

# Adversity and the Brain

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**Revelations in Education**

**Desautels\_phd**

**Connection + Purpose = Well-Being**

# Framework and Discipline

## Applied Educational Neuroscience

- Not a program but the foundation for how we sit beside our students in relationship and development!
- Educator Brain State
- Triune Brain and how we meet students where they are.



# Relationships and Regulation

- Brain foods
- Relationships-attachment is the carrier of all development- I meet the child's needs
- Regulation- I am the external modem- emotions, body temperature, and blood sugar- I provide a healthy interaction and balance between sympathetic and parasympathetic response.
- Brain chemistry predicts mental health or mental illness
- We secrete excitatory neurons when we are cold, hungry, lonely, fearful- they give us the energy to fight or flee – glutamate, adrenaline, cortisol
- Inhibitory- Serotonin is our master regulator! We want that set point or balance for self regulation

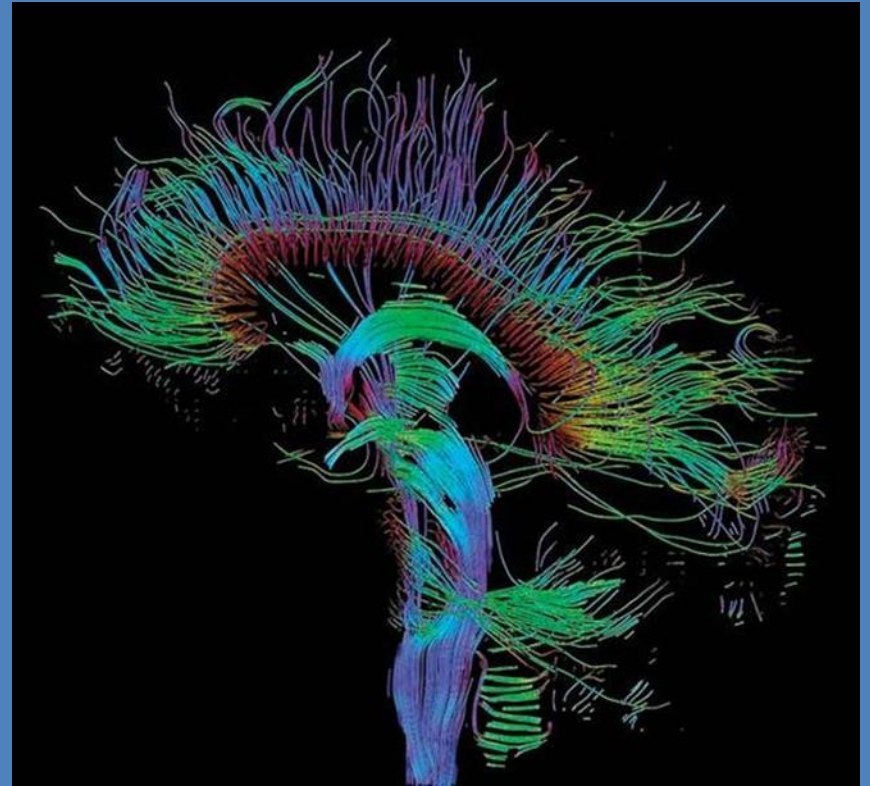
# Adversity/ Trauma

## Physiological/ Psychological

- Brains have changed – (pre and post natal )
- Beliefs have changed- I'm not valuable and I have lost my voice
- Biology has become vulnerable
- Our challenge- how do I meet you where you are? How do I give you a voice?
- How do I give you some good words?
- Dr. Karyn Purvis/  
Children from hard places!

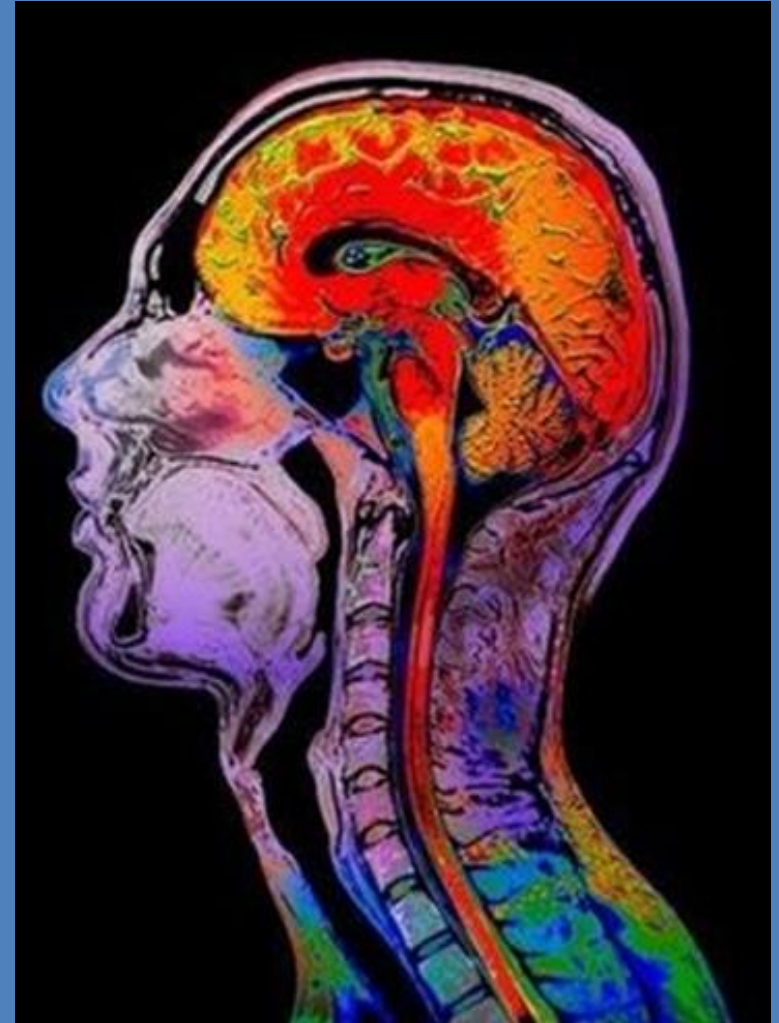
# Framework!!!

- Brain does not react to the world but brains predict and construct all of our experiences of the world.



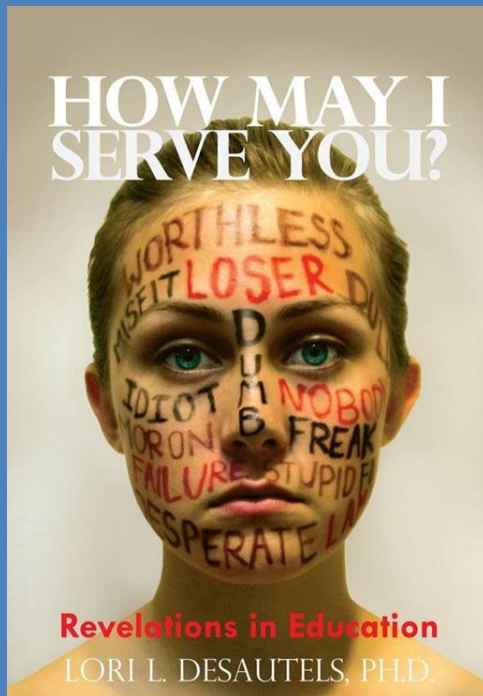
# Neuro-Development and Neuro-Regulation

- All Behavior is communication
- Attachment is the carrier of all development
- We must meet the student in their brain development , not academically
- Life Disruptions adversely affect the structure and function of the brain



# Statistics/ CDC

- In just the five years between 2010 and 2015, the number of U.S. teens who felt useless and joyless – [classic symptoms of depression](#) – surged 33 percent in large national surveys. Teen suicide attempts increased 23 percent. Even more troubling, the number of 13- to 18-year-olds who committed s
- suicide jumped 31 percent.



- The following are key findings from this report about mental disorders among children aged 3–17 years:
- Millions of American children live with depression, anxiety, ADHD, autism spectrum disorders, Tourette syndrome or a host of other mental health issues.
- ADHD was the most prevalent current diagnosis among children aged 3–17 years.
- The number of children with a mental disorder increased with age, with the exception of autism spectrum disorders, which was highest among 6 to 11 year old children.
- Boys were more likely than girls to have ADHD, behavioral or conduct problems, autism spectrum disorders, anxiety, Tourette syndrome, and cigarette dependence.
- Adolescent boys aged 12–17 years were more likely than girls to die by suicide.
- Adolescent girls were more likely than boys to have depression or an alcohol use disorder.



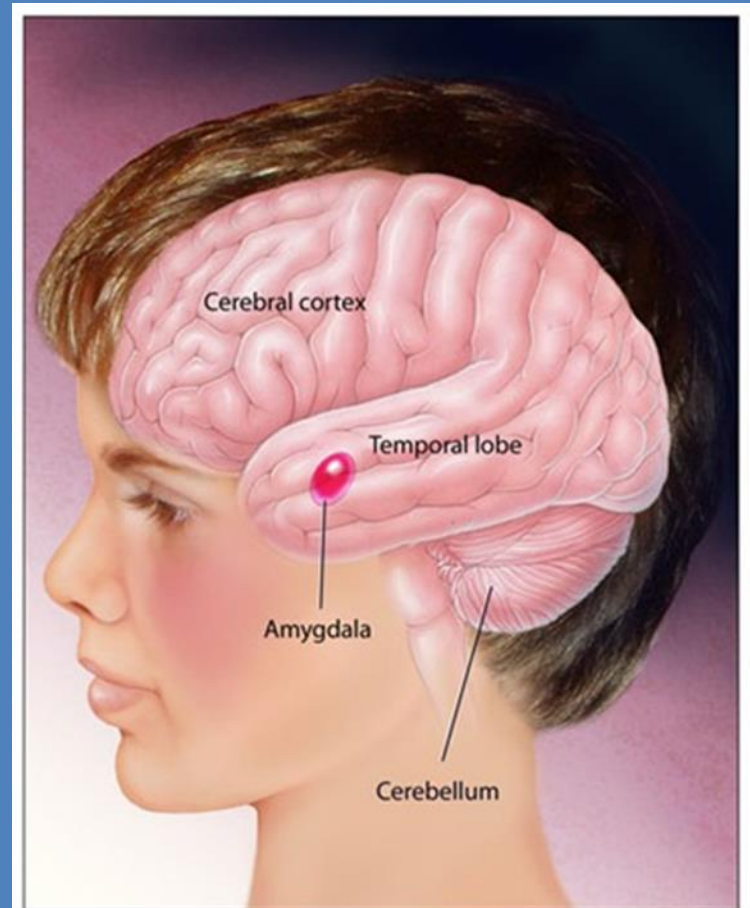
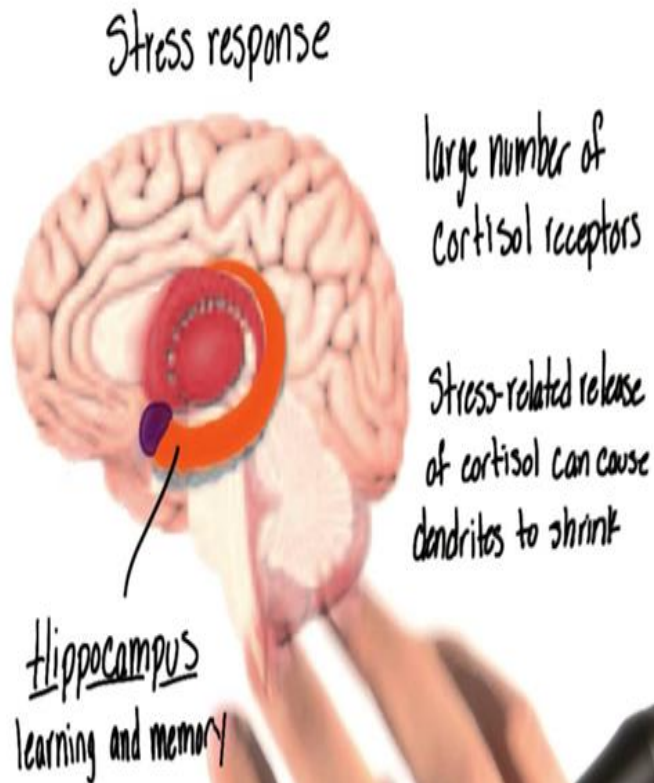
# Statistics

- 25% of our nation's children are growing up with significant poverty
- Over 20% of our students in general education classrooms are walking in with anxiety and dysregulated
- Over 80% of adversity calls to CPS are concerning neglect
- 15 million American children and adolescents are affected by a mental or behavioral health issue and less than 25% are receiving treatment.
- Our brains are social organs and emotions are contagious

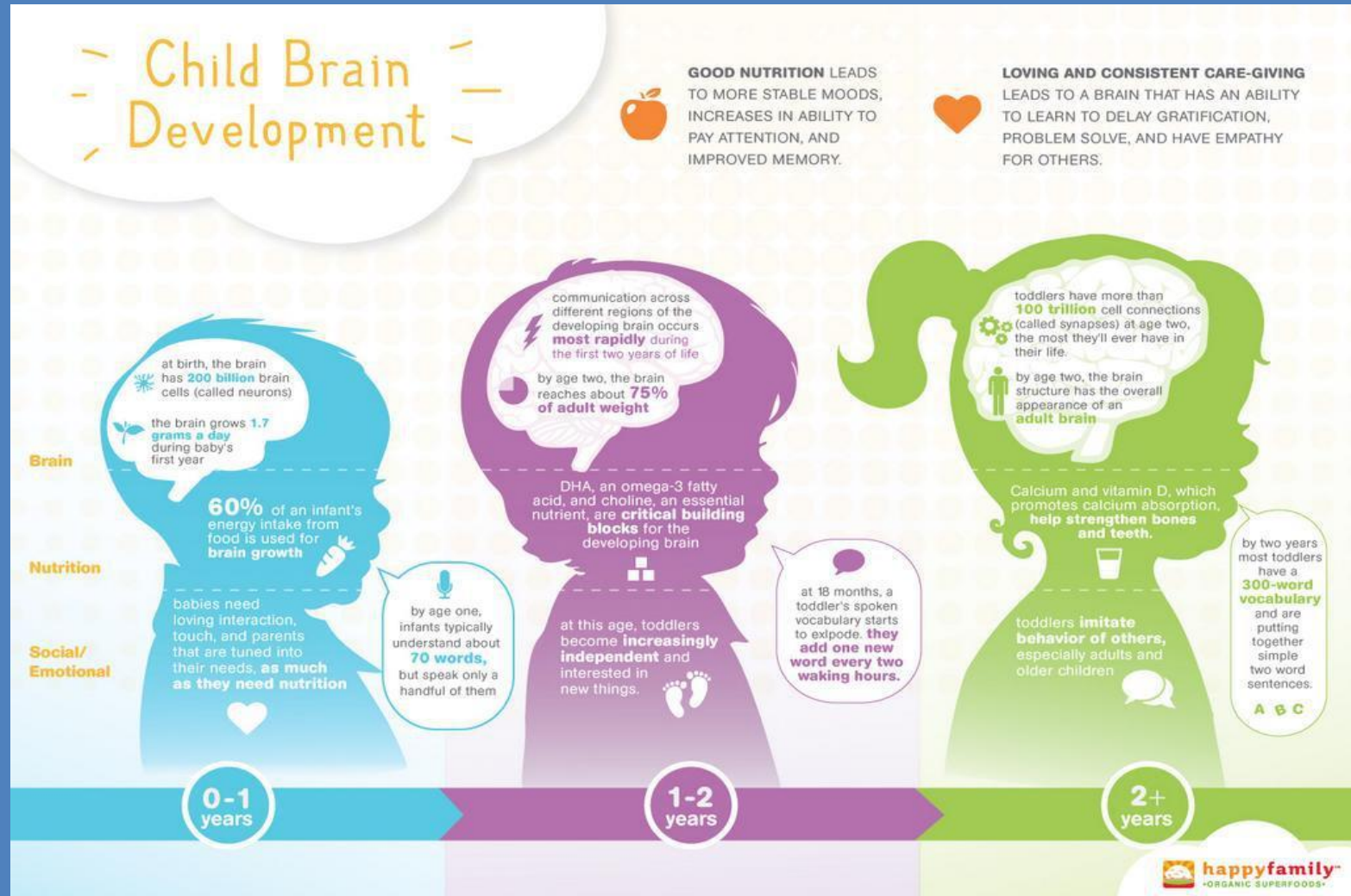




# Neuro-Development



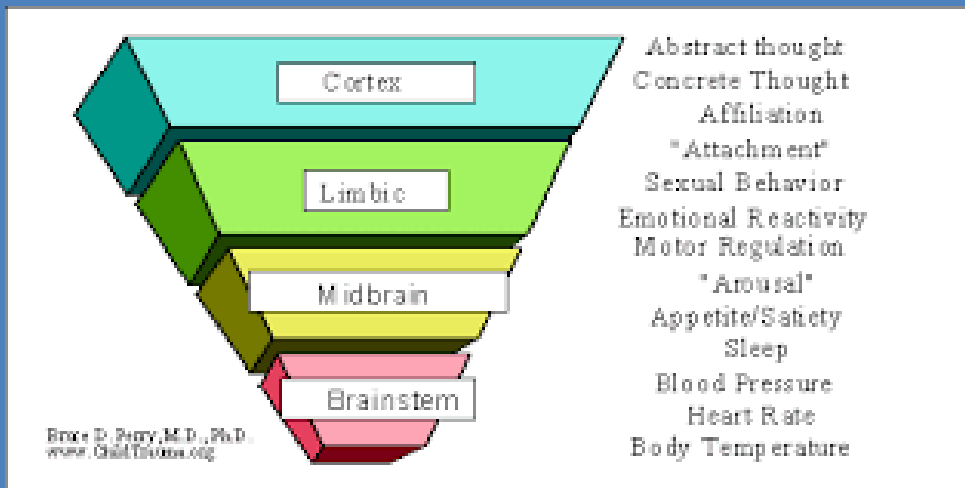
# Brain Development



# Brain Development Model

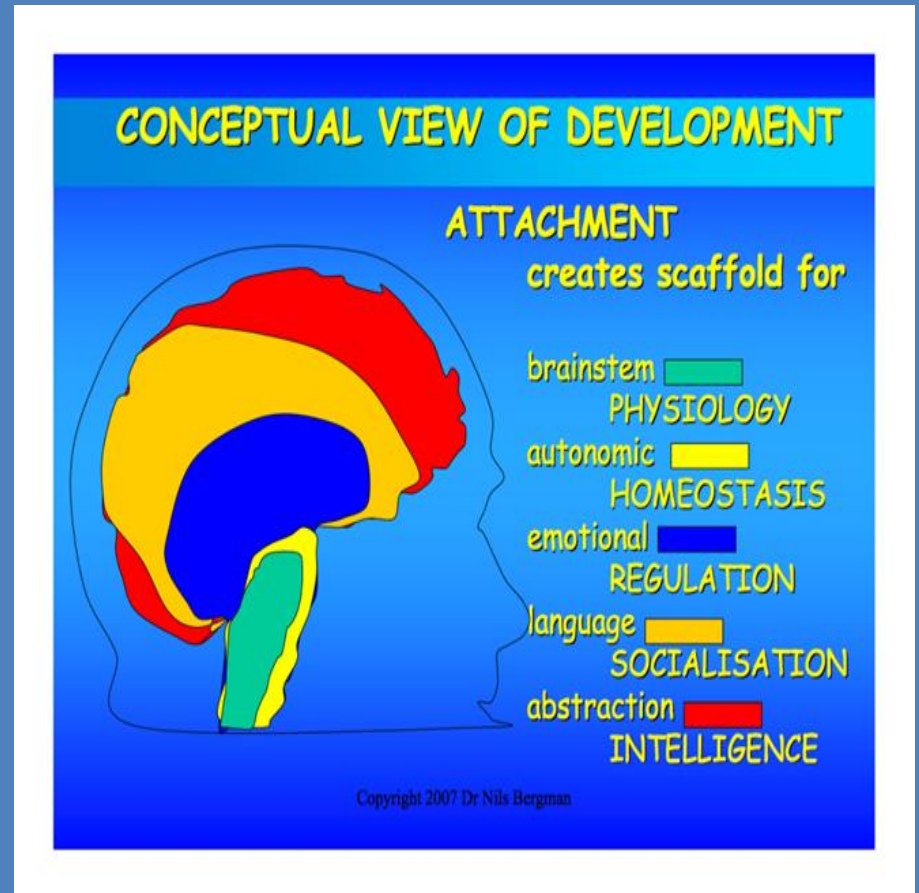
## Meeting Students Where They Are

- Language of the brain stem is sensation
- Language of the limbic system is feelings or emotions
- Language of the cortex is words



# Neuro-Development

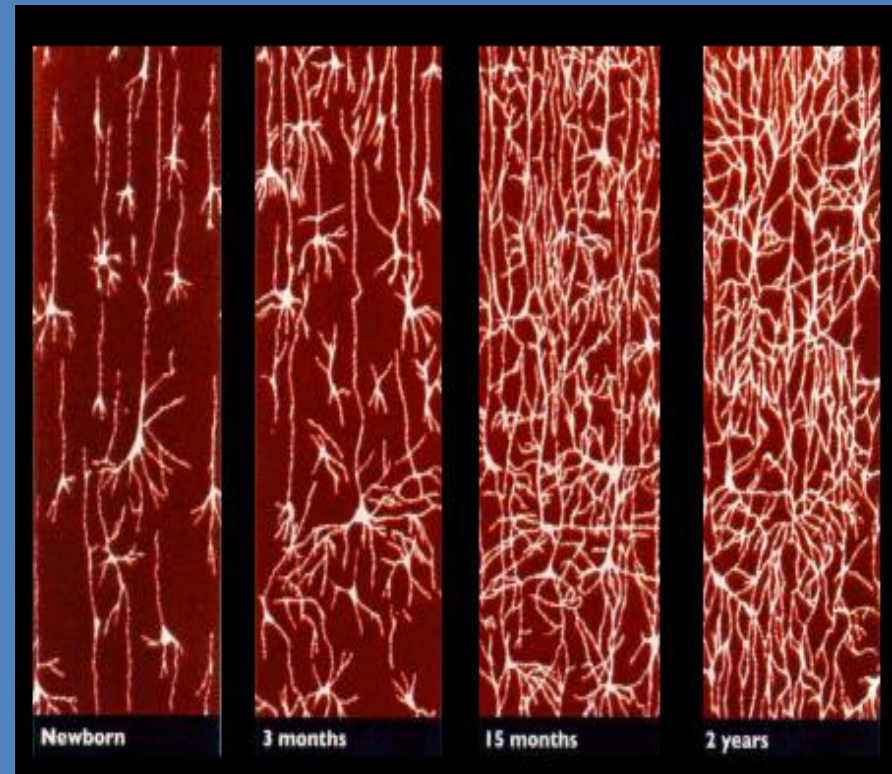
- Back to front and Inside Out
- Cognition
- Affiliation
- Regulation
- Attachment





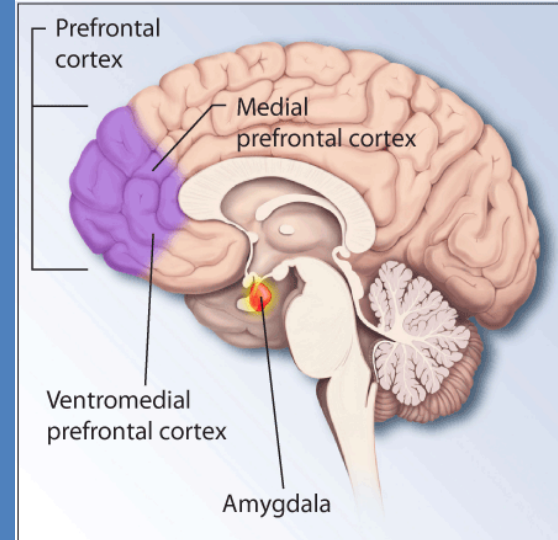
# Early Development

- Right Hemisphere- First Year of Life
- Left Hemisphere- Second Year of Life
- Neuroplasticity
- Last trimester to two years- greatest time of brain development
- BDNF- Provides protection to the hippocampus/ activating NB
- 1 billion synapses in a cubic centimeter of brain tissue in early development



# Brain Development

- Activation of RH offers access to the stored physical and emotional traumatic memories, internal sensations, feelings and thoughts that can be expressed in visual form.
- RH is activated followed by limbic system, , cognitive and prefrontal structures.
- We are in a paradigm shift from behavior to cognition to bodily based emotions as the RH is the seat of body mind self.



Brain Structures Involved in Dealing with Fear and Stress

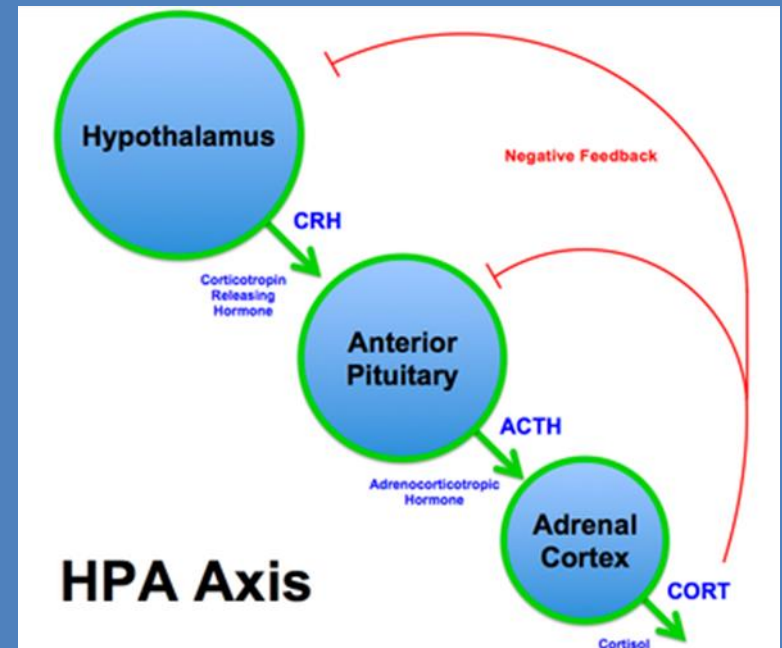
# Adverse Childhood Experiences- Stress Response Systems

- ACE's change the architecture of the brain
- Trigger inflammation in both brain and body
- Erosion of telomere caps on the ends of strands of DNA
- Can reset our lifelong level of stress and reactivity
- Adversity can become rooted in the body's immune system
- Early unpredictable stress is most damaging!
- Your emotional biography becomes your physical biology
- Two stress systems- HPA
- And SAM
- In young children the SRS is still developing like the brain – so with early chronic stress the body and brain become flooded with inflammatory neuro-chemicals.



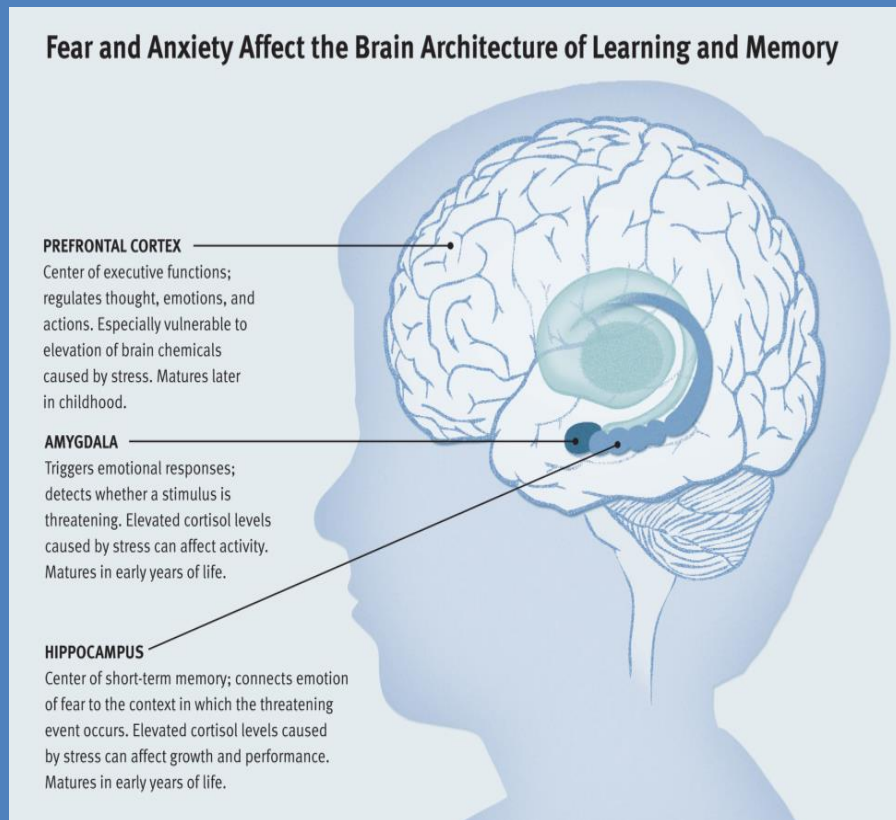
# HPA and SAM

- In young children, the HPA axis is still developing so with early chronic stress the body becomes flooded with inflammatory stress neurochemicals. Early childhood stress reprograms how we will react to stress our entire lives! Early chronic unpredictable stress is most damaging.
- Stress causes the brain and body to marinate in toxic inflammatory chemicals. ACE research shows that both the physical and emotional suffering are rooted in the complex immune system- our body's operating control center.



# Hippocampus

- Steinberg calls attention to the work of Dr. J. Douglas Bremner who does research on Post-traumatic Stress Disorder (PTSD). In an [on-line article](#) Bremner writes: "Recent studies have shown that victims of childhood adversity/ abuse and neglect and combat veterans actually experience physical changes to the hippocampus, a part of the brain involved in learning and memory, as well as in the handling of stress. The hippocampus also works closely with the medial prefrontal cortex, an area of the brain that regulates our emotional response to fear and stress."



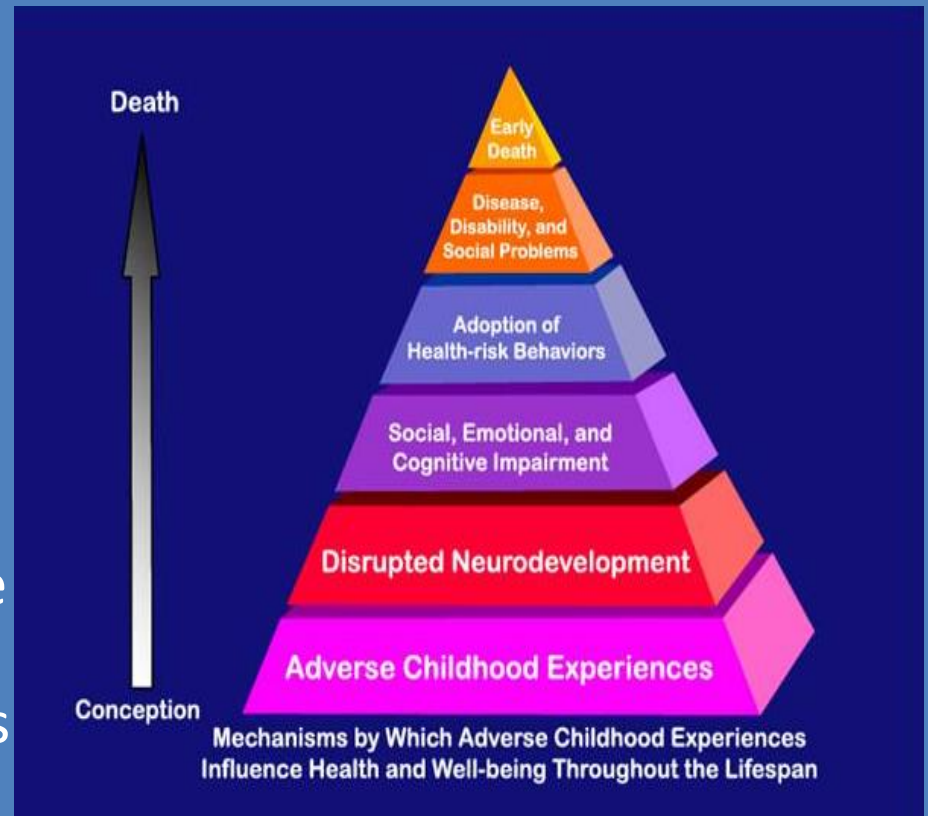
# Hippocampus

- The higher the ACE, the smaller the cerebral gray matter or brain volume in the PFC, amygdala and sensory association cortices and cerebellum. Frontal regions are also underactive making individuals hyperactive to very small stressors.



# Theory of Everything

- Correlation between childhood adversity/ brain architecture/ adult well-being!
- The immune system is the body's operating system! Our emotional biography becomes our physical biology. Early stress we face when we were young, catches up with us as adults altering our bodies, cells and even our DNA

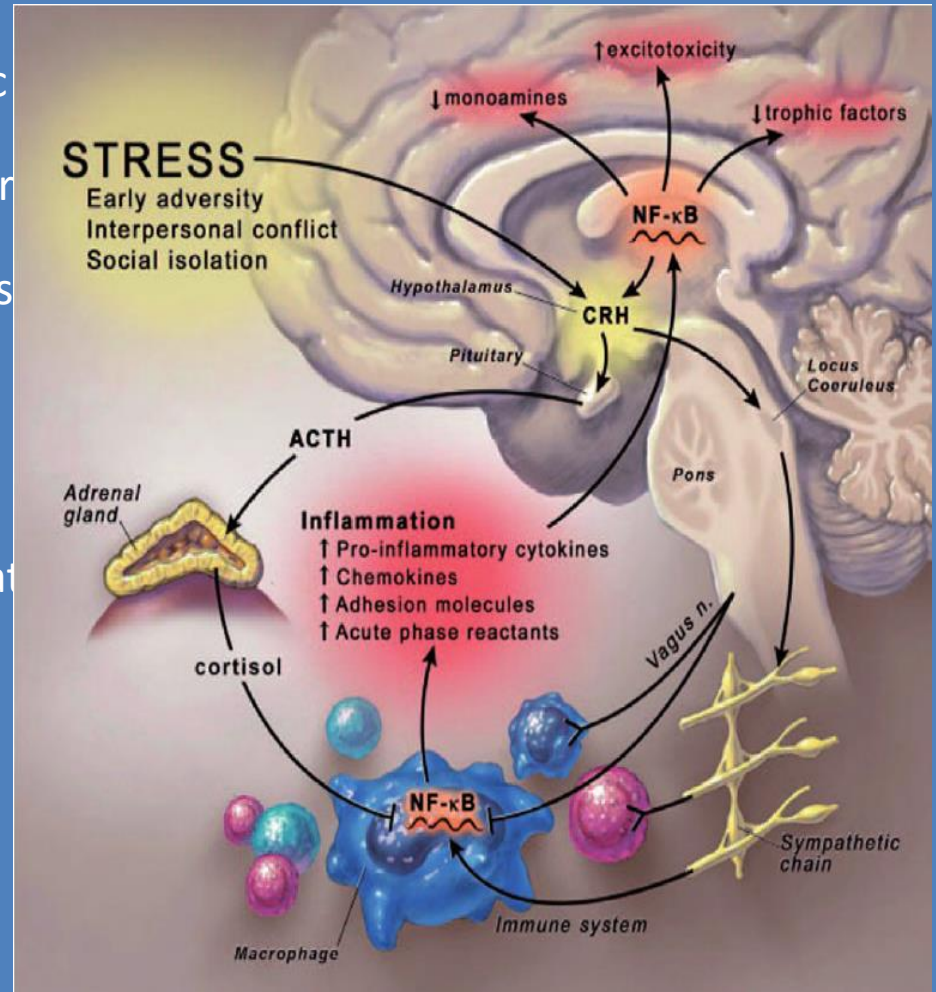


# What it looks like in a child?

- We had no knowledge of **complex developmental trauma**.
- 
- His negative behaviors were the result of his brain constantly sending him signals that he was in danger. To him, even small things were viewed as life or death, and he responded accordingly
- We learned that his **brain had been wired by chronic traumatic experiences** so that he was living in a **constant state of fear**.
- He was not doing the negative behaviors on purpose.

# Stress

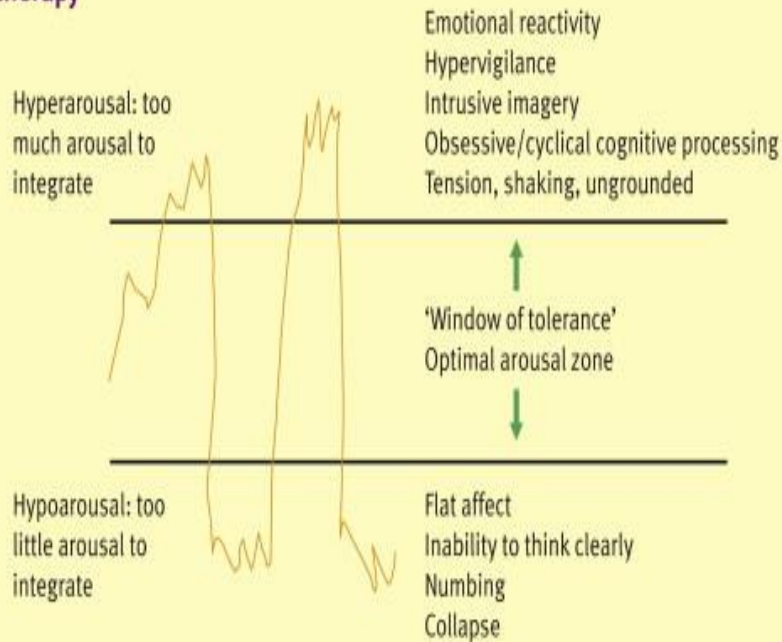
- Causes the brain to marinate in toxic inflammatory chemicals
- Alters our bodies, cells, and even our DNA
- HPA releases inflammatory cytokines that promote inflammation
- White blood cells secrete cytokines to help destroy pathogens but when these are not regulated they cause more damage- cytokines are cell signaling molecules and proteins that aid cell to cell communication in immune responses and move towards areas of inflammation and infection.





# What We See!

## The 'window of tolerance': maintaining optimal arousal for trauma-focused therapy



(Adapted from Ogden and Minton 2000)<sup>10</sup>

- We see everything as a regulation issue, not a behavioral issue. We recognize that when regulated, our students are helpful, caring, funny, smart, creative, etc.
- We try to respond to *every* behavior with gentle faces, eyes, and voices.
- Two words: Self care!



# Meeting Students Developmentally

- Pupil dilation
- Tight jaw
- Shallow fast breathing
- Not too much chaos
- Needs a gentle, soft environment
- Adversities- 3 to 6 we see ADD symptoms/ excitatory/ aggression and even violence
- 7-10- Depression/ Anxiety and aggression- low serotonin
- 12 + Bi-polar and Borderline Personality Disorders

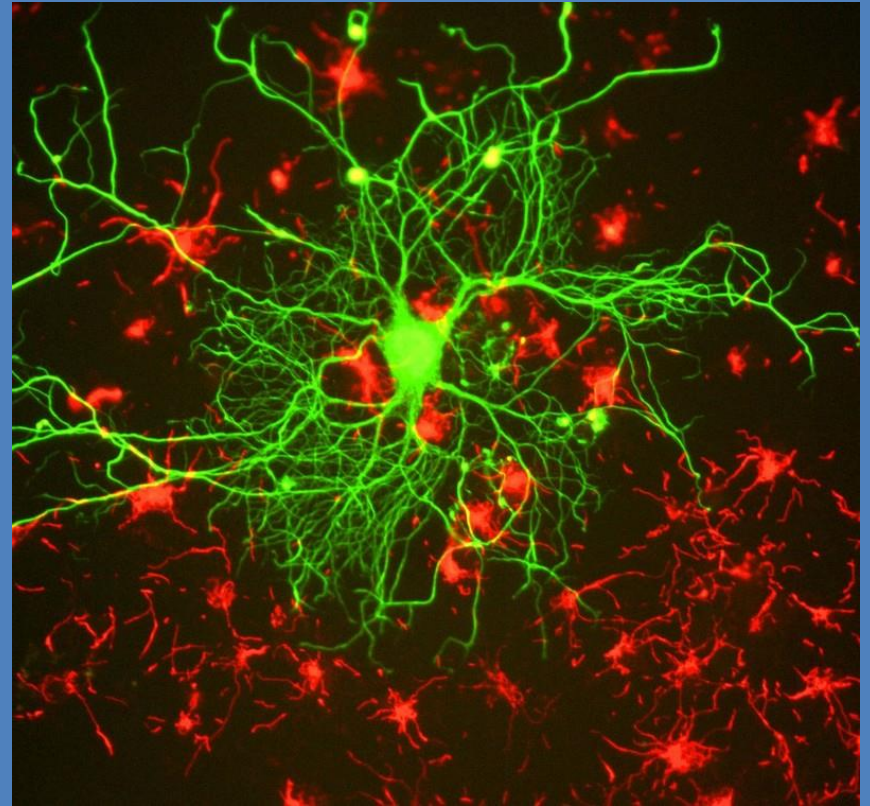
# Brain Development

## Chemistry of Fear to Chemistry of Hope

- Prenatal- most vulnerable time
- First year of life
- Traumatic birth affects brain development
- Early surgeries and accidents
- Sensory issues/ so much of misbehavior is driven by sensory stimulation
- Bubble gum/ deep muscle input elevation of IQ and academic performance!

# Epi-genetics

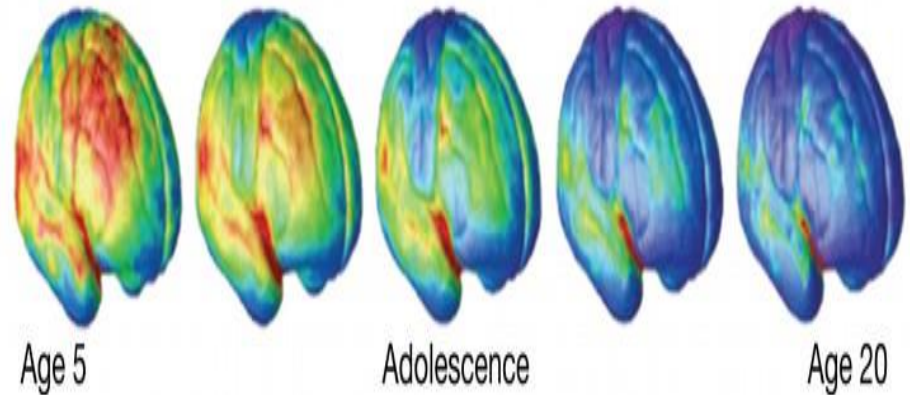
- Chemical markers are methyl groups in the hippocampi- adhere to specific genes that are supposed to govern the activity of the stress hormone! Chemical markers disable the genes that regulate the stress response. These inhibit the receptors and the receptors cannot bind to the hippocampi and cannot turn of the stress response! The genes cannot be read!



# Stress and Genetics

- John Kaufman, director of CARE research at Yale School of Medicine analyses the DNA in the saliva of healthy happy children and then compared to the saliva of children who had come from abusive or neglectful patrons, experiencing chronic stress. The children from the second group, showed changes in almost 3000 areas in their DNA and all 23 chromosomes, effectively altering forever, how appropriately their bodies would be able to respond to and rebound from future stressors.
- To the developing brain, knowing what comes next matters most. The brain can tolerate severely stressful events if they are predictable

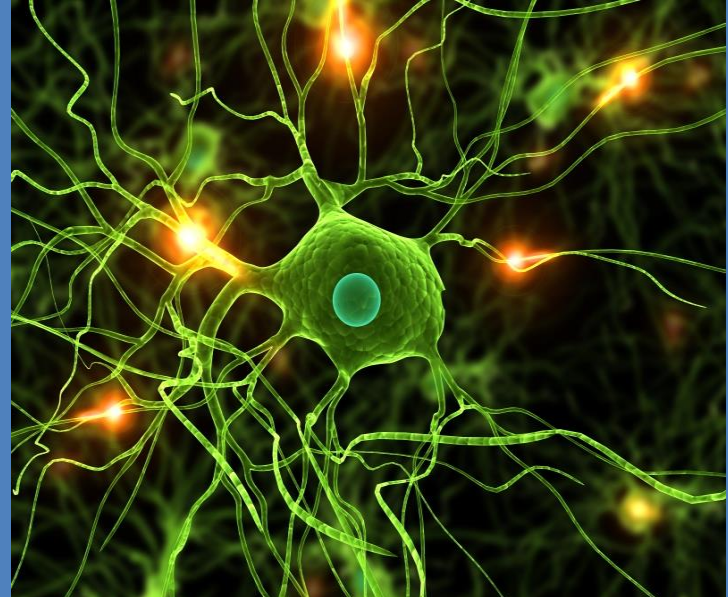
Dynamic mapping of human cortical development



Source: "Dynamic mapping of human cortical development during childhood through early adulthood," Nitin Gogtay et al., Proceedings of the National Academy of Sciences, May 25, 2004; California Institute of Technology.

# Microglial Cells

- Non-neuronal cells make up 1/10<sup>th</sup> of our brain cells
- Play an integral role in the pruning during development
- They don't like chronic stress and can crank out neurochemicals that are inflammatory that lead to neuro-inflammation
- Can kill healthy cells
- Can affect hippocampal cells that are capable of regeneration!
- Leads to a reset tone in the brain



# Adversity

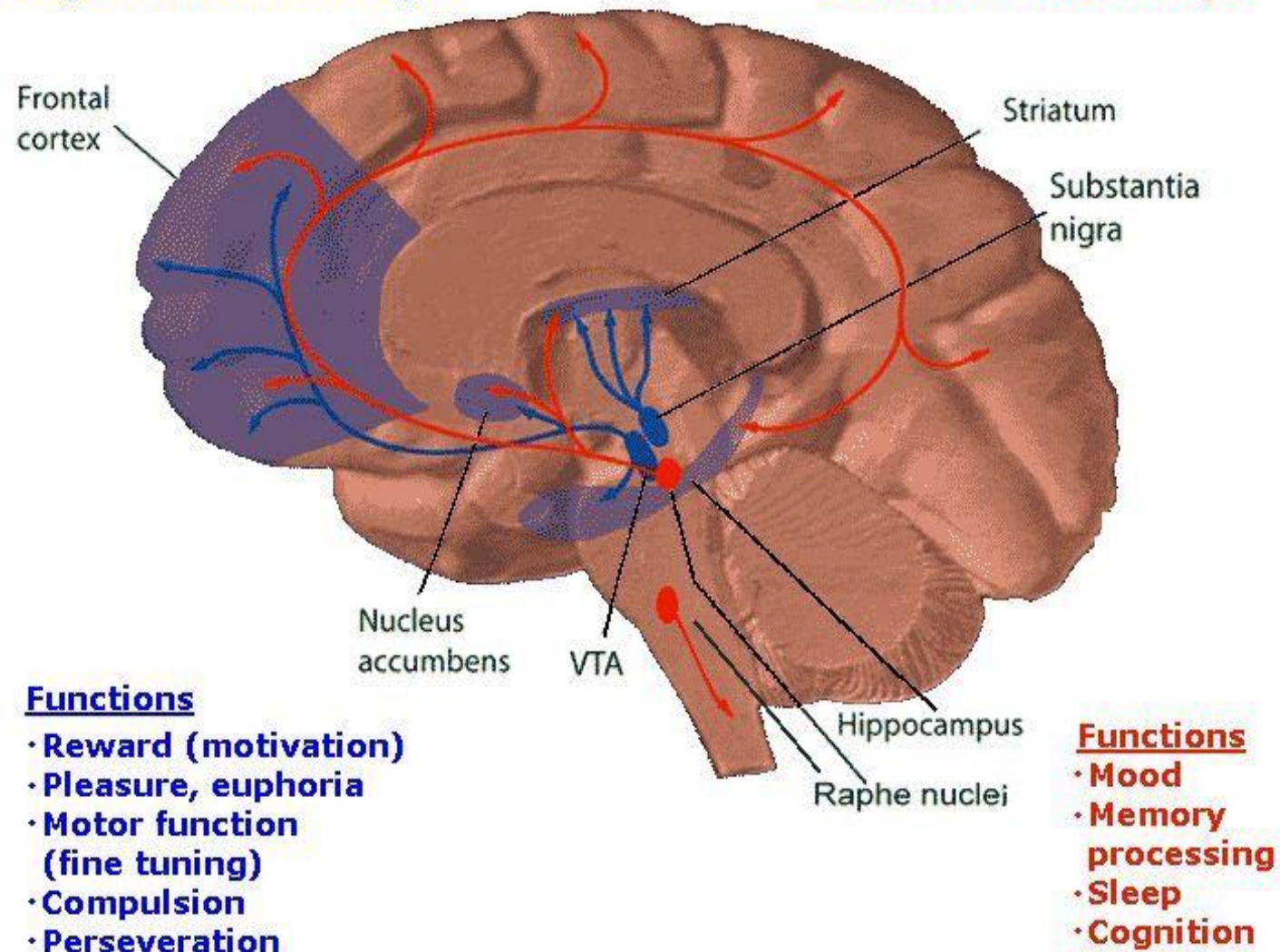
- Trauma becomes stuck in the body
- Gets under the skin
- Dose Response Relationship between ACES and Health Outcomes
- Distorted thinking
- Self or core identity distortion
- Feel like a powder keg!
- Factors that play into PTSD and Developmental Trauma Disorder
- Perceptions
- Coping Strategies
- Co-Regulator
- Inherited pre-trauma factors
- Amygdala –more active- Anterior Cingulate is underactive and this is what is suppose to quiet the amygdala



# Reward Center

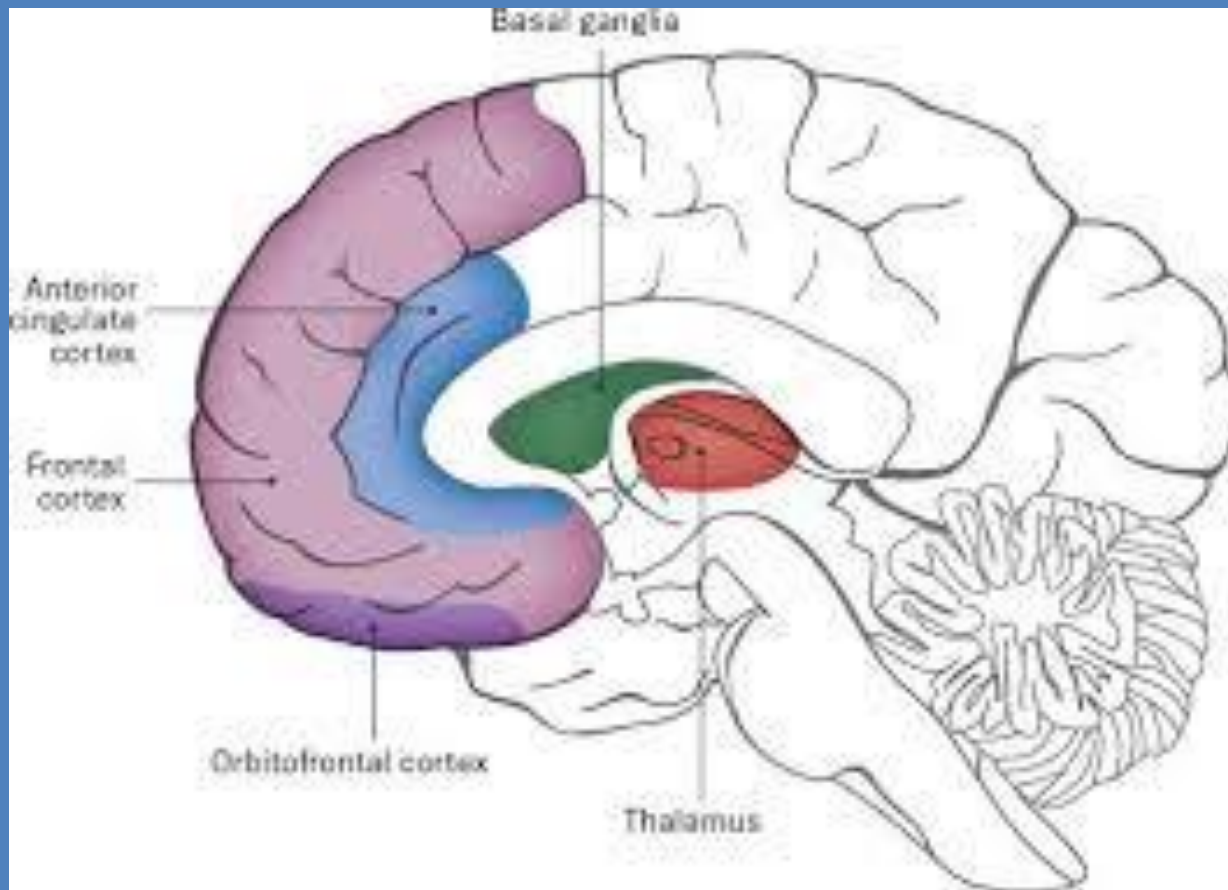
## Dopamine Pathways

## Serotonin Pathways





Anterior Cingulate is underactive and  
the Amygdala is overactive!



# Cortisol

- Sometimes there are elevated and low levels of cortisol in the aftermath of trauma and in the offspring of those who have experienced significant trauma
- These distorted levels lead to changes in thinking and behavior
- Affects metabolism
- Glucose regulation
- Inflammation
- Cognition
- Sleep
- Cardiovascular Health
- 80% of cells in our bodies have cortisol receptors
- Needed for survival helps us adapt and can strengthen immune function!
- One of only many mediators

# Cortisol and Hippocampus/ GUT

- Regular exercise and learning increase hippocampus size
- When there is increased anxiety- we see increased dendritic branching in the amygdala and orbitofrontal cortex
- We also see medial and insular cortex activity decrease with little self-awareness , insight
- Cortisol helps our bodies return to normal but in chronic stress the levels of cortisol are abnormal – trauma can produce legacies of distress and legacies of strength
- We need cortisol oscillations
- 80% of our immune cells in the gut!
- 90% of serotonin is produced in the gut
- Glucocorticoid receptors function differently in the hippocampus with chronic stress because of epigenetic changes
- The receptors cannot bind to turn off cortisol as the gene cannot be activated or read.
- The RNA cannot be read...

# Epi-Genetics

- This is a change in gene function without a change in gene sequence of DNA
- Chromosomal DNA- 2% - responsible for hereditary physical traits
- Non-coding DNA 98%- responsible for many of the emotional , behavioral, and personality traits- affected by environmental stressors
- DNA methylation blocks proteins from attaching!
- Epigenetic tags- chemical signals which attach to DNA and tell the cell to activate or suppress or silence a gene. The experience of the DNA doesn't change but the expression does.
- Most common tag is DNA methylation- helpful or unhelpful
- Gene is in off position
- Micro RNA- another epigenetic mechanism in gene regulation

# Epi- Genetics

- All cells have the same genome
- DNA is the recipe book/  
molecules are the ingredients
- Genome- a person's complete set of genetic instructions.  
Recipe book. 50 to 100 trillion cells each with their own complete set of instructions
- A change on the gene changes the function
- 200 different types of cells but have the same genome
- Gene is the blueprint
- Genes do not control our biology
- Were made of 100,000 protein parts
- Proteins respond to an environmental signal and they change shapes
- Movement of proteins creates behaviors
- Our nervous systems are like cell membranes when it comes to environmental signals

# What does all of this mean?

- Stressors without buffers change the brain!
- Significant adversity in the first year of life is correlated to worse health outcomes
- Focus on early developmental interventions
- Achievement Gap is ADVERSE environments- this is the divergence of achievement
- When you are exposed to patterns of stress- food and housing insecurity and repetitive patterns of stress activation- this leads to a sensitized stress response and this treats anything new as potentially threatening!

# What does all of this mean?

- We need to teach our students stress response capabilities for neuro-typical responses!
- Good News is Neuroplasticity – buffering the sensitized response.
- Life Disruptions!
- When our Stress Response Systems are in good working order, it can save our lives, when it is not and out of balance, it shortens our lives- *Nadine Burk Harris*



# The Deepest Well

- Body's set off a firestorm of chemical reactions to protect itself but the body remembers when the adversity ends!
- HPA- Cortisol
- SAM-Sympatho-adreno Medullary ( shorter acting – adrenaline and noradrenaline
- SAM- activates the adrenal glands and the Locus Cereuleus – is where the stress response begins and tis area regulates moods, irritability, cognition, arousal, and attention... our startle response is here! Releases too much noradrenaline
- Chronic stress affects the developing brain, immune and hormonal systems

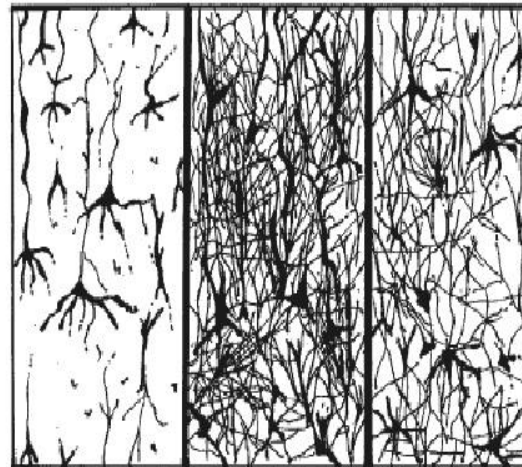
# What Does This Mean?

- Dr. Carrion's study
- With 4 or more aces, a child will have 32.6 times the academic and behavioral challenges
- Ventral Tegmental Area-Reward Center- Chronic stress messes with sensitivity of the dopamine receptors – you need more and more dopamine to feel the same amount of pleasure!
- Baby- underdeveloped sensory and nervous system- they require gentle movement, soft voices and softy music and low stimulus environment- these actually build and strengthen the nervous system
- Pain and fear reduce serotonin levels
- RH is underactive and yet RH amygdala is larger
- Sensitivity to touch and sounds, etc.
- RB development grows in a dyadic relationship with another person- the baby conveys internal states of arousal to the mother via RB to RB sensory communication.
- RH to RH- visual presence , demeanor, clean organized space, attire is repetitious recreating early attachment

# Adolescent Brain

- When children come into adolescence they go through a natural period of developmental pruning of neurons. When we are very young, we have an over production of neurons and synaptic connections. Some of these die off naturally to allow us to turn down the noise in the brain to increase our mastery skills that interest us. The brain prepares for becoming more specialized at the things we are good at and interest us- but if due to childhood stress lots of neurons and synapses have been pruned away, then when the natural pruning that occurs during adolescence begins to take place, and the brain begins to prune away naturally neurons it doesn't need, - then suddenly there may be too much pruning! Excess pruning in the integrated areas and circuitry between the hippocampi, corpus collosum, PFC, and amygdala-.
- These brain changes have a profound effect on self-regulation, attention, thoughts and behaviors. The chaotic exposure of microglia cells runs havoc and leads to a reset tone in the brain.

## Synaptic Pruning



at a child's birth      at 7 years of age      at 15 years of age

The first change after this synaptic growth spurt is a selective pruning which takes place.

In adolescence, most of this pruning is taking place in the frontal lobes.

The adolescent loses approximately 3 percent of the gray matter in the frontal lobes.

# The Story

*Remember, everyone in the classroom has a story that leads to misbehavior or defiance. Nine times out of ten, the story behind the misbehavior won't make you angry. It will break your heart."*

- Annette Breaux



# Strategies and Interventions/ Brain and Developmentally Aligned!

- Sensory Bath
- Rhythms, art, kidney beans, clay, puppets, balls, weighted blankets,
- Ask for a compromise
- “I am on duty for you!”
- 30 seconds!!
- Attunement
- Safe touch
- Smiling eyes
- Undivided attention
- Validating eye contact
- Warmth of voice
- Playful engagement

# Empowering Practices

- Dehydration- serious cognitive and behavioral challenges- produces more glutamate and glutamate is associated with seizures, aggression, violence
- Every couple of hours!
- Snack, water, sensory activity
- 400 repetitions to get one new synapse in the brain
- 12 repetitions if they are accompanied by joy and a little laughter!

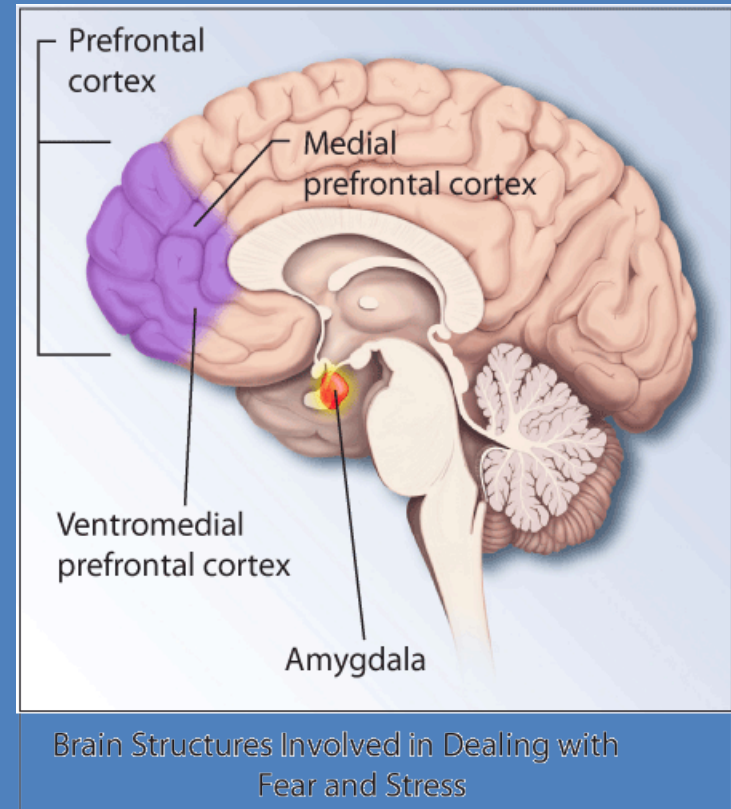


# Empowering Practices

- Self Check –in!
- Am I creating an atmosphere of fear or healing?
- Predictable ecology
- Choices and a voice
- Just sit for a minute and then tell me what you need!
- Low serotonin- you never feel full! Food issues are bodily issues!
- “ I am on duty for you today!”
- Carrying heavy objects or feeling weight of any kind can release neurotransmitters of serotonin and gaba!
- Sleep is sorely lacking for many of our students because they have not felt safe!
- I need to provide a predictable routine filled environment that students even help create!

# Brain Aligned Strategies

- Be a thermostat not a thermometer
  - When in a dysregulated state -- triggered by a memory or sensory issue -- a traumatized child's emotional age is half his chronological age or less.
  - Consider this when giving responsibilities to, say, a 12-year-old student. **What would you expect from a 6 year old?**



# Brain Stem

- Language is sensations
- Word Wall of Sensations-Cold
- Warm, hot, sweaty, twitchy, butterflies, stuck, soft, sharp, dull, itchy, shaky, trembly, tingly jittery, weak, empty, full relaxed, calm, peaceful, flowing, spreading, strong, tight, tense, dizzy, fuzzy, blurry, numb, prickly, jumpy, tearful, goosebumpy, racing, tired
- Suckers
- Cheerios
- Swallowing with a straw
- Sound therapy with feeling your vocal chords and mimicking a sound
- Ice pops
- Frozen grapes
- Sucking yogurt through a straw
- Bi-Lateral Scribbling
- Animal Totems/ symbols
- Sensation Word Wall
- Warm water/ Touching cheeks
- Hug on opposite sides
- Sound Machine
- Rocking chairs
- Scribbling
- TRE – charging and discharging emotion and trauma- contract and release muscles
- Tapping/ EFT

# Limbic Brain

- Breathing
- Movement
- Left Eye to Left Eye
- Images are a reflection of self
- What does mad look like? How big is it? What color is it?
- Metronome and sound machines
- Paint sticks and rhythms
- Show me how you would melt?
- Show me how you would freeze and shiver and then relax? Show me how you would moonwalk?
- Show me a snake pose
- Roll like a ball
- Wall push ups
- Body is a container
- Place one hand on forehead and one on heart ... breathe and place hand from forehead to belly!
- Domino Effect / 90 second rule
- Trace until I feel better
- Eye yoga
- Trumpet breath- fill up cheeks with air and repeatedly blow out!
- Guess the sound?

# Brain Stem

- Brain Bath
- From the research of Dr. Peter Levine and his somatosensory strategies, I have created a few morning meeting exercises or brainstem aligned bell work to begin the day! In the longer article I will address what areas of the brain these directly impact.
- Horse Lips- Loosen your lips and blow... allow the air to wriggle your lips and do these with a large inhale and even bigger exhale. We can laugh too as we calm the brain stem areas where the stress response begins!
- Talking funny with the tongue- Loosely place your tongue on the roof of your mouth and begin to speak holding or talk with your tongue cemented on the roof ... create a class chant to say altogether or the teacher can address the class modeling what he or she would like to share!
- Tongue stretch- with clean hands or a Kleenex, stick out your tongue and stretch it as far as it can go! This relaxes the throat, palate, upper neck and brain stem! What could you add to this to make it funny?

# Brain Stem and Limbic Brain

- Humming- There are so many ways you can incorporate humming during a brain interval or at the beginning of the day! You could initiate a Simon Says, mimic me, name that tune, or move your arms and legs to the humming. This activity releases stress and blockages in the brain stem and dopamine!
- With a different color marker in each hand, draw or scribble to the beat of the music for 30 seconds. When you finish see if your drawing turned into anything familiar or strange! Share with a classmate and then give your art a name!
- Draw what happiness looks like! Draw what sadness is! Draw how anger feels and what it is! Now look at your art and close your eyes and feel in your body if any of those feelings are there and where in your body do you feel happiness, anger or sadness.
- As a class, or in small groups, or individually create a collage of all the things that help you cope! People, places, things and pets!



# Brain Stem and Limbic Brain

- Escape Stories- These could be written out, expressed as cartoon drawings and drawn with symbols and words. Sometimes we all have had to escape or get away from something or someone that didn't feel good to us. Maybe your story is true or maybe it is a make-believe escape story. Either way, share where you were, what happened and how you escaped. Do you have a plan for the next time? What would you do different? What was the best part about this plan? Who are the people that could help you escape? After drawing or writing the Escape Story, students could color code different parts of their scenes with this chart.
  - Blue= sad
  - Orange lines- nervous
  - Yellow polka dots-happy
  - Black- feeling numb or frozen
  - Purple curvy lines- energetic
  - Red- hot and angry or mad
  - Brown-tight and tense
- We could also create a life size cut out of the outline of "us." After cutting out this life size model we color code different places in the body where we experience these feelings and then draw some coping strategies that would help lessen the negative feelings.
- Walk your students to their "Safe Place." In this visualization, I will have my students close their eyes and with soft music playing in the background, I will verbally take them on a journey to their own special place. In this focused attention exercise, they will imagine colors, sounds, tastes, people, activities, places and sensations! When they return from their "safe place" trip, we will reflect on our journeys! How did it feel? What was the best part? Who was with you? What did you see? What did you hear?
- Write your favorite word with your dominant hand four times and then write it again with your other hand. How did it feel? What was more difficult? Why? What happened in your brain when you wrote with your non-dominant hand? What would help your non-dominant hand to become stronger?

# Brain Stem and Limbic Brain

- For 30 seconds cross and hold your toes, ankles legs, wrists and arms tightly while you take five deep breaths . Slowly begin to uncross each part one at a time as you continue to breathe deeply? How did that feel?
- In groups of three, for 9 seconds begin to jump with an invisible jump rope. The three in each group will take turns holding each end of the rope and jumping for equal amounts of time. Have fun with different jumps and combinations and make sure those who are holding the rope are in sync with one another. Reflect on how this felt afterwards by writing down your jumps, the sequences of jumps and if this is an exercise that could really improve how you jump with a real rope! Why or why not?
- Drumming with pretend drums and only sticks!

- <https://www.youtube.com/watch?v=Ag6y6jz7b>



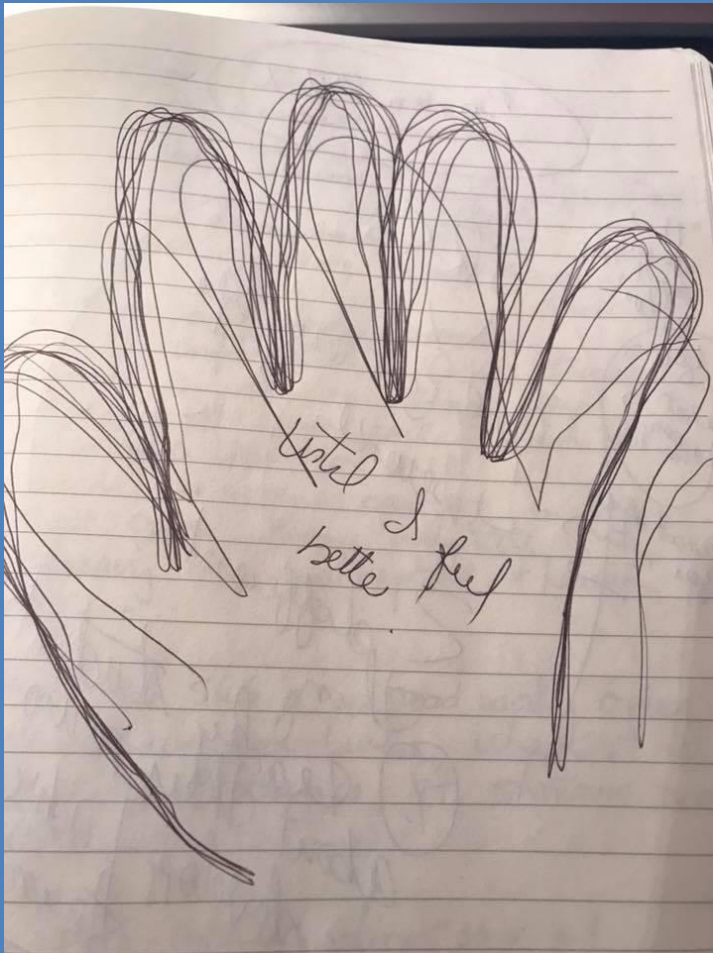
# Fill Your Paper with Colors

- Which color is the biggest?
- If it had a voice, what would it say? Which color is in charge? Which color would like to be in charge?
- Which color likes to hide? Why? What color is the happiest? Why?
- What color is the saddest or angriest?
- Extension of animal Symbols
- Select an animal to represent each member in your family
- Start with the youngest-what does it look like? What does it eat? Where does it sleep? How does it play? Is it friendly mean , wild small, scary, lovable?

# Draw Your Initials

- 1. Which letter is most developed ? 2. Which letter is least developed? 3. Which letter do you like best? 4. Which letter is most powerful? 5. Which letter is most vulnerable or get picked on? 6. What message do you get from your initials?
- Boundary Bowl- What type of things do you want on the inside of your bowl- things you want to protect or defend
- What do you want to keep out of your bowl?
- Masks
- Room of My Own/ Sensory Comforts

# Limbic System



- Going through the car wash!! Move through each place on the body with a rub, a gentle pound, a tap and contraction and release exercises!
- Ice Cube Melt
- Mimicking rhythms
- Pop rocks, mints, and tastes

# Limbic Development/ Strategies

- Brain Box- measures our arousal level!
- What activities make us have fast breathing? Slow breathing, what is calm breathing?
- How can you change the brain box meter?
- Pulse reader
- Labyrinth
- Scented blankets and cotton balls
- Drinking water- increases focus and attention
- Brain Freeze
- My Brain Boss Says...
- Trees and Brains / What does a tree need to grow? What does a brain need to grow and develop?
- Draw your tree ? Does your tree have lots of connections and branches or a few?



# Limbic and Cortical Regions for Strategies

- Movement , Space and Breath! Focused Attention Practices
- Drawing and Coloring
- Validation
- Power of Questions
- Amygdala First Aid Kit!
- Choices
- Service to Another/ Bell Work
- Connection Journals



# Limbic and Cortical Strategies

- ❖ Teach students about their brain's neuroplasticity
- ❖ Routines and rituals- change them up/ Bell Work
- ❖ Notice Everything
- ❖ Create class guidelines ( agreements) together and change them often!
- ❖ Stories, Images
- Everyone will get what they need!
- Co-Teach and Co-Design Lessons
- Validation and the power of Questions
- What homework did you do for your students this week?
- Focused Attention Practices

# Adversity Teams

Kids who have complex developmental trauma look “normal” and generally have not received adequate accommodations in schools.

TIP: Prevention is the best medicine! Spend your time helping the child feel secure to minimize their feelings of fear and shame.

- Small Back-Up
- Medium Back-Up/ whole class
- Large Back Up/ Adversity Teams in Your School and District

# Cognitive and Regulation Strategies

## Dual Thought Sheets

- What is our challenge?
- What led up to this challenge?
- How did we handle this together and /or apart?
- Could we have prevented this problem?
- What are two adjustments we will make the next time?



# Cognitive Relationship Strategies

- Take your order
  - Brain Lab
  - Regulation Room
  - Amygdala First Aid Station
  - Teachers and students
  - I will work for you!
- 
- Noticing!
  - 2x10 Strategy
  - Above or below the Line
  - Maslow Hierarchy/ brand new!!!

**Guest Check**

TABLE NO.	PERSONS	SERVER NO.	CHECK NO.
			4114-1
BEV • APPET • SOUP/SALAD • ENTREE • VEG • DESSERT			
to know + tell me when you see me trying!			
to notice when I am feeling frustrated give me a break!			
let me go to the bathroom one more time!			
TAX			
TOTAL			
Thank You — Call Again			
A-505 / T-63116			
PERSONS	DATE	CHECK NO.	AMOUNT
		4114-1	

# Routines and Procedures

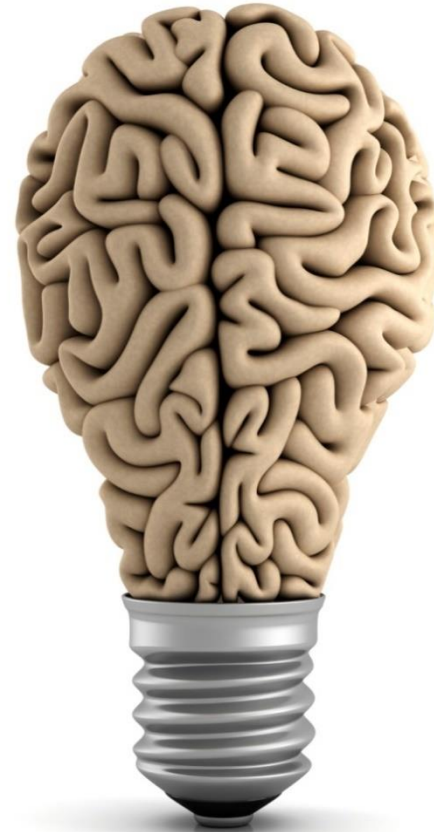
- Use structure and routines to establish felt safety in the child.
- Maximize a child's strengths -- praise them and incorporate their interests into any activity or assignment you can.
- Minimize a child's weaknesses -- avoid asking a child to continually do something that is beyond his or her capability.
- Help with transitions -- reminders, notes, visual signals.
- Be positive -- encourage, believe, smile, use soft face and voice.



# Chandler's Tips

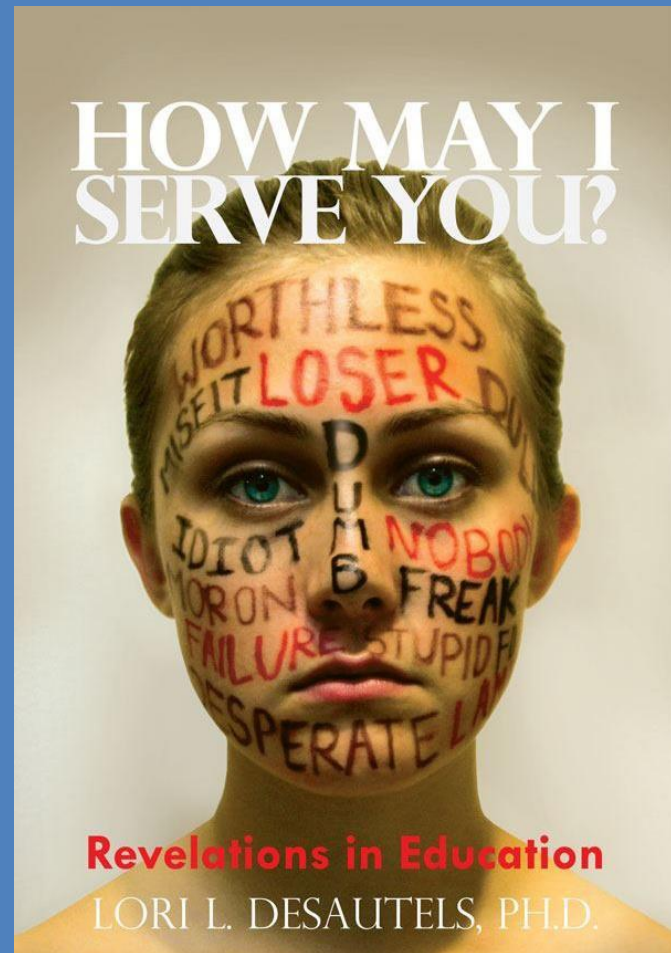
## Chandler's tips

- Praise (Get creative...seriously, praise *anything*)
- Errands (If child is safe/comfortable with it...change of scenery)
- Affirm (Greet child specifically early...glad you're here)
- Correct (Get 1-on-1, on child's level, quietly and calmly)
- Effort (Acknowledge trauma...I know you're going through...)



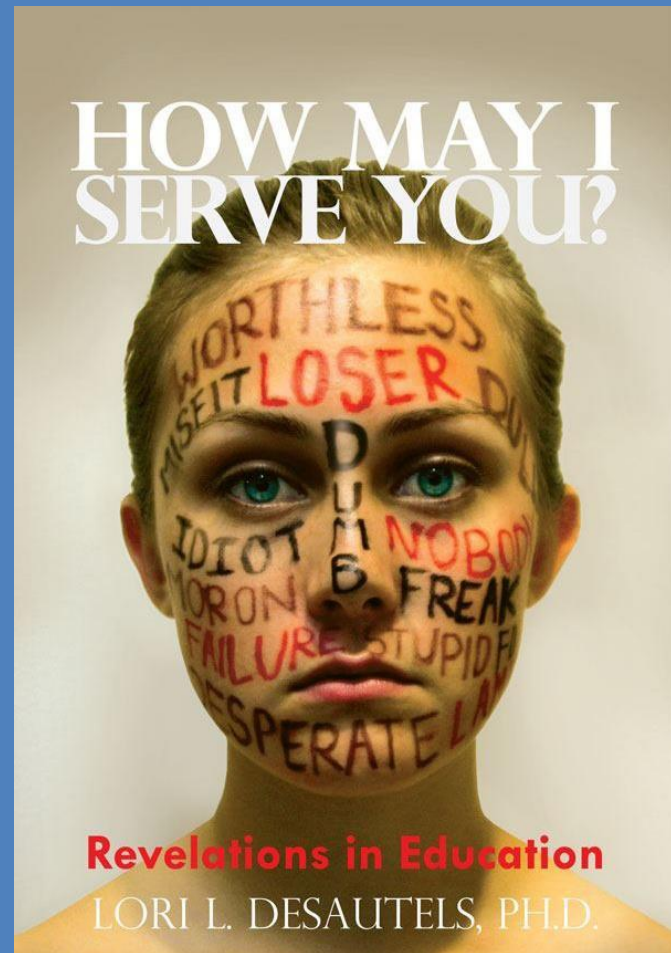
# Cortical Strategies/ Validation

- That must have made you feel really angry.
- What a frustrating situation to be in!
- It must make you feel angry to have someone do that.
- Wow, how hard that must be.- That's stinks!-
- That's messed up!
- How frustrating!
- Yeah, I can see how that might make you feel really sad.
- Boy, you must be angry.
- What a horrible feeling.
- What a tough spot.
- I hear you.
- I hear that.
- 90 SECOND RULE!



# Questions

- What do you need?
- How can I help?
- What can we do to make this better?



# Connect With Me!

- To understand our neurobiology is to know the secret of life!
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- ldesaute@butler.edu
- [www.revelationsineducation.com](http://www.revelationsineducation.com)
- Desautels\_phd - twitter handle

Who are YOU?" said the Caterpillar.

This was not an encouraging opening for a conversation.

Alice replied, rather shyly, "I-I hardly know, sir, just at present - at least I know who I WAS when I got up this morning, but I think I must have been changed several times since then."

*- Alice's Adventures in Wonderland, Lewis Carroll*

# Thank you!!!

