

THE INTERSECTION OF FEAR, TRAUMA, VIOLENCE & A PATH TO HEALING

Dr. Alisha Moreland-Capuia, M.D.

Diplomate of Psychiatry and Neurology

Assistant Professor of Public Psychiatry, OHSU

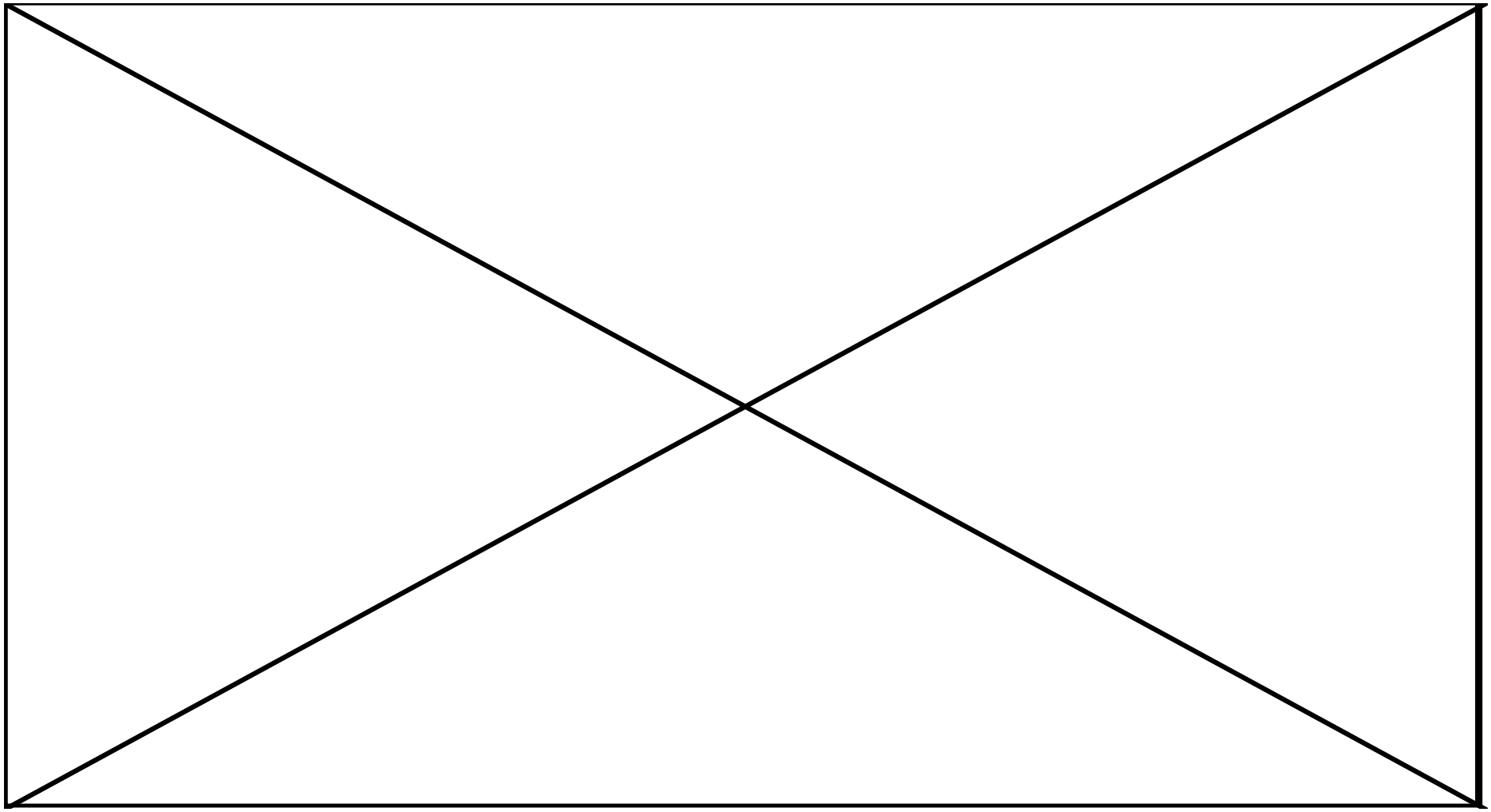
Exec Dir, OHSU Avel Gordly Center for Healing

Outline

- Explore the intersection of fear, trauma and violence and the path to healing
- Review Adverse Childhood Experiences
- Analyze Trauma Informed Care/Practices and Approaches

By the end of this lecture, you should be able to:

- Comprehend the physiology of fear
- Define trauma
- Understand the intersection between fear, trauma and violence
- Appreciate fear conditioning and stress sensitization
- Recognize Adverse Childhood Experiences
- Appreciate the relationship between trauma-informed practices and empathy



<https://www.youtube.com/watch?v=u8MZRoMdkso>

WE CAN ALL RELATE TO Fear or BEING AFRAID

- Afraid of the dark as children
- Afraid of the light as adults

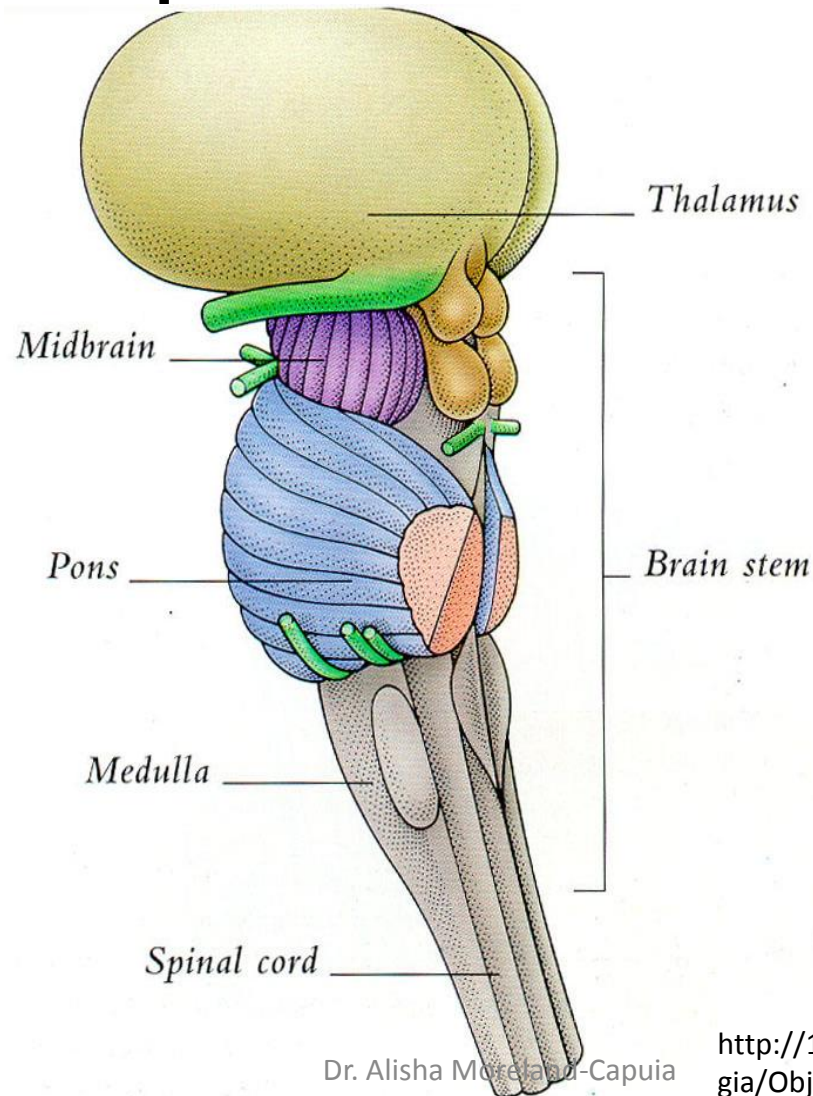


- FEAR
- FEAR

- Fear is a natural response shared by all human beings. The fear response stems from all human's natural proclivity towards survival.

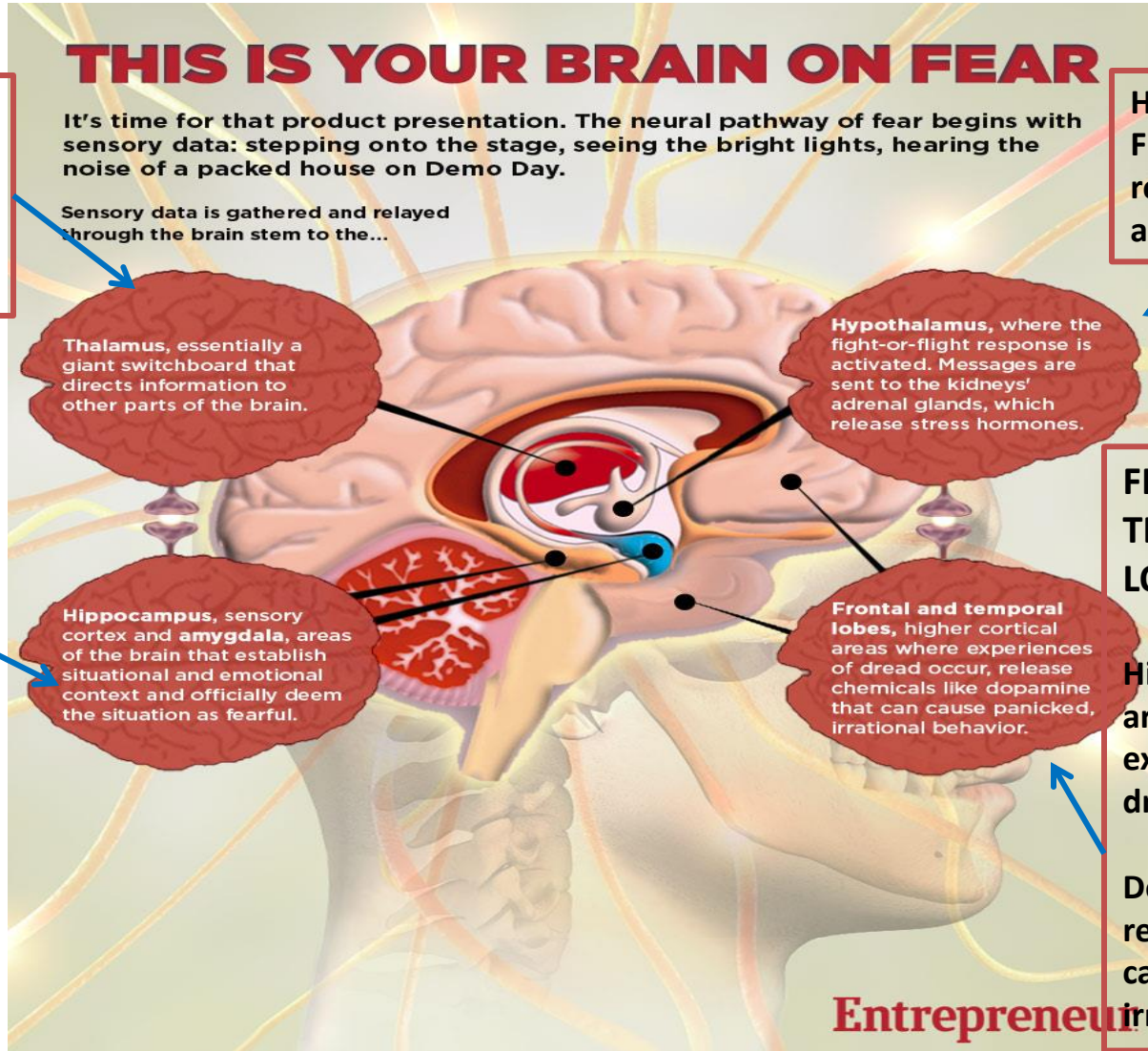
DEFINING FEAR TO UNDERSTAND TRAUMA

Brainstem: “survival center” - the primitive brain



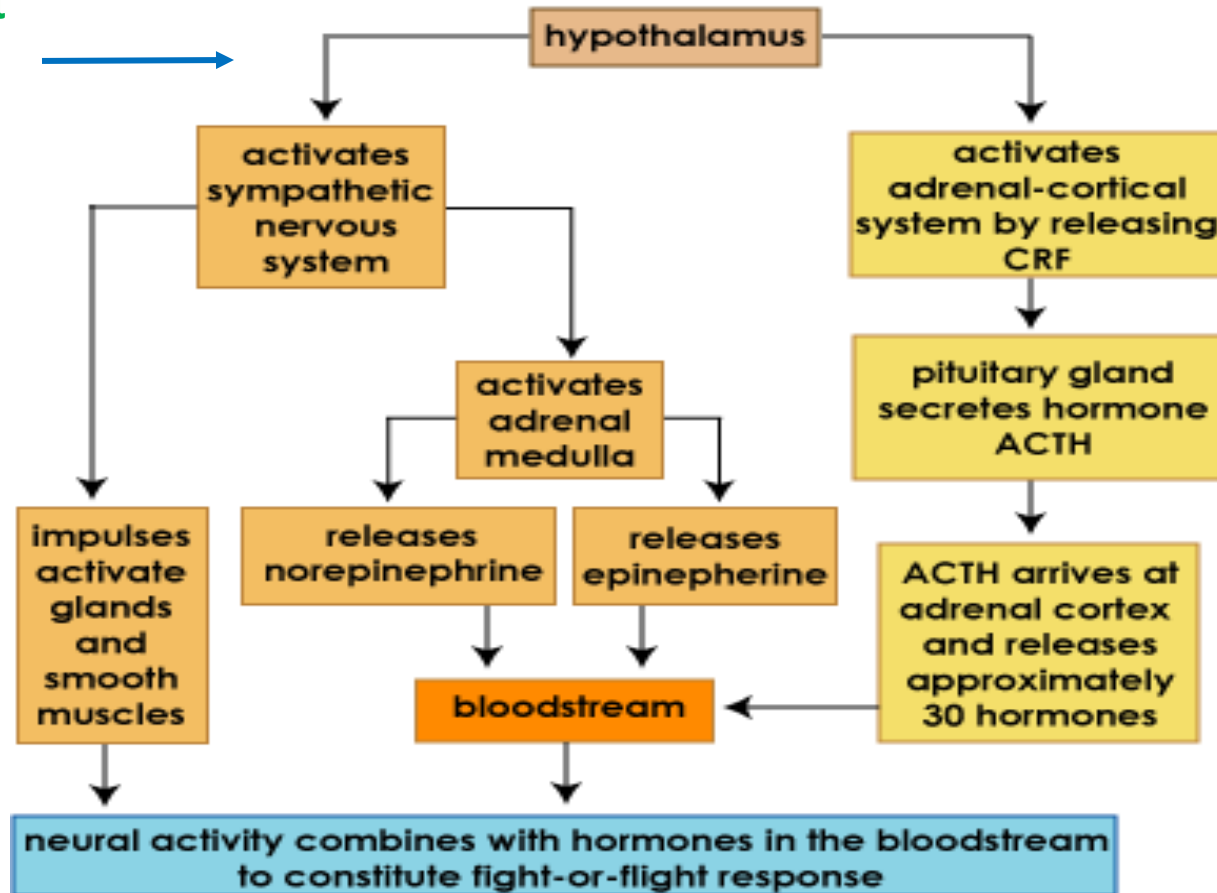
Brain stem contains centers that regulate several functions that are **vital for survival**; these include blood pressure, heartbeat, respiration, digestion, and certain reflex actions

Fear: a natural response



Fight-or-flight Response

External threat
perceived or
real



Parasympathetic
Nervous System

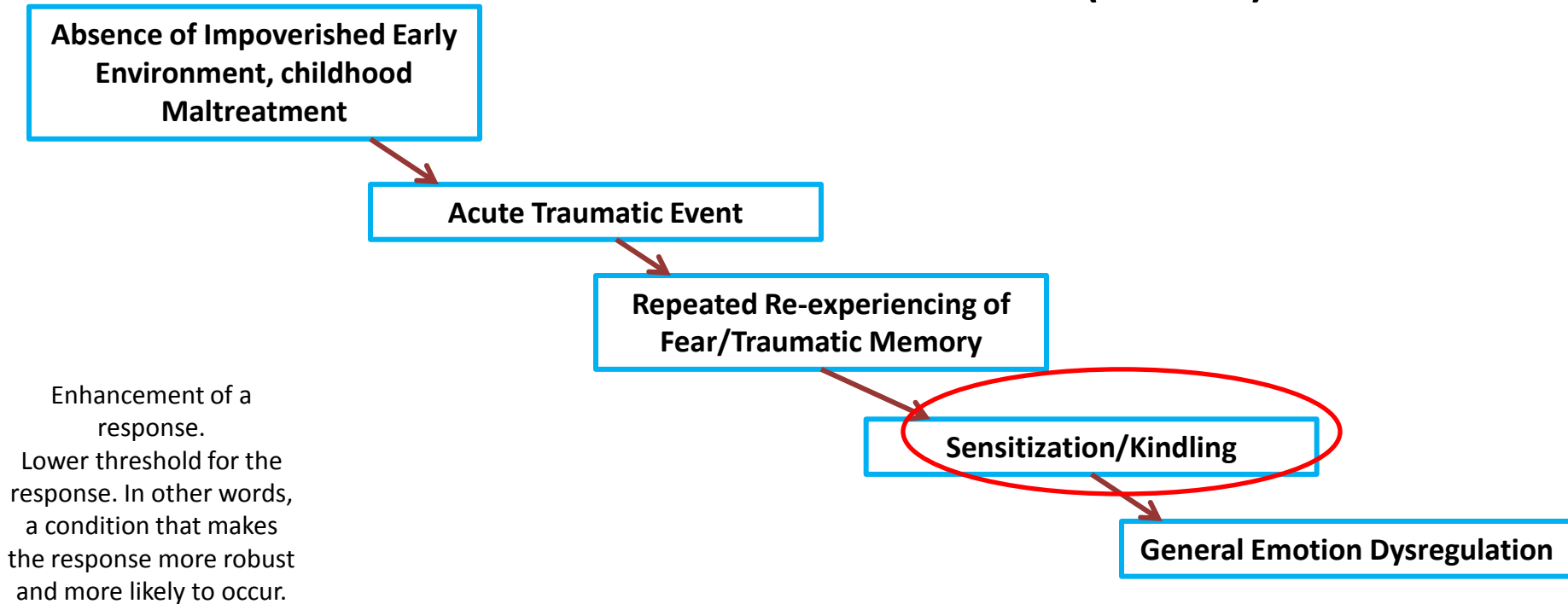


The fear response is meant to be time limited,
once the fear trigger is eliminated, the fear
response should subside. What happens when
you live in a constant state of fear?

What happens when fear is unwoven??

FEAR CONDITIONING THROUGH STRESS SENSITIZATION & KINDLING

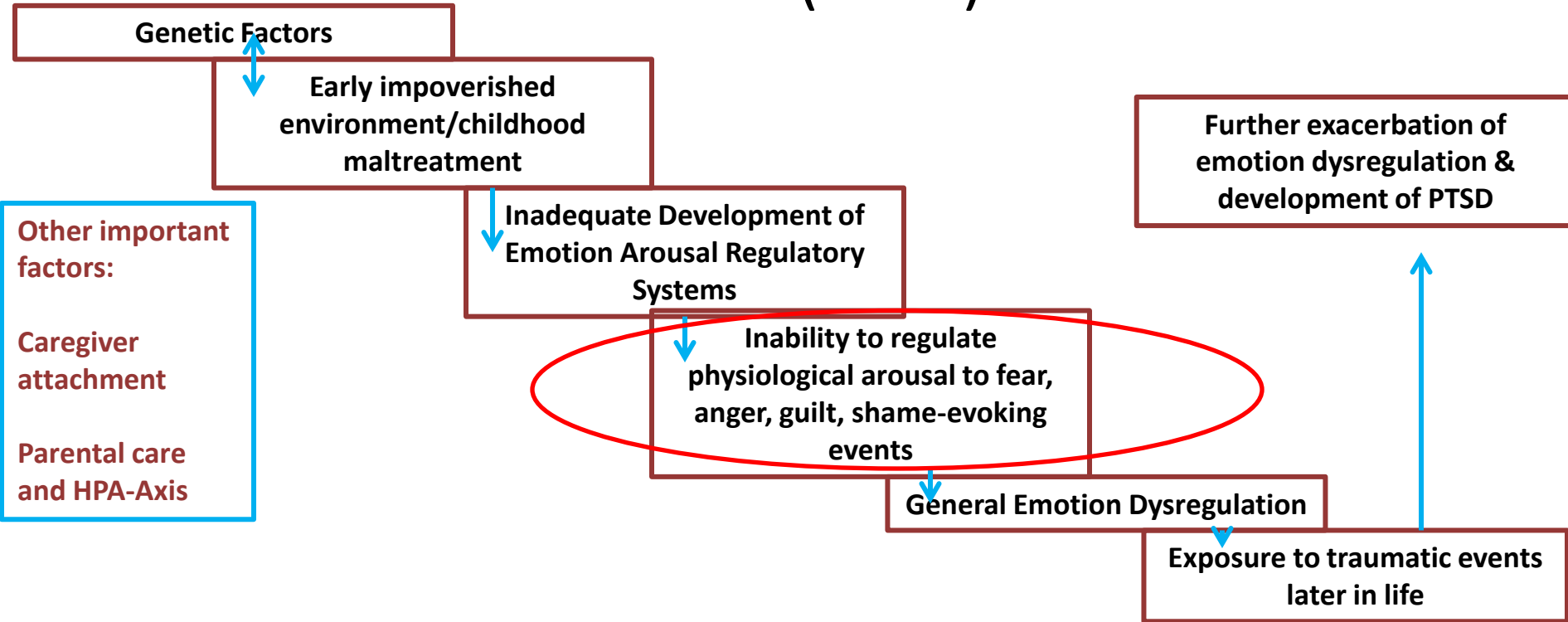
- PATHWAY 1: Lanius et al. (2010)



Lanius et al. (2010). Fear Conditioning and early life vulnerabilities: two distinct pathways of emotion dysregulation and brain dysfunction in PTSD. *European Journal of PsychoTraumatology*, Vol 1 (2010)

EARLY LIFE VULNERABILITIES

- **PATHWAY 2: Lanius et al. (2010)**



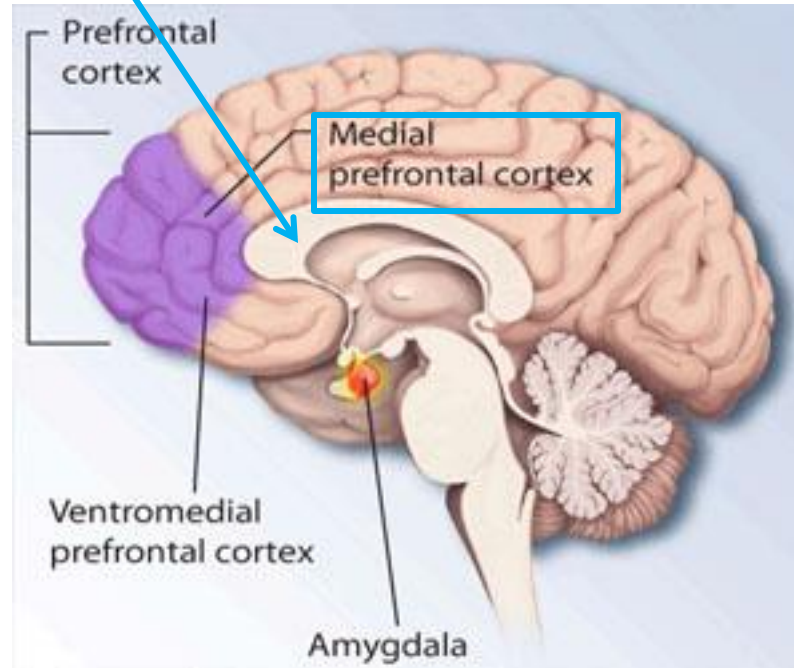
Lanius et al. (2010). Fear Conditioning and early life vulnerabilities: two distinct pathways of emotion dysregulation and brain dysfunction in PTSD. *European Journal of PsychoTraumatology*, Vol 1 (2010)

THE BRAIN & FEAR Conditioning

Corpus callosum

PREFRONTAL CORTEX

- ❑ Planning complex cognitive behavior
- ❑ personality expression
- ❑ decision making
- ❑ moderating social behavior



MEDIAL PREFRONTAL CORTEX (MPFC)

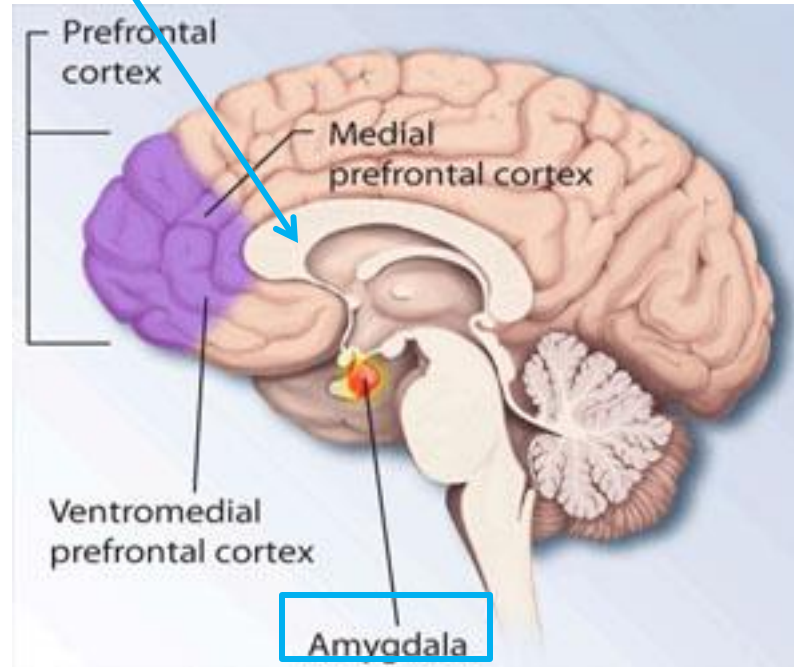
- ❑ Involved in decision making AND
- ❑ Retrieval of remote long term memory
- ❑ Theorized to help us learn associations between context, location, events and corresponding adaptive responses (namely emotional)

THE BRAIN & FEAR CONDITIONING

AMYGDALA

- ❑ Responsible for Processing of memory, decision making and emotional reactions
- ❑ Modulates memory consolidation (which happens over time)
- ❑ Has a role in aggression

Corpus callosum



Amygdala activity at the time of encoding information correlates to the retention for that information.

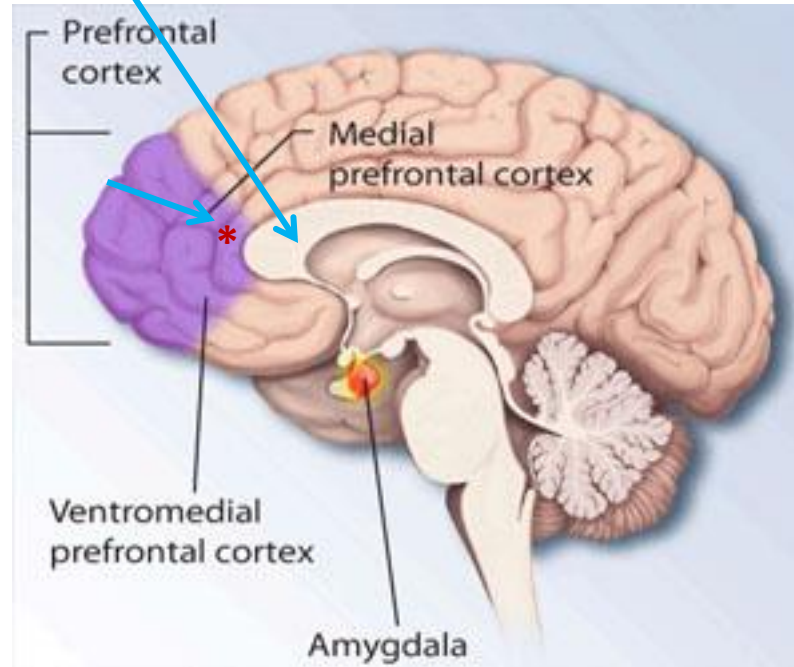
**Translation:
We all tend to remember what happened to us when there is a robust emotional response attached to the memory of the event**

THE BRAIN & FEAR CONDITIONING

ANTERIOR CINGULATE CORTEX (ACC)

- ❑ Responsible for autonomic function (i.e. blood pressure, heart rate)
- ❑ Early learning
- ❑ Problem solving
- ❑ Rational cognitive functions
- ❑ Reward anticipation
- ❑ Decision making
- ❑ Empathy
- ❑ Impulse control
- ❑ Emotion

Corpus callosum



Dorsal aspect of the ACC is connected to the Prefrontal Cortex and plays a role in cognition

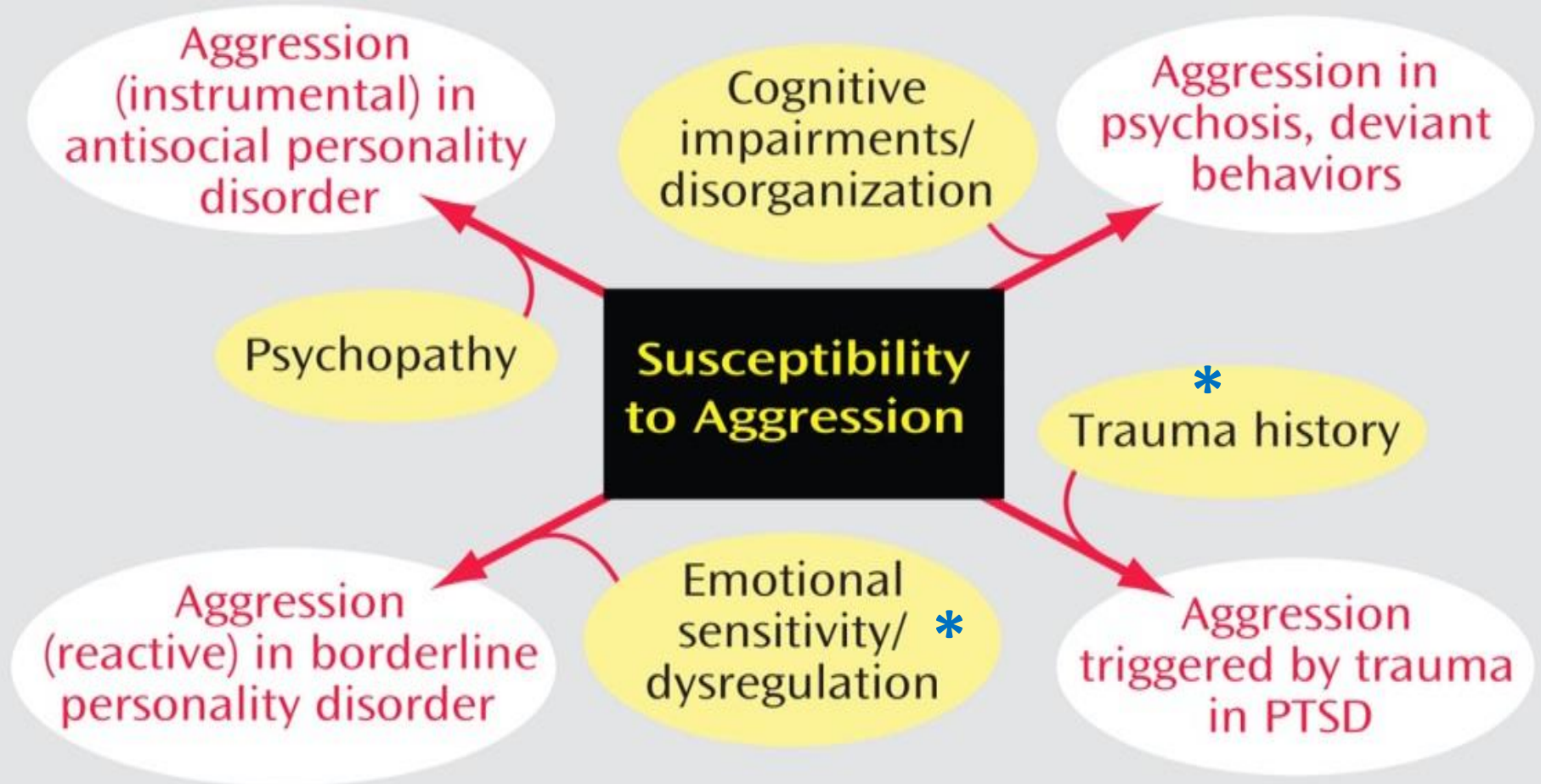
Ventral aspect of the ACC is connected to the Amygdala and plays a role in emotion

Natural fear response unchecked =
traumatization

“Traumatization occurs when both internal and external resources are inadequate to cope with external threat.”

-Van der Kolk, 1989

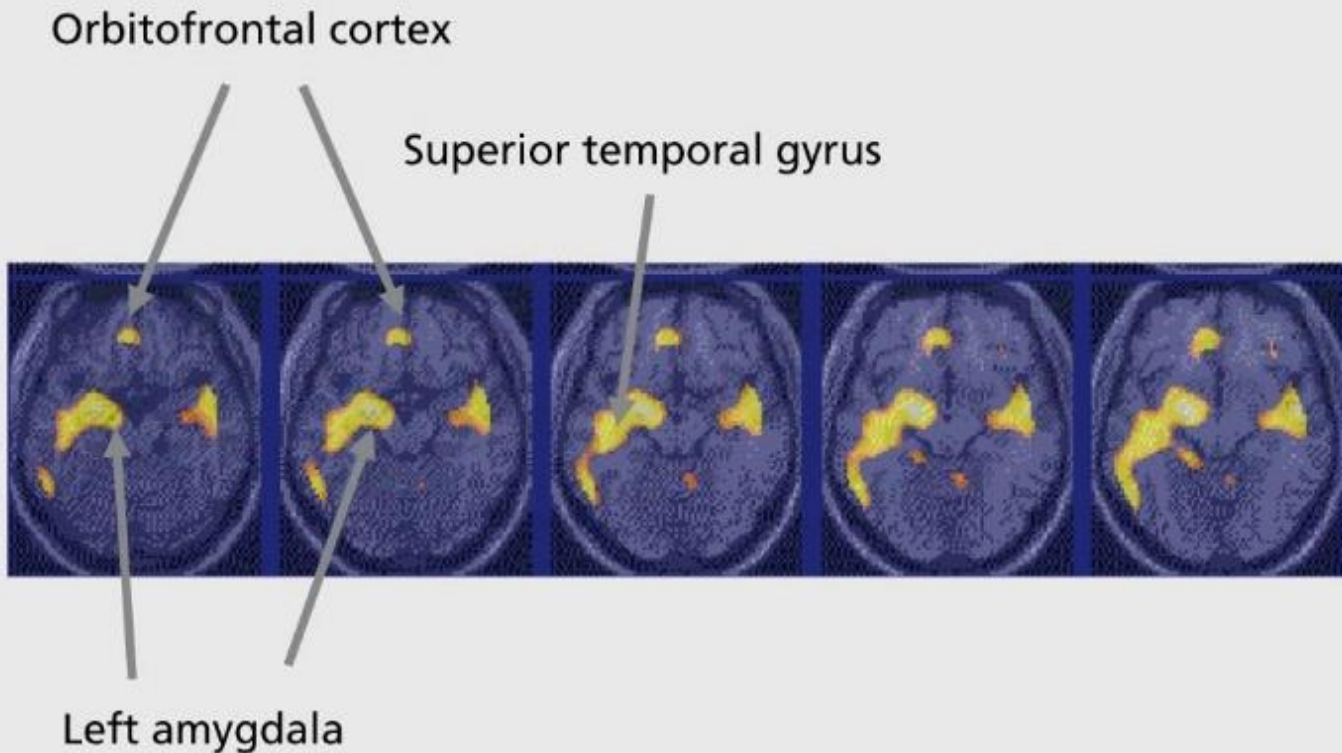
Traumatization unchecked can lead to aggression



Larry J. Siever, M.D. Neurobiology of Aggression and Violence. Am J Psychiatry
2008; 165:429-442

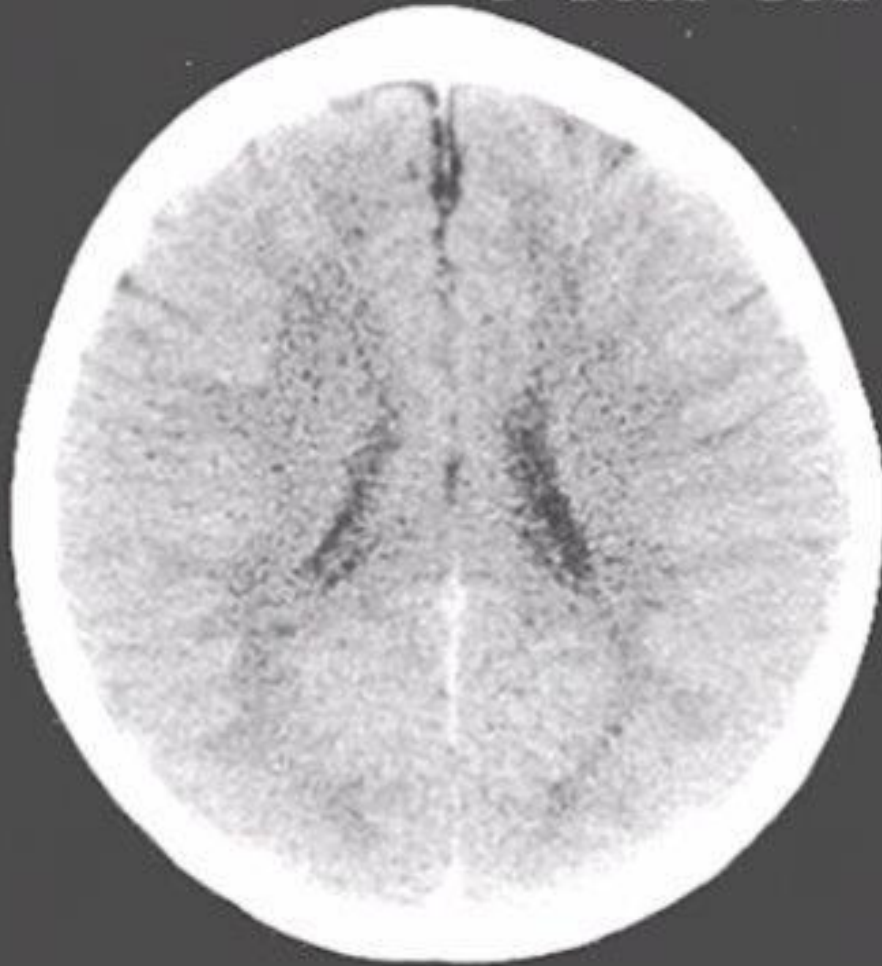
Dr. Alisha Moreland-Capuia

Increased blood flow with fear acquisition versus control in abuse-related PTSD



Yellow areas represent areas of relatively greater increase in blood flow with paired vs unpaired US-CS in PTSD woman alone, $z > 3.09$, $P < 0.001$

3-Year-Old Children



Normal



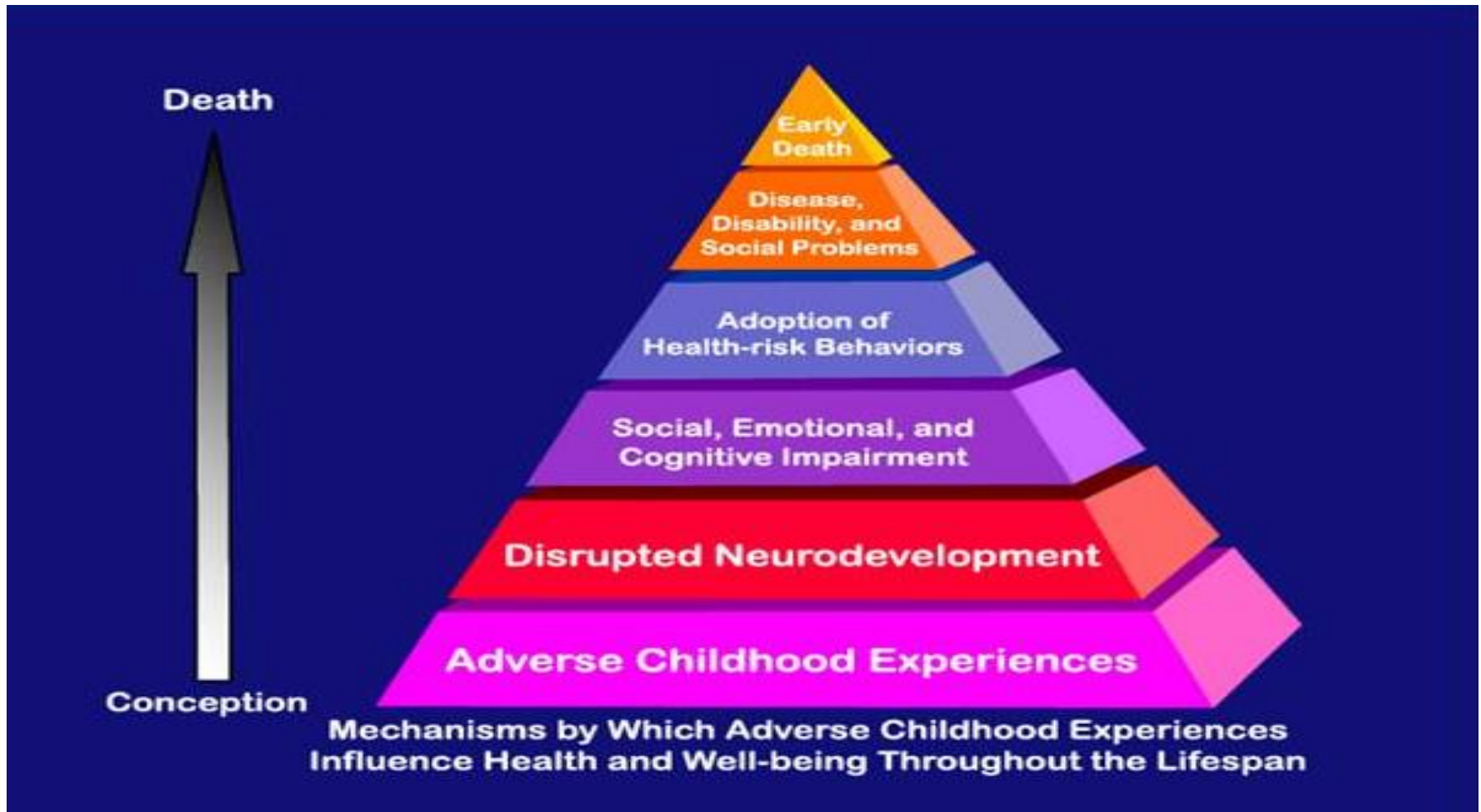
Extreme Neglect

© 1997 Bruce D. Perry, MD., Ph.D., ChildTrauma Academy

ADVERSE CHILDHOOD EXPERIENCES

ADVERSE CHILDHOOD EXPERIENCES (ACE's)

Felitti & Anda 1998



ACE DESIGN

- N = 17,000
- Caucasian
- Middle and Upper Class
- College Educated
- Employed
- San Diego, California Residents
- Had health coverage – all belonged the Kaiser Permanente Health Maintenance Organization

ACE STUDY FINDINGS

- First done in 1998, with up to 57 spin off studies done up until as recent as 2011
- The ACE study demonstrated a link between Trauma and Chronic Disease that develop over the adult life span and increased proclivity for emotional dysregulation

ACE STUDY FINDINGS

- Childhood trauma was very common, even in employed white middle-class, college-educated people with great health insurance
- Direct link between childhood trauma and adult onset of chronic disease, as well as depression, suicide, being violent and a victim of violence;
- Auxiliary types of trauma increased the risk of health, social and emotional problems.
- There was always more than one trauma experience in the participants

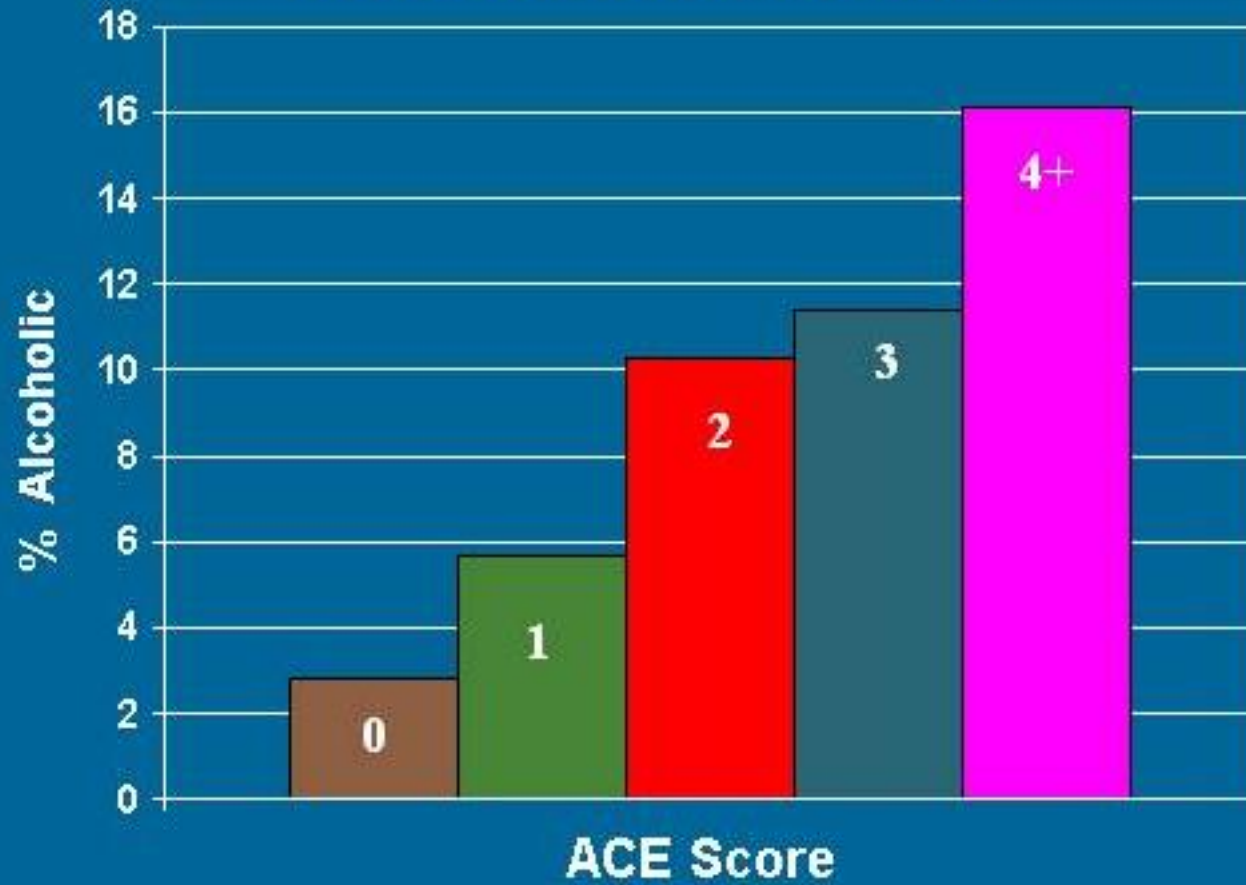
ACE STUDY FINDINGS

- 2/3 of the 17,000 persons in the ACE Study had an ACE score of at least **one**
- **87%** of those had more than one
- **Eighteen** states have completed their own ACE surveys and have demonstrated results similar to the Felitti and Anda's original study
- More recent a Philadelphia ACE study has been done which includes the impact of **racism**

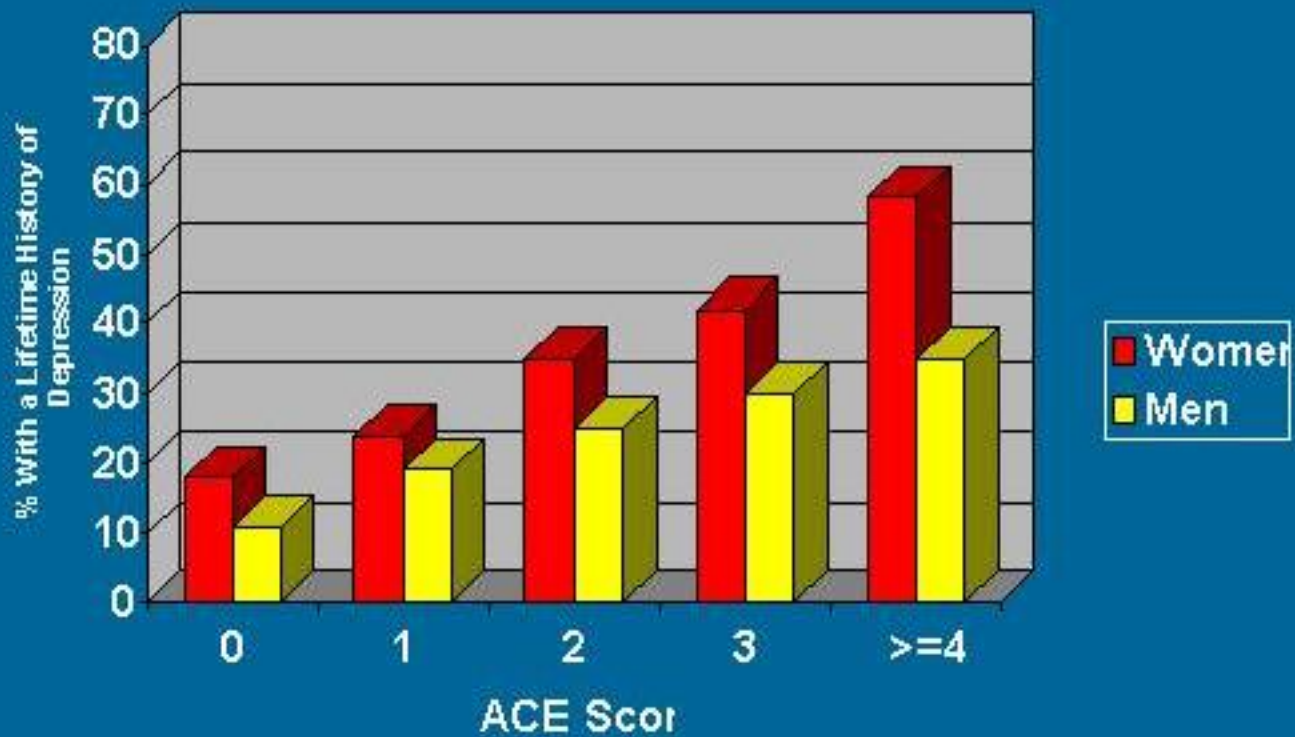
ACE SURVEY

- **Prior to your 18th birthday (important point to be made here – the age at which we do the ACE survey)**
- Did a parent or other adult in the household often or very often... Swear at you, insult you, put you down, or humiliate you? or Act in a way that made you afraid that you might be physically hurt?
No ___ If Yes, enter 1 ___
- Did a parent or other adult in the household often or very often... Push, grab, slap, or throw something at you? or Ever hit you so hard that you had marks or were injured?
No ___ If Yes, enter 1 ___
- Did an adult or person at least 5 years older than you ever... Touch or fondle you or have you touch their body in a sexual way? or Attempt or actually have oral, anal, or vaginal intercourse with you?
No ___ If Yes, enter 1 ___
- Did you often or very often feel that ... No one in your family loved you or thought you were important or special? or Your family didn't look out for each other, feel close to each other, or support each other?
No ___ If Yes, enter 1 ___
- Did you often or very often feel that ... You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you? or Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?
No ___ If Yes, enter 1 ___
- Was a biological parent ever lost to you through divorce, abandonment, or other reason ?
No ___ If Yes, enter 1 ___
- Was your mother or stepmother:
Often or very often pushed, grabbed, slapped, or had something thrown at her? or Sometimes, often, or very often kicked, bitten, hit with a fist, or hit with something hard? or Ever repeatedly hit over at least a few minutes or threatened with a gun or knife?
No ___ If Yes, enter 1 ___
- Did you live with anyone who was a problem drinker or alcoholic, or who used street drugs?
No ___ If Yes, enter 1 ___
- Was a household member depressed or mentally ill, or did a household member attempt suicide? No ___ If Yes, enter 1 ___
- Did a household member go to prison?
No ___ If Yes, enter 1 ___
- Now add up your "Yes" answers: _ This is your ACE Score

Childhood Experiences vs. Adult Alcoholism



Childhood Experiences Underlie Chronic Depression



Adverse Childhood Experiences vs. Smoking as an Adult



TRAUMA INFORMED APPROACHES: A PATH TO HEALING

TRAUMA INFORMED APPROACHES AS A WAY TO
HELP GET FOLKS OUT OF THE BOTTOM PART OF
THEIR BRAIN

OPENING UP THE PRIVILEGE TO OPERATE IN
TOP CORTICAL PART OF THEIR BRAIN

What does it mean to be trauma-informed?

- ❑ Understanding the neurobiological, social, and psychological aspects of trauma (as outlined in prior slides)
- ❑ Changing the way you pose questions: instead of “what’s wrong?” ASK “what happened?”
- ❑ Check underlying assumptions

Being trauma-informed

- ❑ Builds greater capacity for empathy (increases ones capacity to mentalize)
- ❑ Restores a sense of basic humanity
- ❑ Inherently renders you culturally-responsive

Exercise in Empathy Building

Dr. Maya Angelou

'I am a human being, therefore nothing human can be alien to me.'

Why the Rocky moment?

- Rocky is just like....
 - Without intervention: fear-laden, traumatized, aggressive Children become fear-laden, traumatized, aggressive Adults

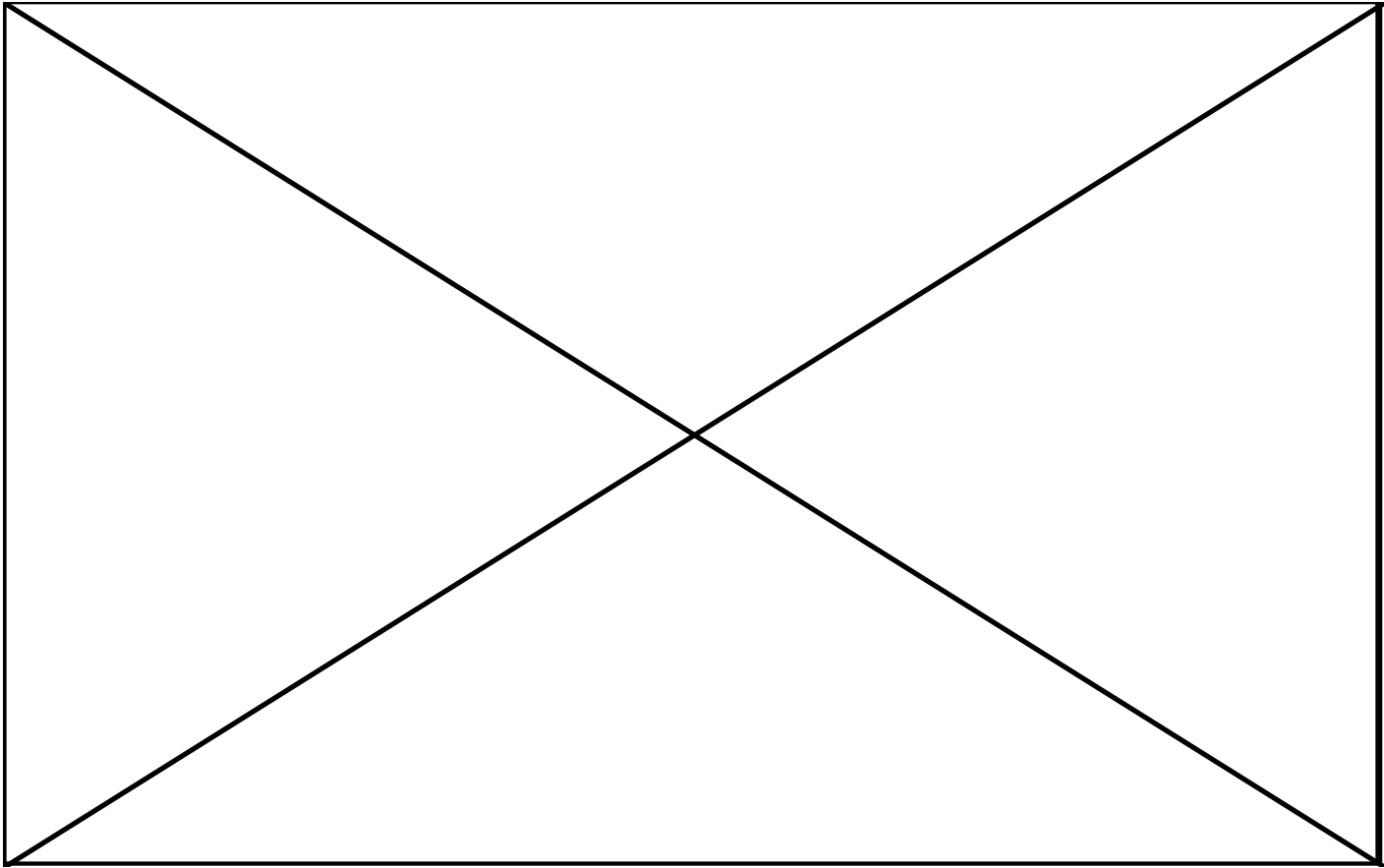
Recommendation(s)

- Build Trauma-Informed people in order to
- Build Trauma-Informed systems of care
- Change the way systems engage clients – being concerned with “what happened?” instead of “what is wrong.”
- Create trauma-informed workspaces

[TIC Non-residential assessment](#)

[TIC Residential Assessment](#)

- Mindfulness



https://www.youtube.com/watch?v=2_fDhgRk_Ro

QUESTIONS??????

Contact information

a.moreland@stanfordalumni.org

amoreland@voaor.org

morelana@ohsu.edu