident	Disappointed	Destructive	Ashamed		
	Content	Discouraged	Disgusted	Bored		
	Delighted	Gloomy	Frustrated	Confused		
	Excited	Hurt	Fuming	Curious		
	Glad	Lonely	Furious	Embarrassed		
	Loved	Miserable	Grumpy	Jealous		
	Proud	Sorry	Irritated	Moody		
	Relaxed	Unhappy	Mad	Responsible		
	Satisfied	Unloved	Mean	Scared		
	Silly	Withdrawn	Violent	Shy		
	Terrific			Uncomfortable		
	Thankful			Worried		

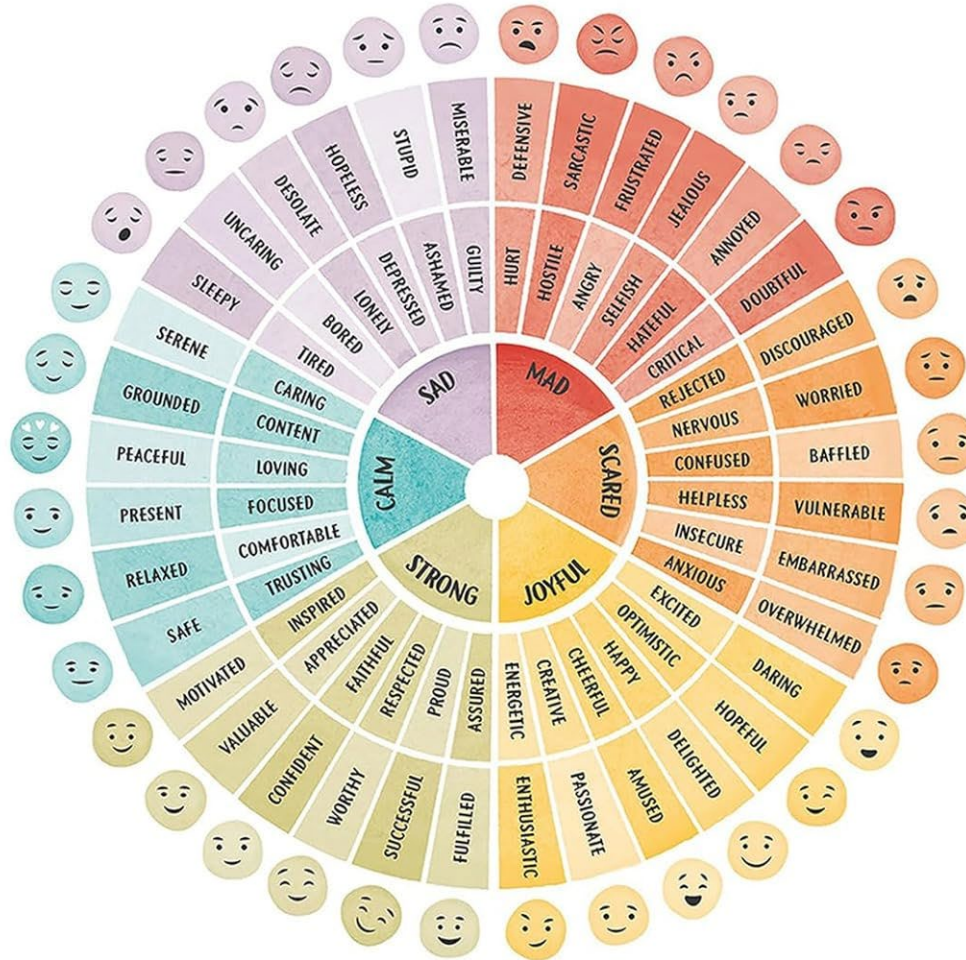
[www.RewardCharts4Kids.com](http://www.RewardCharts4Kids.com)

## Feeling Words

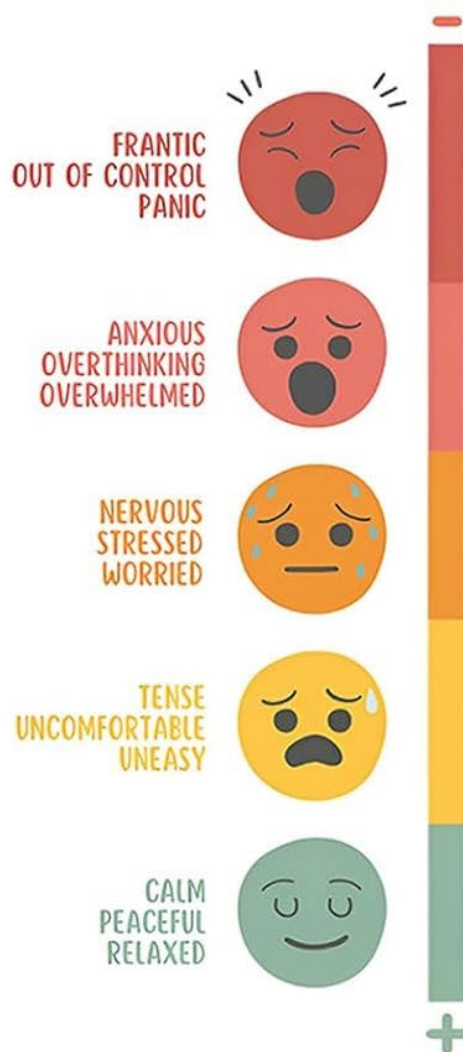
happy 	scared 	sad 	worried 
silly 	confused 	surprised 	mad 
proud 	nervous 	angry 	sick 
embarrassed 	tired 	jealous 	frustrated 

<http://www.funfonix.com/gradefroggies.com>

# FEELINGS wheel



# ANXIETY SCALE + COPING SKILLS



HOW DO YOU ACT?	WHAT CAN YOU DO ABOUT IT?
<p>CRYING, SCREAMING, REFUSING, MELTDOWN IMPULSIVE, BEHAVIORS SHUTTING DOWN, TROUBLE SHOOTING</p>	<p>ASK A FRIEND OR ADULT FOR HELP</p> <p>TAKE SLOW, DEEP BREATHS</p> <p>TAKE A BREAK IN A PEACEFUL SPOT</p> <p>PRACTICE GROUNDING TECHNIQUES</p> <p>SPLASH COLD WATER ON YOUR FACE</p> <p>TAKE A NAP</p>
<p>DISTRACTED SHORT-TEMPERED, TROUBLE SLEEPING, SHAKING, PACING FROZEN, AVOIDING NEGATIVE THINKING, FAST BREATHING, WHINING/COMPLAINING, LOST IN THOUGHT</p>	<p>TALK YOURSELF INTO BEING CALM</p> <p>THINK OF A PEACEFUL PLACE</p> <p>MEDITATE/ PRAY</p> <p>TENSE AND RELAX YOUR MUSCLES</p> <p>GET A DRINK OF WATER</p> <p>JOURNAL ABOUT YOUR FEELINGS</p> <p>TAKE A WARM/COLD SHOWER</p> <p>STRESS MANAGEMENT TECHNIQUES</p> <p>COUNT TO 10 OR 100</p> <p>MOVE YOUR BODY OR EXERCISE</p>
<p>TIGHT MUSCLES, PACING FIDGETING, GROANING, TROUBLE CONCENTRATING</p>	<p>GET OR GIVE A HUG</p> <p>GET SOME FRESH AIR</p> <p>DO A HOBBY YOU ENJOY</p> <p>TALK TO FRIENDS OR FAMILY</p> <p>LISTEN TO MUSIC</p> <p>SQUEEZE A STRESS BALL</p>
<p>SMILING, ENGAGED, RELAXED BODY, PAYING ATTENTION, ENJOYING YOURSELF</p>	<p>SMILE &amp; PRACTICE GRATITUDE</p> <p>USE KIND &amp; POSITIVE WORDS</p> <p>KEEP LISTENING</p> <p>HELP SOMEONE ELSE</p> <p>TAKE STEPS TOWARDS YOUR GOALS</p> <p>WRITE ABOUT YOUR SUCCESSES</p>

# Consistency and Predictability

- Increases a sense of safety as the world becomes less scary and more predictable
- Over time allows the child to relax their hypervigilance and control
- They have less energy devoted to fight/flight/or freeze
- It opens the door for reshaping their development
- Aids the child in their ability to organize their world
- This is not to be confused with rigidity—consistency still allows for flexibility

# Examples

- Mealtimes
- Bedtime routines
- Placement in a classroom
- Support persons (grandma time, babysitters, etc.)
- Screen time...
  - Television
  - Video games
  - Phones/tablets

# Alter the Environment

- Placement in the room, small vs large environment, busy or quiet
- Introduce objects/tools slowly with added time for adjustment
- Frequent breaks, anticipate and plan for transitions
- Monitor response to transitions, meals, change
- When you start to see emotional dysregulation, slow down, regroup
- Safe place for emotional time out
  - Demonstrate how to take an emotional break and regroup



# Grounding Skills

Grounding skills are useful for traumatized kids when:

- The child is experiencing a flashback
- The child is triggered
- The child is dissociating/tuning out/shut down
- The child needs to reconnect to the present
- The child needs help to feel safe
- The child needs help to modulate arousal

# Grounding Tools

- Sight--visual cards, look out the window
- Touch—squishy ball, playdough
- Hearing—music, singing, noise reducing headphones
- Smell—lotions on hand/wrist, teabags
- Taste—cinnamon gum, hard candy
- 5-4-3-2-1

# Nutrition, Sleep, Exercise

- Nutrition: Teach parent and child healthy choices, small changes frequently
- Sleep: Address first and continually readdress
- Exercise: Must be natural and fun, 60 minutes of increased heart rate every day



# Skills

- All traumatized children have skewed development—some areas may be age appropriate while other areas are markedly behind for their chronologic age.
- We can help shape development:
  - Once the child feels safe in their environment
  - Can teach skills for self regulation, attention, organization, sensory processing, social interactions, safe and nurturing touch
  - This is all about connecting and having fun

# Bruce Perry:

- “The only way to move from a super-high anxiety state, to a more calm cognitive state, is rhythm. Patterned, repetitive rhythmic activity: walking, running, dancing, singing, repetitive meditative breathing, you use brainstem related somatosensory networks which make your brain accessible to relational reward and cortical thinking.”

# Examples of Rhythmic Physical Movement

- Yoga
- Swimming
- Singing
- Drumming
- Roller/ice skating
- Crocheting/knitting
- Walking/running
- Biking
- Skateboarding
- Deep breathing



# Take Home Points

- Trauma to children causes brain damage, changes their epigenetics and immune system, and alters their development
- Children are resilient: every one of us is a part of their resiliency. Hope can be built.
- Recognizing trauma related behaviors in children is important so the reaction to the behavior does not further traumatize the child
- Traumatized children can be repaired
- Treating, teaching, and parenting traumatized children is exhausting but very rewarding

# Resources

- **National Child Traumatic Stress Network**
- Act of Congress 2005, in response to 9/11 and the national trauma experienced by children affected by this act of terrorism
- **Center for Youth Wellness, Dr. Nadine Burke Harris, TED talk**
- **Washington State Department of Social and Health Services**
  - 1-866-END HARM (1-866-363-4276)
  - Mandatory Reporters
- **Education: Darkness to Light**
  - Child Sexual Abuse Prevention Trainings and resources
- <http://www.edutopia.org>
- <http://massadvocates.org/tlpi/>
- <http://www.cdc.gov/violenceprevention/childmaltreatment/index.html>
- **Paper Tigers Documentary**

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