

The Neuroscientific Connection between Trauma & Indigenous Healing

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Territory Acknowledgement



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Warning!

The content from this presentation can bring up painful feelings. Talking about trauma stirs up trauma both primary and secondary. Please do what you need to do to take care of yourself.

Please hear about HOPE!!!!

If you want extra support- please ask!

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Trauma is not Unique to Indigenous Communities...

New research in the USA (2018) found 75% of children have experienced at least one ACE...



With COVID- those numbers are probably even higher now

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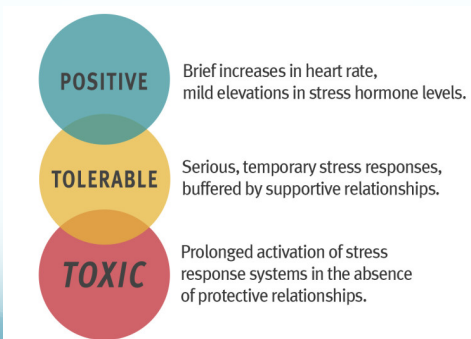
Toxic Stress & COVID-19



Increases in: Domestic violence
Mental Health Issues
Suicide
Substance Misuse
Isolation

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Toxic Stress= Trauma



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Trauma Defined

Trauma is defined by:

1. The individual sensory system NOT a discrete event itself
2. Long term impact mentally, physically, emotionally and/or spiritually

(SAMSHA)



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ACEs can have lasting effects on...



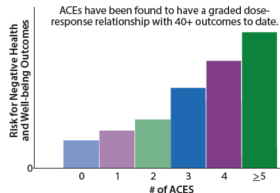
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



Life Potential (graduation rates, academic achievement, lost time from work)



*This pattern holds for the 40+ outcomes, but the exact risk values vary depending on the outcome.

The researchers found that people with **six or more ACEs** died nearly **20 years** earlier on average than those without ACEs — **60.6 years** versus **79.1 years**

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Mindy Body Connection Explained

"The mind and the body are like parallel universes. Anything that happens in the mental universe must leave tracks in the physical one."

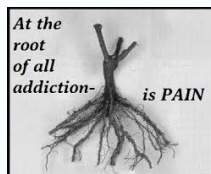
Deepak Chopra



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The Connection Between Childhood Trauma & Addiction

Most people who struggle with addiction have experienced trauma



An ACE score of 4
Increases risk of suicidality by 1200%
likelihood of alcoholism by 700%



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<https://www.youtube.com/watch?v=BVg2bfqblGI>
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Don't Compare Trauma:

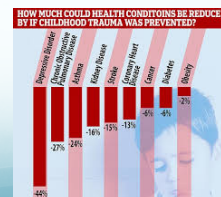
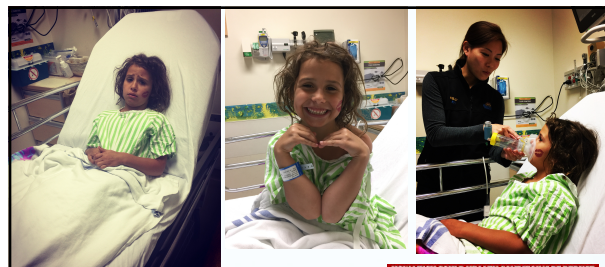
Validate feelings/concerns

Even if the situation doesn't seem that bad to you, it's how the youth feels that matters



- Try not to judge – it's how the youth feels about the stress is what matters most
- "It may not even be just one event, but the culmination of chronic stress—i.e. poverty

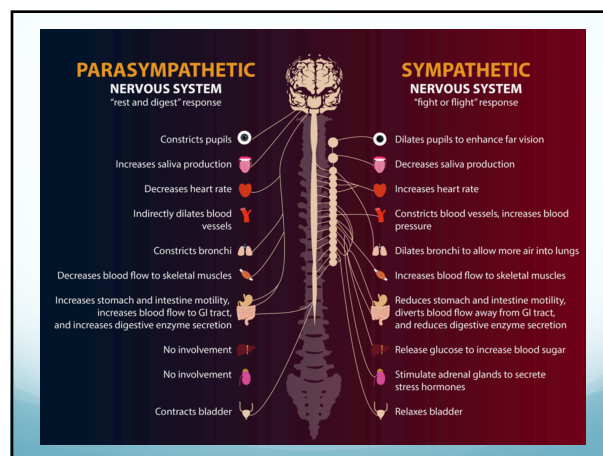
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Toxic Stress Change the Size and Shape of our Brain

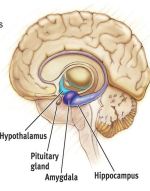
The Limbic System

Hypothalamus, pituitary, amygdala, and hippocampus all deal with basic drives, emotions, and memory

Hippocampus → Memory processing

Amygdala → Aggression (fight) and fear (flight)

Hypothalamus → Hunger, thirst, body temperature, pleasure, regulates pituitary gland (hormones)



When SNS is activated-

Alerts the hypothalamus

Which alerts the pituitary gland

PG tells the adrenal gland (above kidney) to make stress chemicals

Stress hormones travel via the bloodstream

This affects entire body

Amygdala inflames (^ intensity of emotions (sadness, fear, and anger)

Blocks hippocampus from consolidating memory

Prolonged increases of stress chemicals cause hippocampus to shrink and the amygdala enlarges

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Toxic Stress Change the Size & Shape of our Brain

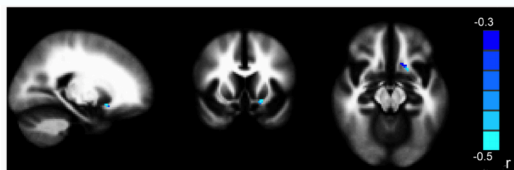


SHRINKS the hippocampus!!

(responsible for processing emotion and memory and managing stress- and spatial memory enabling navigation

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Toxic Stress Change the Size & Shape of our Brain



Parts of the cortex (the gray area on the outside that does most of your thinking) are also affected, including the VMPF (ventral medial prefrontal cortex), which controls emotions by calming the amygdala

Other areas in our cortex (that help us speak and think coherently) also can decrease in size

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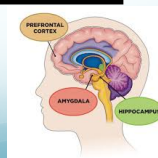
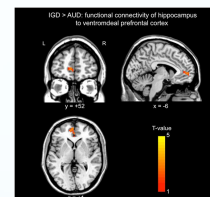
Toxic Stress Weaken Neural Connections- Brain Connectivity

- weakens connections bw prefrontal cortex and the hippocampus

- weaker connections bw prefrontal cortex and the amygdala (girls)

- The prefrontal-cortex-amygdala connection

- plays essential role in determining how emotionally reactive/ how likely we are to perceive these events as stressful or dangerous



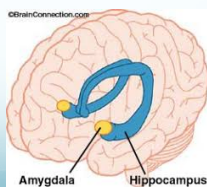
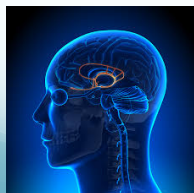
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Amygdala

Perceives emotions such as anger, fear, and sadness, & controls aggression

Helps store memories of events and emotions so that we can recognize similar events in the future

Can enlarge with toxic stress exposure

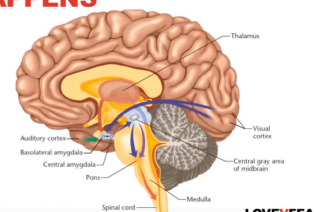


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ACEs Affect the Way We Process Information

HOW AMYGDALA HIJACKING HAPPENS

- The stimuli goes directly to thalamus and it then goes right to amygdala before a signal reaches the neocortex to process.
- This survival mechanism lets us react to things before the rational brain has time to mull things over.



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Adaptive vs Disruptive



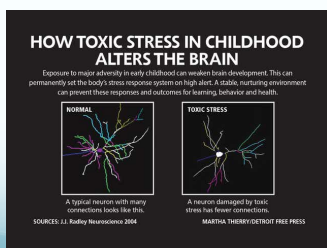
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Kids don't go from 0-100 – they're already revving high



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What's the antidote to weakened neural connections and impacted brain structures????



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The Answer is Connection



Caring Connected Relationships: single-most protective factor



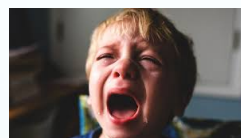
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Disengage the stress response & activate Resilience

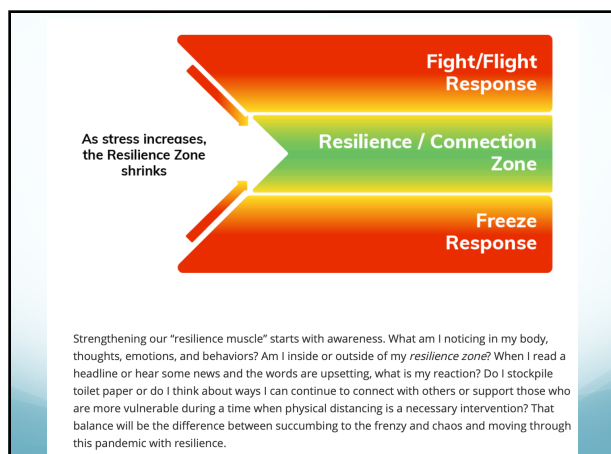


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Re-calibrating set points




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Ancient Indigenous wisdom has always had the key to healing




- Caring, connected relationships
- Connection to nature/the land
- Traditional plants, medicines & healers
- Ceremony
- Rythmic healing practices (drumming, dancing, chanting, singing)

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What traditions/healing practices/rituals/ceremonies would you say could be considered rythmic healing for the brain?





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Cultural & Religious Ceremonies/Practices/Rituals


- Drumming
- Dancing
- Prayer
- Meditation
- Connecting with nature





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Authentic Identity



Possessing a strong cultural identity has been shown to protect against mental health symptoms and buffer distress

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Neuroplasticity

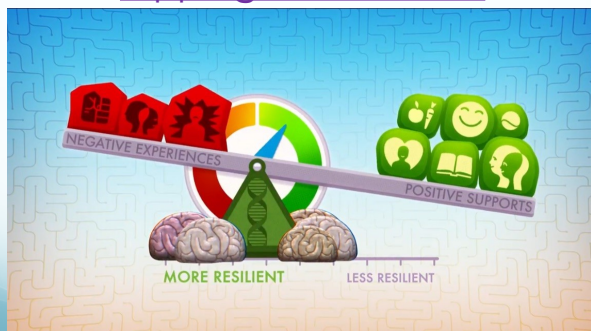
- Our brains have the most amazing propensity to heal and want to heal!!

“NEUROPLASTICITY PROVIDES US WITH A BRAIN THAT CAN ADAPT NOT ONLY TO CHANGES INFLICTED BY DAMAGE, BUT ALLOWS ADAPTATION TO ANY AND ALL EXPERIENCES AND CHANGES WE MAY ENCOUNTER...”



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Tipping the Balance



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Activating Resiliency

1. Caring Connectedness
- +
2. Opportunities to Contribute
- =
3. Changing Expectations Of Oneself in the World



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