

Becoming a Trauma Informed Educator

2014 Idaho Prevention Conference

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OBJECTIVES

Educators will be able to:

- Understand how the brain learns and grows;
- Be able to explain how traumatic experiences affect brain development, memory, and behavior of children;
- Understand how trauma experiences are linked to substance use and abuse;
- List three to intervene and support a youth with a history of abuse or neglect.

OBJECTIVES

In the end we will try on some Trauma Lenses and look at the school and children differently.



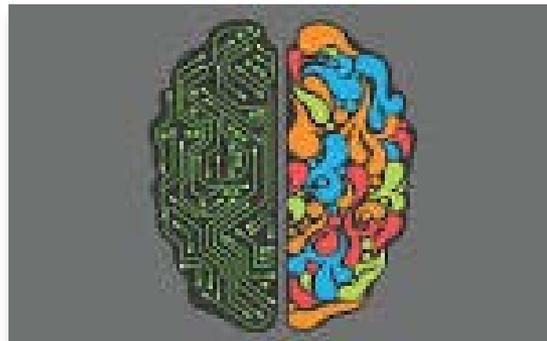
Brain Structure: Experiences Build Brain Architecture

http://developingchild.harvard.edu/resources/multimedia/videos/three_core_concepts/brain_architecture/

Brain Structure: Three Main Levels

Main Points:

1. Connections that are used more become stronger
2. Connections that are used less become weaker and “prune” away
3. Simple circuits form first providing a foundation for later learning



Brain Structure: Serve and Return builds connections

http://developingchild.harvard.edu/resources/multimedia/videos/three_core_concepts/serve_and_return/

Brain Structure: Serve and Return Interaction

Main Points:

1. New Circuits are created when children interact with adults.
2. “Serve and Return” helps create neuro-connections to all areas of the brain, building the emotional and cognitive skills children need in life.



Brain Structure: Toxic Stress

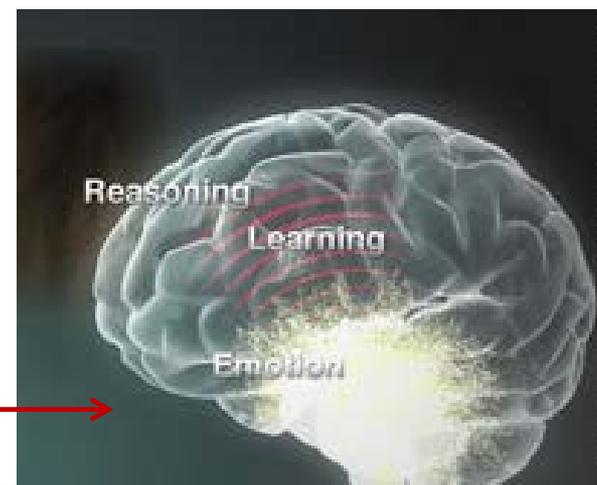
http://developingchild.harvard.edu/resources/multimedia/videos/three_core_concepts/toxic_stress/

Brain Structure: Stress Response

Main Points:

1. Constant activation of the stress response overloads developing systems with serious, life-long consequences for the child.
2. Living in toxic stress can cause the stress response systems can become “set” on high alert.

Sensitized stress response

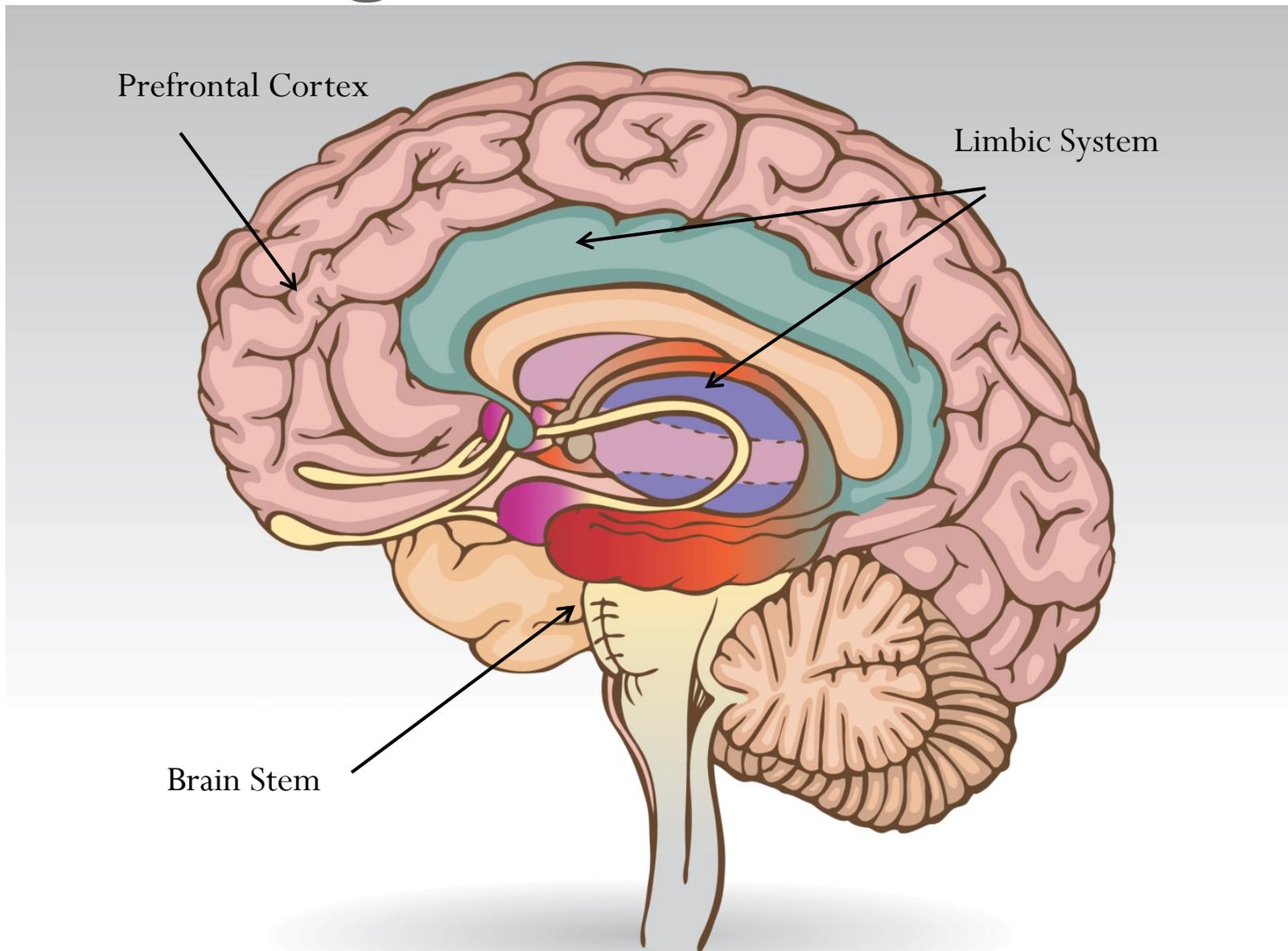


How do People Learn?

Still Face Video:

<http://acestoohigh.com/2013/09/26/the-still-face-video-still-packs-an-emotional-wallop/>

Brain Diagram

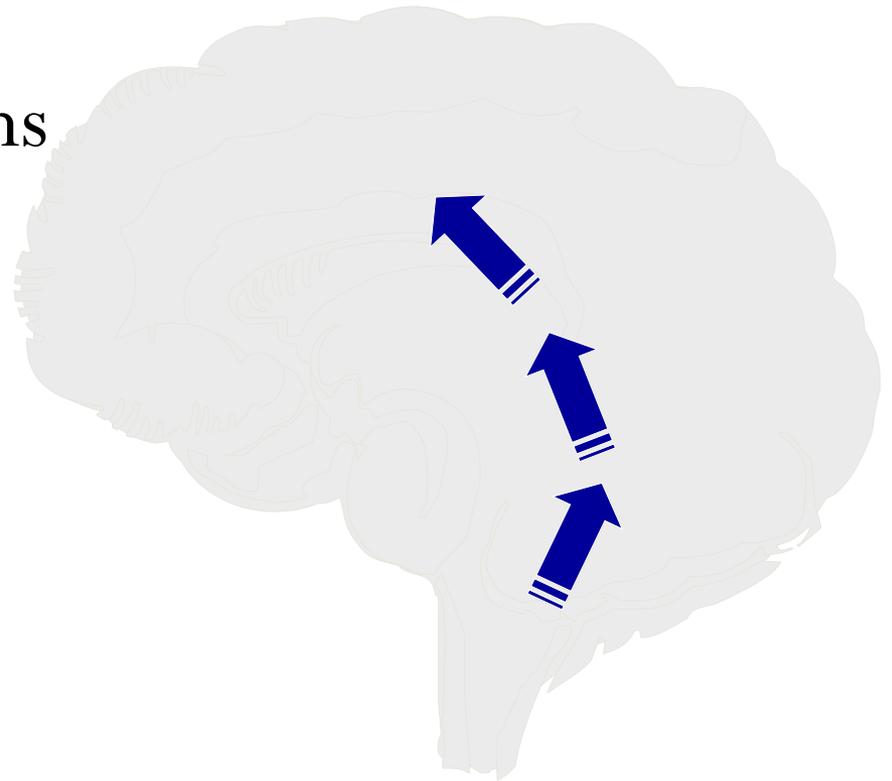


Brain Structure: Three Main Levels

- **Prefrontal cortex** – abstract thought, logic, factual memory, planning, ability to inhibit action
- **Limbic system** – emotional regulation and memories, “value” of emotion
- **Brainstem/midbrain** – autonomic functions (breathing, eating, sleeping)

Experience Grows the Brain

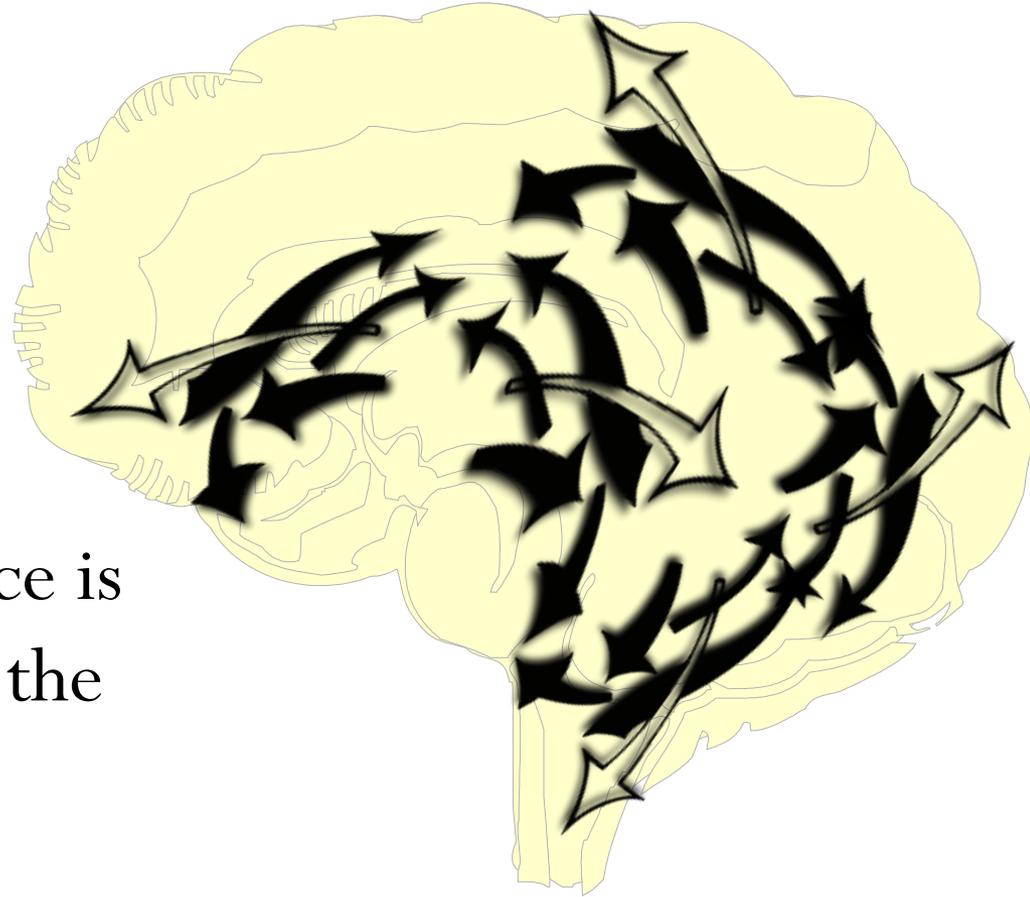
- Brain development happens from the bottom up:
 - From primitive (basic survival: brainstem)
 - To more complex (rational thought, planning, abstract thinking: prefrontal cortex)



Experience Grows the Brain

(continued)

- The brain develops by forming connections.
- Interactions with caregivers are critical to brain development.
- The more an experience is repeated, the stronger the connections become.



Brain Development and Experience

- Relatively few synapses are present at birth
- Learning requires forming new synapses as well as strengthening and discarding existing synapses
- Early synapses are weak and need repeated exposure to strengthen
- Brain adapts to environment—positive or negative

Building Connections: Rapid Growth of Synapses



birth



3 months old



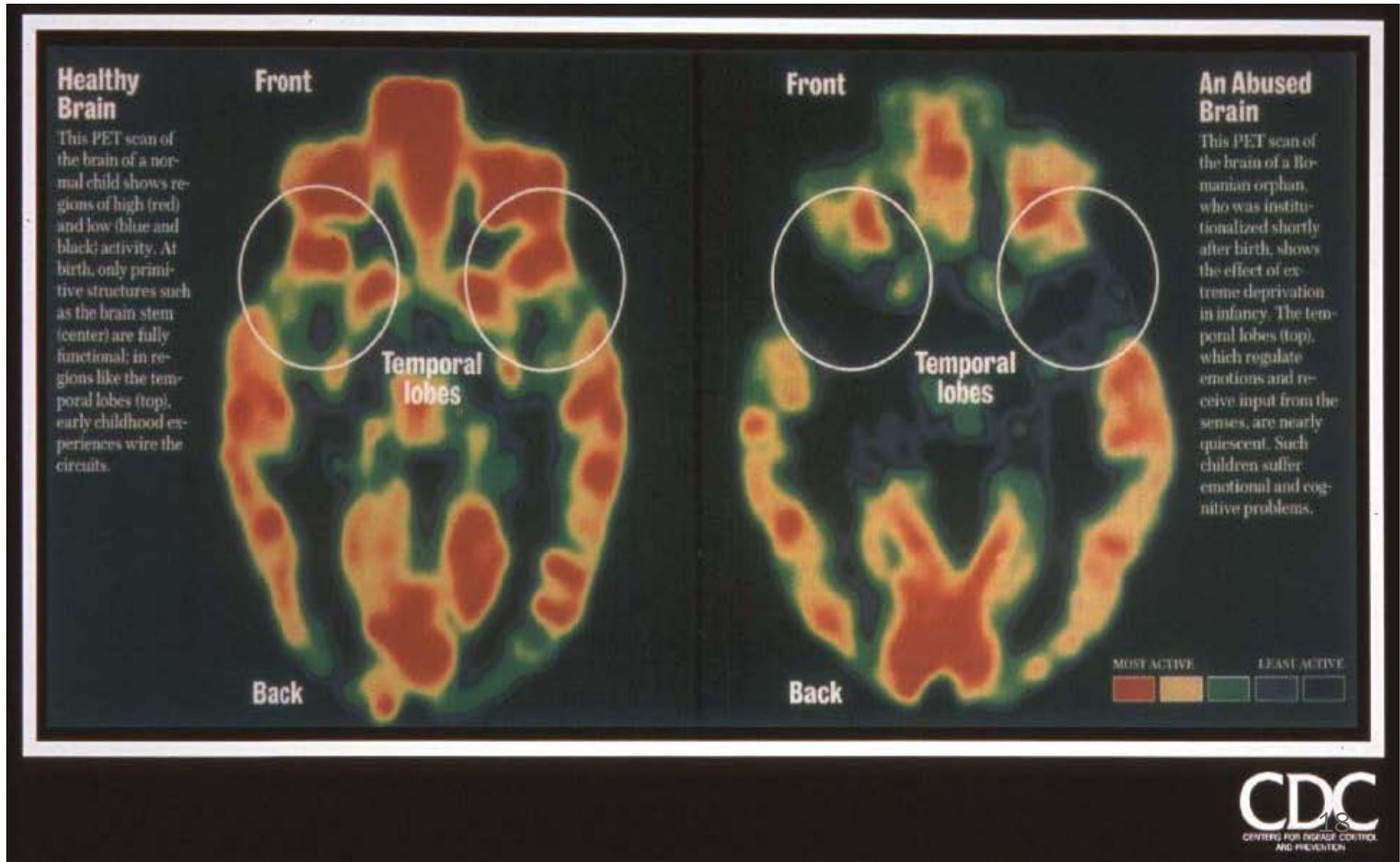
2 years old

Source: Carter, R. (1999). *Mapping the mind*. Berkeley, CA: University of California Press.

Trauma and the Brain

- Structural Brain Differences
 - Maltreated children present with a smaller corpus callosum, which affects how the brain's hemispheres communicate about arousal, emotion, and cognition.
 - Adults who were maltreated as children show reduced volume of the hippocampus (learning and memory) and prefrontal cortex (behavior, cognition, emotional regulation).

Impact of Extreme Deprivation on Brain Development



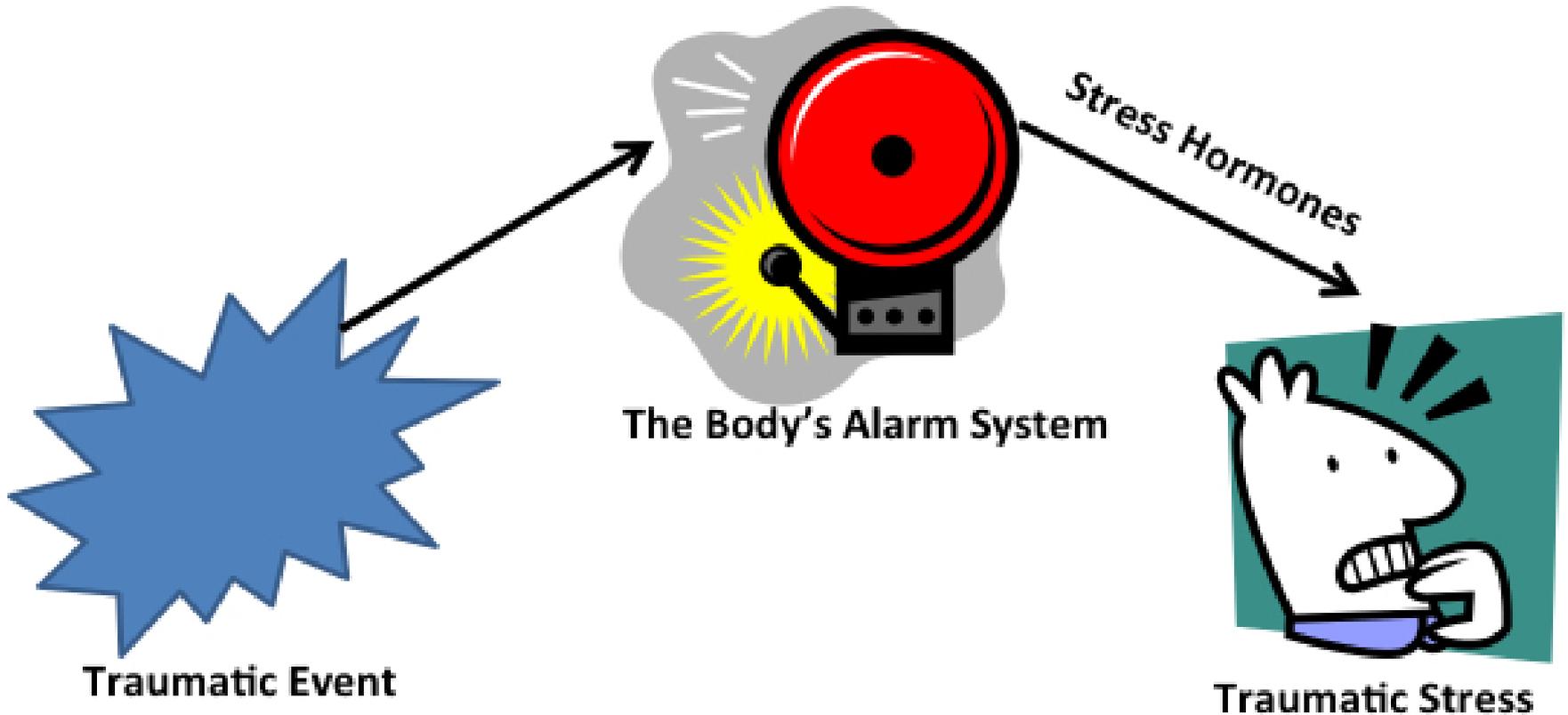
SITUATIONS THAT CAN BE TRAUMATIC

Can you name some?

What Is Child Traumatic Stress?

- Child traumatic stress refers to the *physical and emotional responses* of a child to threatening situations.
- Traumatic events overwhelm a child's capacity to cope and elicit feelings of terror, powerlessness, and out-of-control physiological arousal.

Traumatic Stress Response Cycle



Source: Georgetown University Center for Child & Human Development. (n.d.). *Stress and the developing brain: The stress response*. Retrieved from Center for Early Childhood Mental Health Consultation website: http://www.ecmhc.org/tutorials/trauma/mod2_1.html

“Flipping the Lid”



Figure 1. A model of the brain.

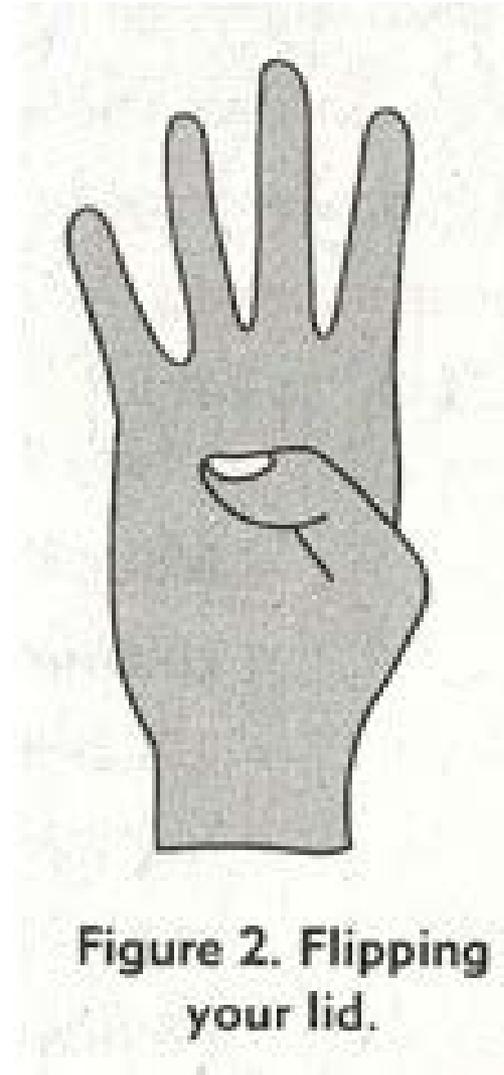


Figure 2. Flipping your lid.

Dinosaur Brain



Traumatic Stress Response Cycle

- Connections in the brain that are used a lot become stronger, quicker, more automatic – they are “Use Dependent”.
- When it comes to the stress response system, we say it becomes “sensitized”.
- The stress hormones produced during trauma also interfere with the development of higher brain functions.
- Past trauma causes the brain to interpret minor events as threatening.

Traumatic Stress Response Cycle

- The limbic system has a disproportionate fear/emotional response to the experience and sends signals to the brainstem.
- Cortisol and adrenaline are released, increasing heart rate and respiration.
- Fight, flight, or freeze response occurs.
- Prefrontal cortex is skipped (lack of reasoning), leading to impulsive reactions.
- Memories of the event can be foggy and stored erratically.

Memory and Associations

What do you associate with:



Memory and Associations

What do you associate with:



Memory and Associations

What do you associate with:

<https://www.youtube.com/watch?v=t1TcDHrkQYg>

<https://www.youtube.com/watch?v=h04CH9YZcpl>

Trauma and Memory

- Children with early trauma may retain implicit memories of abuse:
 - Physical or emotional sensations can trigger these memories, causing flashbacks, nightmares, or other distressing reactions



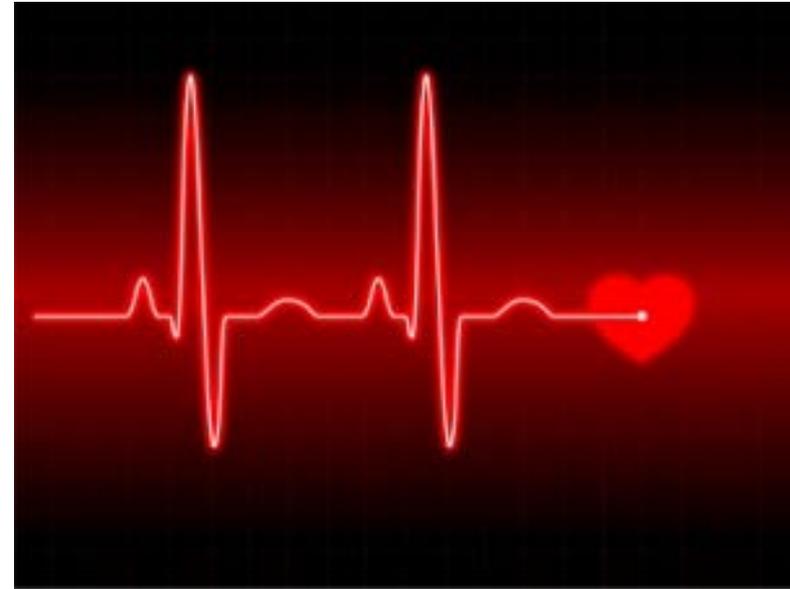
Results of Trauma and Stress

- People generally have three possible responses when confronting trauma or danger:
 - Fight
 - Flight
 - Freeze

Hyperarousal Recurrent

- **Classic fight or flight response:**

- Heart rate goes up
- Blood pressure increases
- Adrenalin is released
- Focus on external threat
- Behavioral strategy is try to run away or try to resist by fighting



Hyperarousal Recurrent

- **Sensitization can lead to:**
 - High resting heart rate
 - Behaviorally explosive – exaggerated response
 - Dysregulated
 - Poor memory and focus
 - Frequently get labeled as:
 - ADHD
 - Conduct Disorder
 - Oppositional Defiant Disorder (ODD)
 - Anger management problems

Dissociation Recurrent

negative thing?

- **Takes place more commonly if you are very young.**
When you are an infant, you can't fight or flee very effectively. So you tend to have to dissociate.
- **What your brain does when you are using this coping method:**
 - Rather than increasing your heart rate, it decreases your heart rate.
 - Rather than making you focus externally, it makes you focus internally.
 - You are essentially using a form of psychological flight.
 - You can't get away. It is an inescapable and often a painful experience so your brain helps protect you by taking you away from that experience.

Dissociation Recurrent

- **Sensitization can lead to:**
 - Very, very compliant – can be false compliance.
 - Pleasing or flat aspect
 - “Daydreaming”
 - Frequent somatic complaints – head, muscle, stomach aches, constipation. High pain tolerance
 - Intelligent but poor at math
 - Poor processing speed
 - Frequently get labeled as:
 - ADHD – inattentive type
 - Depression
 - Developmental Delays or Autism
 - Can look like absence seizures

Combined Hyperarousal & Dissociation Responses

- **Sensitization can lead to:**
 - External reactivity
 - Inattentive, lack of focus, poor memory
 - Can look very flat
 - Looks like Absence seizures
 - Frequently get labeled as:
 - ADHD
 - Depressed
 - Can look like absence seizures
 - Bipolar

Results of Trauma and Stress

Most Common Areas Affected by Trauma and Stress:

- Cause and effect thinking
- Problem solving skills
- Moral development
- Social skills/ reciprocity
- Trust, respect for authority
- Delayed gratification
- Abstract thinking
- Initiative

Results of Trauma and Stress

Maladaptive coping strategies can lead to behaviors including:

- High activity levels, irritability, or acting out
- Emotional detachment, unresponsiveness, distance, or numbness
- Hyper-vigilance, or feeling that danger is present even when it is not
- Relationship problems
- Discipline problems and poor learning
- Poor memory and processing – can look lazy or lying
- Poorly organized

Results of Trauma and Stress

What responses and reactions does your child have?



Coping

How do you cope when stressed and/or angry?



Coping

- Release of Dopamine and Adrenaline help decrease physiological distress.
- Music, rhythm, and sensory input.
- Exercise
- Positive Human Interactions
- Positive Spiritual Interactions
- Behavior consistent with value system



Coping

- Release of Dopamine and Adrenaline helps decrease physiological distress.



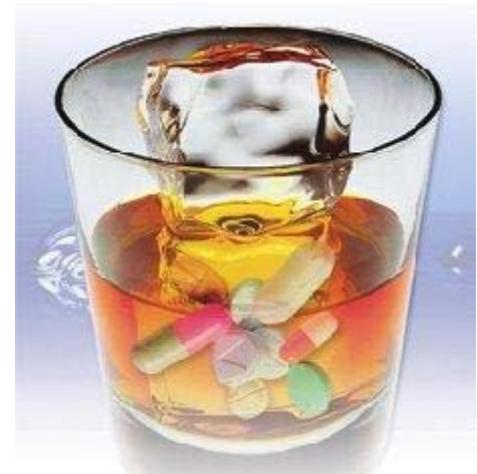
- Sweet, salty and fatty foods

- Sex

- Drugs of abuse – alcohol, cocaine, opiates, stimulants

- Cut, pick and pull

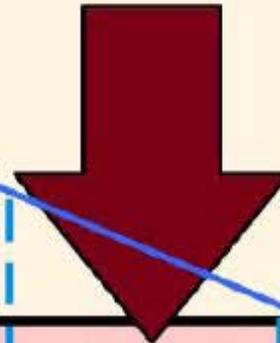
- Vomit



- Four main ways to self-regulate
 - Top down – use cognitive strengths to manage feelings and reactions
 - Bottom up – use somatosensory things to soothe and manage emotions like music, rocking, swinging, dance (rhythm), clay or toys to manipulate.
 - Relationships
 - Dissociate
 - Distract and forget

State-dependence of Reward:

Diminishing reward options with shift up Arousal Continuum



Reward Elements	Beliefs	Relational	Sweet, Salt, Fat, Sex	Relief of Distress	Rocking, Self-stim
Primary secondary 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

Nucleus Accumbens: NA

Ventral Tegmental Area: VTA



So what do we do about it?

Medicate them

- ADHD
- Bipolar Disorder
- Depression
- Developmental Delays or Autism
- Conduct Disorder
- Oppositional Defiant Disorder (ODD)
- Anger management problems
- Seizures
- Schizophrenia

What Medications Do...

- Medications can temporarily alter brain chemistry and therefore can have an affect on thoughts, feelings and behaviors.
- Therefore they can make a child capable of participating in and benefiting from certain kinds of therapeutic experiences.

What Medications Don't Do...

- Medication do not “grow” the brain or increase the number of neural connections that result in long term, sustained change.
- Medications cannot provide the types of patterned, repetitive experiences required to reorganize parts of the brain involved in the symptoms.

Three Reasons to Use Medications:

- Provide symptom relief for psychiatric conditions that have medication targets
- Improve functioning by relieving symptoms
- Reduce high-risk symptoms (e.g., suicidality, psychosis)

Medications can be helpful when they are used as a supplement to a thoughtful, multidimensional treatment process. No medication by itself without other experiences is going to make any enduring and meaningful change in a kid's life.

Become a Trauma Informed School

1. Maximize physical and psychological safety.
2. Make the school day therapeutic
3. Help the child understand and manage overwhelming emotions and problem behaviors.
4. Help the whole family

1. Maximizing Physical and Psychological Safety

Simply removing a child from a dangerous environment will not by itself undo the serious consequences or reverse the negative impacts of early fear learning. **Simply moving a child out of immediate danger does not in itself reverse or eliminate the way that he or she has learned to be fearful.**

What Is Psychological Safety?

- **What is psychological safety?**
- **What does it look like?**
- **How can you tell if a child or parent feels safe?**
- **How can you tell if a child or parent feels unsafe?**

What Is Psychological Un-Safety?

- They are Hypervigilant of non-verbal cues
- They tend to over-read frustration
- They tend to interpret anger into hate
- The child may seem to very controlling
- They lack flexibility

Create Psychological Safety

- Be aware of your reactions and respond to their cues
 - Be attentive and attuned
- Be aware of the intimacy Barrier
 - The most powerful way to experience pleasure and one of the most important forms of glue in our species is the capacity to feel reward from human beings.
 - Many triggers – particularly around intimacy lead to dissociation.
 - Parallel play vs. didactic play

2. Make the School Day Therapeutic

- Find at least one person who is irrationally in love with this child.



“In order to develop normally, a child requires progressively more complex joint activity with one or more adults who have an irrational emotional relationship with the child. Somebody’s got to be crazy about that kid. That’s number one. First, last and always.”

Urie Bronfenbrenner

2. Make the School Day Therapeutic

- Find at least one person who is irrationally in love with this child.
- Know what stage of development the child is in.

Family Portrait

Drawn by an 8 yr-old boy who was adopted at 3 from Eastern European orphanage.



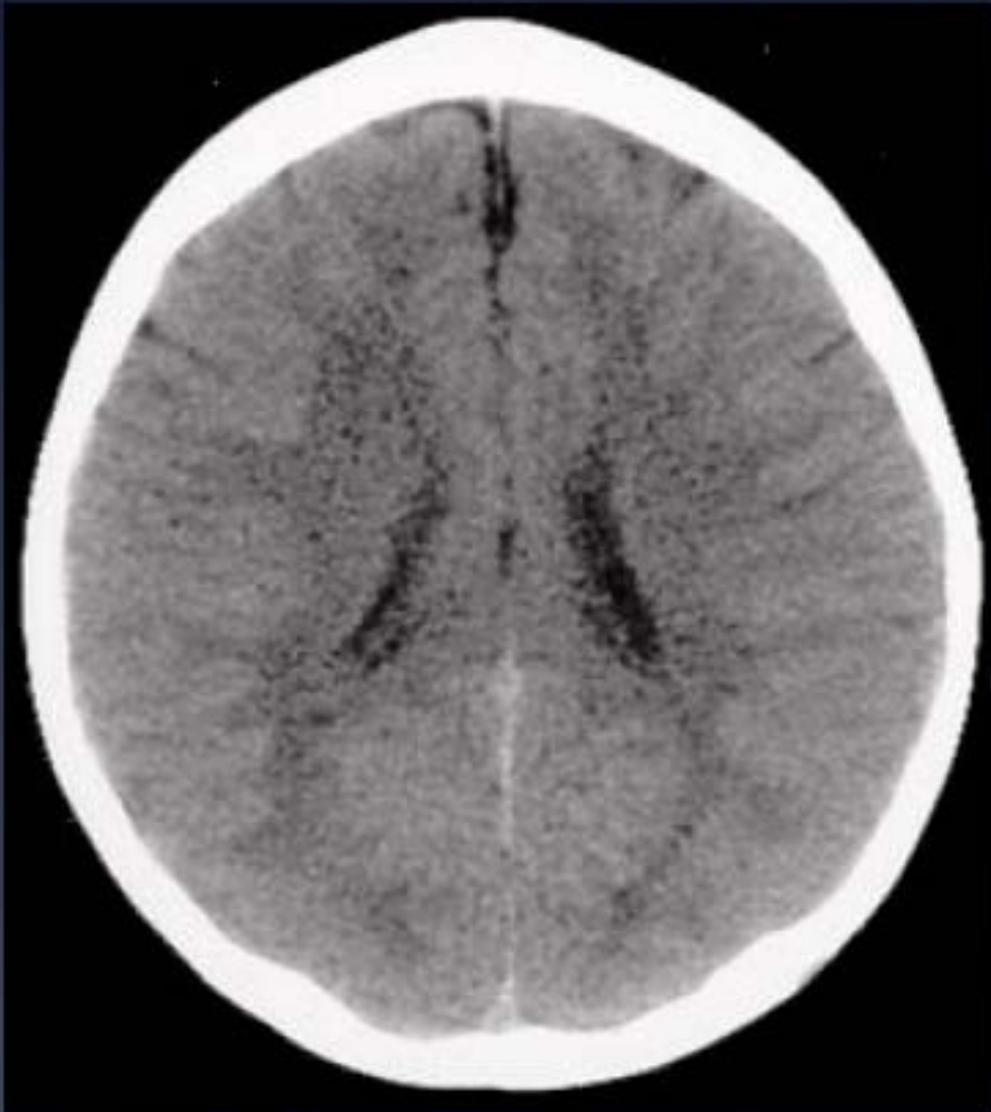
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www.childtrauma.org

Family Portrait

Drawn by a 14 yr-old boy who was neglected by his caregiver during his first 18 months of life.



3 Year Old Children



Normal



Extreme Neglect

Unrealistic expectations of adults servicing these children collide with external behaviors of traumatized youth.

Rejected children get angry



Neglected children act or feel crazy

Rejected and neglected children begin to appear evil.

What is the physical age of your child?

What is the developmental/emotional age of your child?

2. Make the School Day Therapeutic

- Find at least one person who is irrationally in love with this child.
- Know what stage of development the child is in.
- Allow for somatosensory (regulating) activities throughout the day.

Somatosensory Activities

- Exploration, texture, movement and rhythm all help regulate the child.



2. Make the School Day Therapeutic

- Find at least one person who is irrationally in love with this child.
- Know what stage of development the child is in.
- Allow for somatosensory (regulating) activities throughout the day.
- Allow for connection throughout the day.
- Be a team

3. Help the child understand and manage overwhelming emotions and problem behaviors.

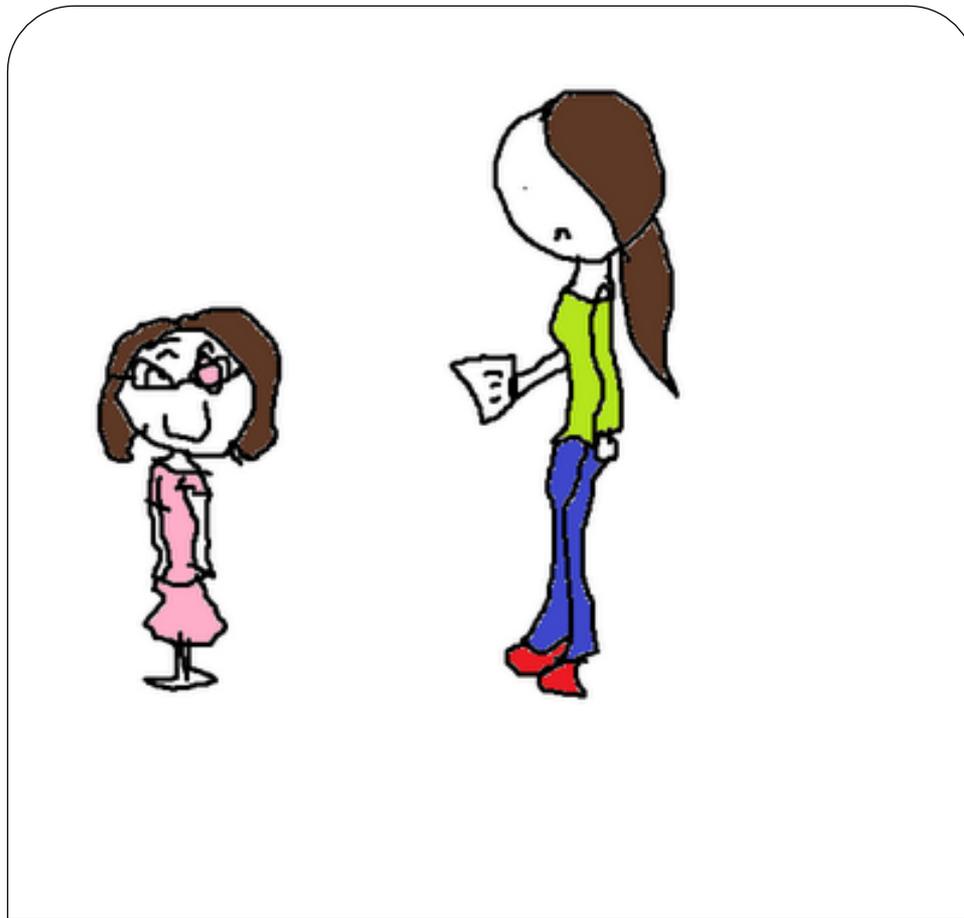
- Keep kids in school

- Stay Calm – Children will mirror you and you will mirror them.
- Take nothing personally – unless you should
- Need Nothing from the child
- Be a detective rather than a disciplinarian
 - What's causing the behavior?
 - when they are done raging, ask, “Are you ok? Did something happen that is bothering you? Do you want to talk about it?”
 - Watch children carefully for how they regulate themselves and help them do it in pro-social ways.

Instead of focusing on the symptoms of the problem, we have to tell ourselves that if this child were regulated, he would not do that. The question for us is how do we get him regulated?

4. Help the whole family

- The best way to help a child is to help her parents.
- As a system, we can partner to help parents become more connected, less stressed, and more skilled.



NURTURING THE TRAUMATIZED BRAIN DAILY

Every action, reaction and interaction has significance.

Contact and More Information

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