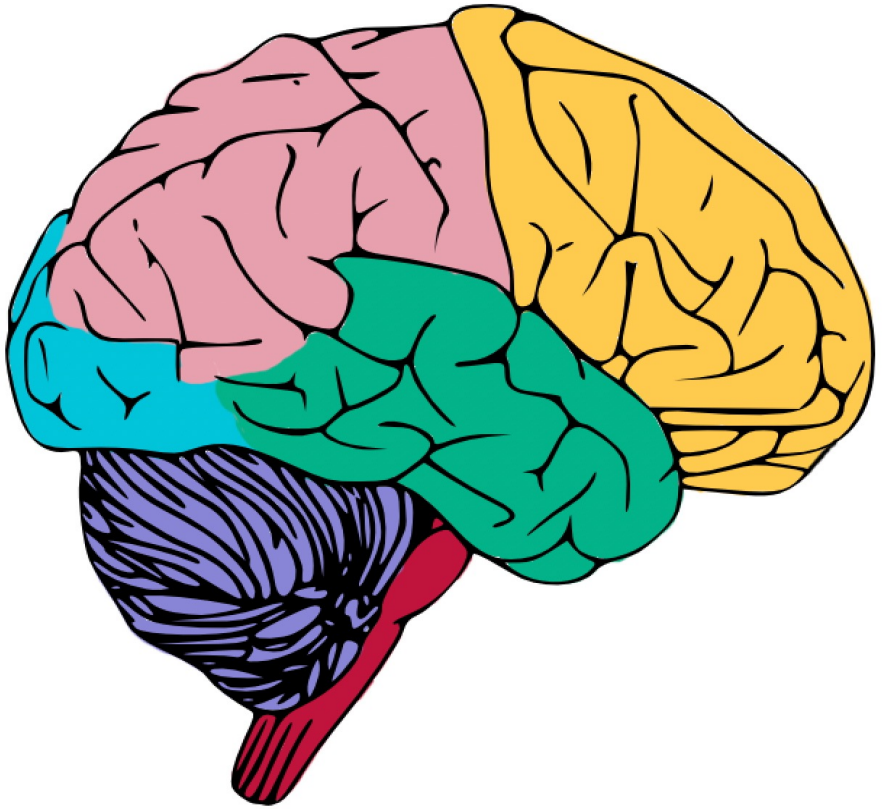
Trauma Informed Social Work

Module 1: Class 3

Trauma & the Stress Response System



Agenda

- Different effects of the stress response systems on the body
- Impact of unmediated stress on the body
- Adverse childhood experiences (ACEs)

Self Care Activity (5 Minutes)

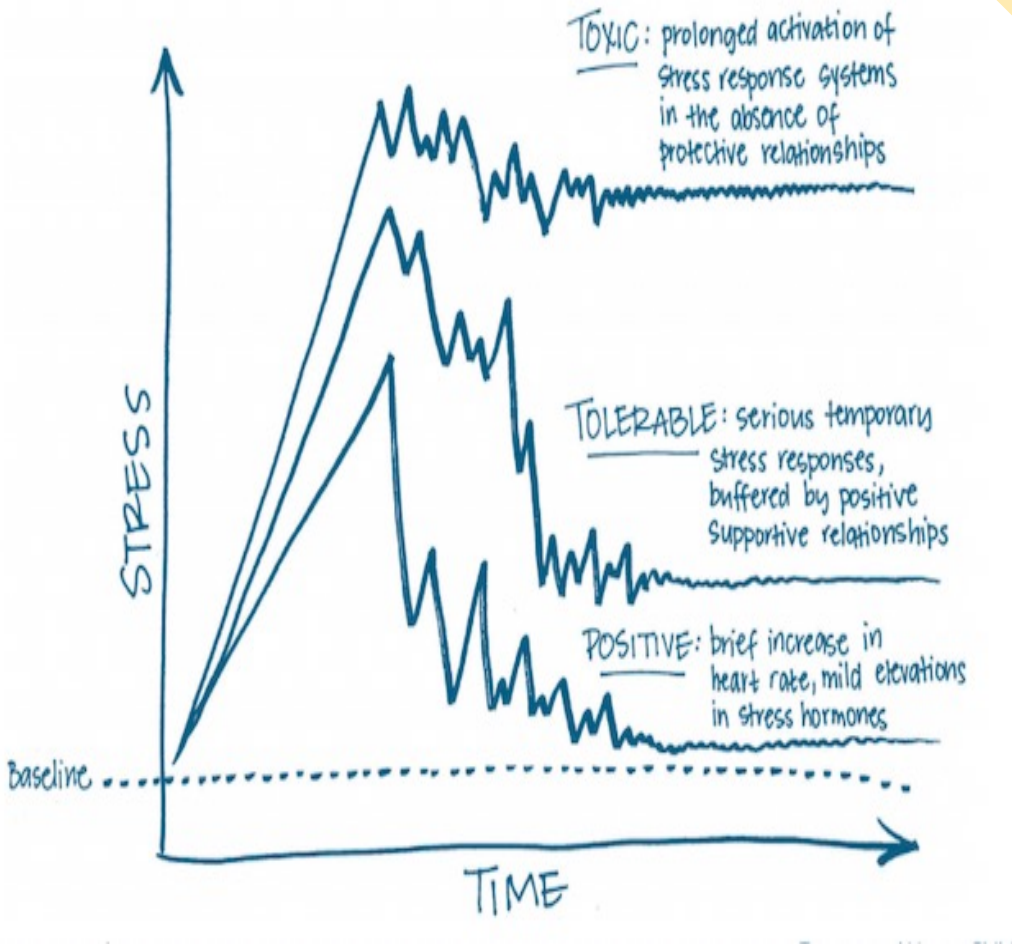
Types of Stress Response

Types of Stress Response

- **Positive Stress Response:**
  - Brief, infrequent with mild to moderate severity
  - Normal and essential part of healthy development
  - **Social emotional buffer allows the child to return to baseline**
  - E.g., bruising a knee, starting a new daycare

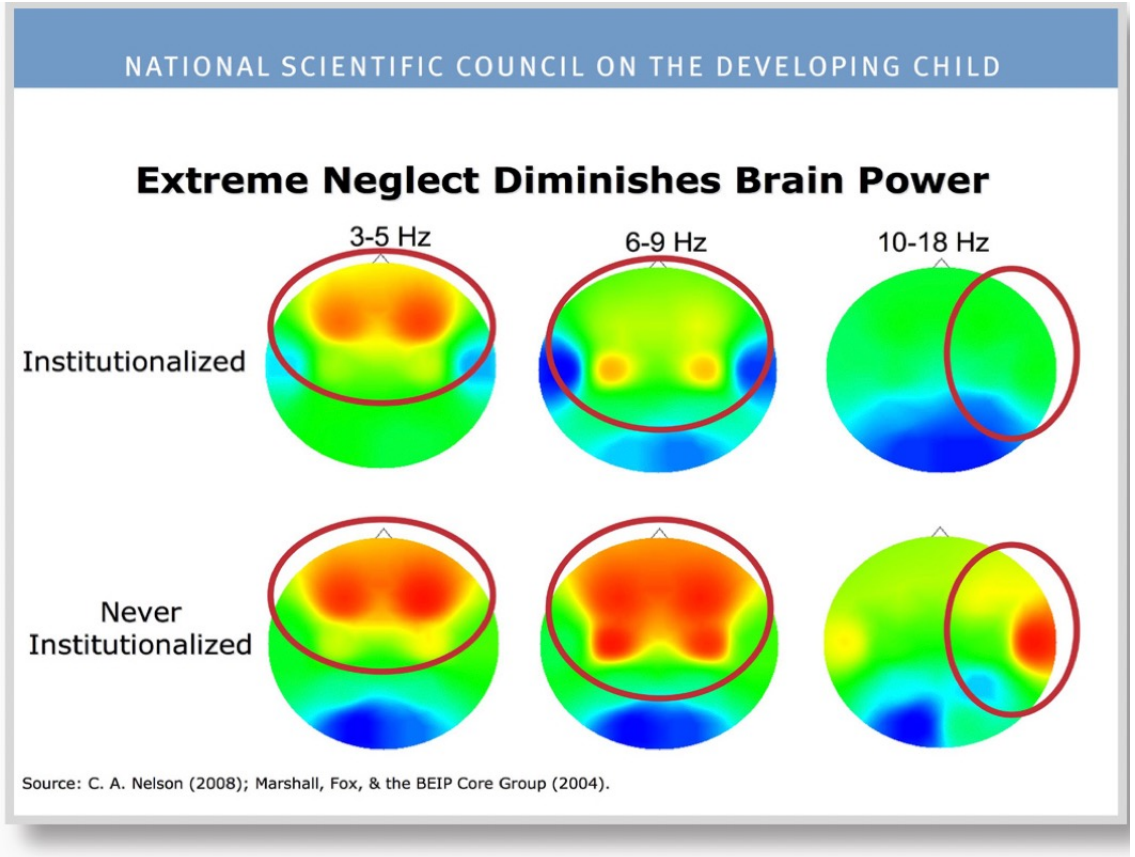
- **Tolerable Stress Response:**
  - Actives the body's alert system as a result of a more sever, longer-lasting difficulties
  - If limited in time and **buffered with supportive relationships** the brain can recover and child will return to baseline
  - E.g., Death in the family

- **Toxic Stress Response:**
  - Occurs with experiences of strong, frequent, and/or prolonged adversity without the presence of adult supportive relationships
  - Results in disruption of brain development and other organs and increase risk for stress-related diseases and cognitive impairment across the life course
  - Continuous exposure to toxic stress and /or having multiple triggers increases the cumulative toll on physical and mental health for a lifetime
  - More adversities experienced, the greater the odds of developmental delays and later health problems
  - E.g., childhood abuse and neglect



Impact of Toxic Stress on Development Across the Life course

- Early experiences influence the developing brain
- Chronic stress can be toxic to developing brains
- Significant early adversity can lead to lifelong problems
- Early intervention can prevent the consequences of early adversity
- Stable caring relationships are essential for healthy development



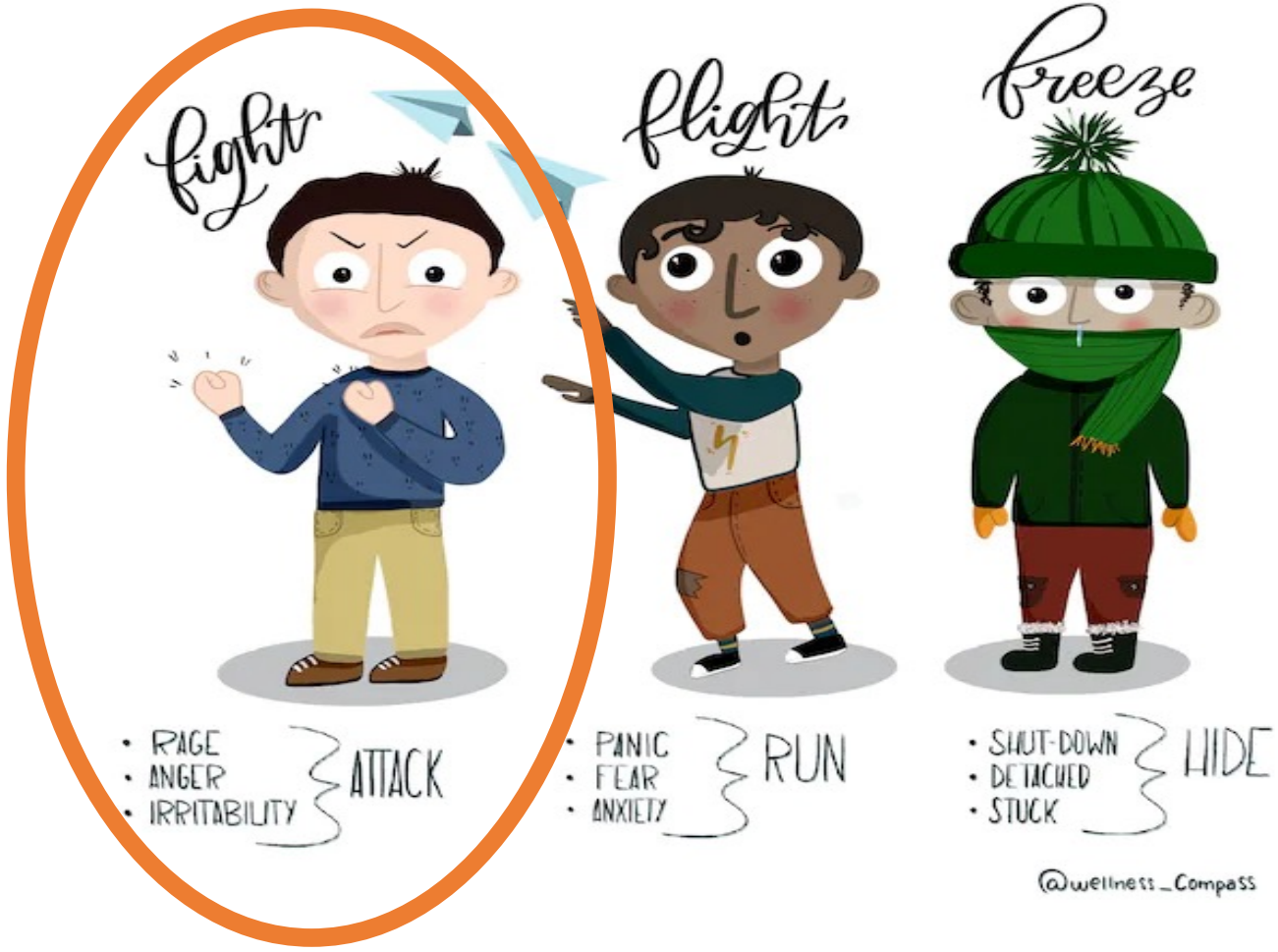
The brain's activity can be measured in electrical impulses—here, "hot" colors like red or orange indicate more activity, and each column shows a different kind of brain activity. Young children institutionalized in poor conditions show much less than the expected activity.

Source: https://46y5eh11fhgw3ve3ytpwxt9r-wpengine.netdna-ssl.com/wp-content/uploads/2015/05/inbrief-adversity-1.pdf

How Does the Body Respond to Toxic Stress?

Fight "The Agitator"

- Sympathetic regulatory system "the agitator" excites the amygdala (brain's alarm system), which mobilizes to defend and protect the person from harm.
- When amygdala hijacks ordinary process of information processing, it broadcasts distress and disaster, → triggering a cascade of physiological responses.
- Hippocampus is flooded with intense emotionally laden stimuli that are then laid down as body memories aka "iconic" or "symbolic memories."



How Does the Body Respond to Toxic Stress?

Flight "The Runner"

- Your body will operate from the sympathetic system mode just like the fight response.
- The main driving force here is fear, worry, anxiety, and terror.
- In this state, persons are interested in avoiding and fleeing the scene.

How Does the Body Respond to Toxic Stress?

Freeze

Freeze "The paralyzer"

- Parasympathetic system "the paralyzer" releases opiates in the brain, contributing to a state of numbness.

- In this state, person may experience restricted affect, withdrawal, and "freezing," or emotional paralysis.

Content adapted from Dean J. Shapiro

How Can We Reduce & Prevent Toxic Stress?

- Prevent the need for these responses
- Reducing stress in people's lives
- Helping people meet their basic needs
- Fostering strong responsive relationships between children and caregiver

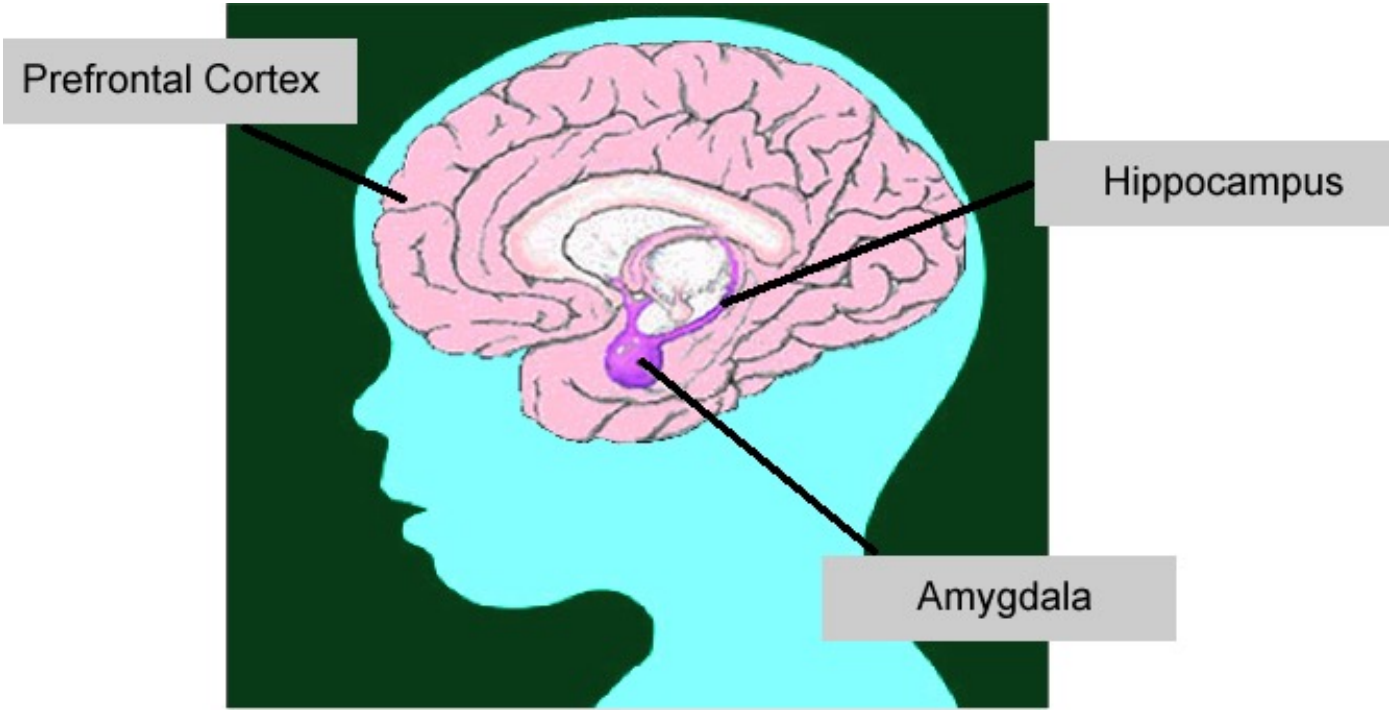
The Impact of Unmediated Stress on Early Development

Stress Response System in Children

https://www.youtube.com/watch?v=rVwFkcOZHJw&t=1s

Stress Response System in Children . . .

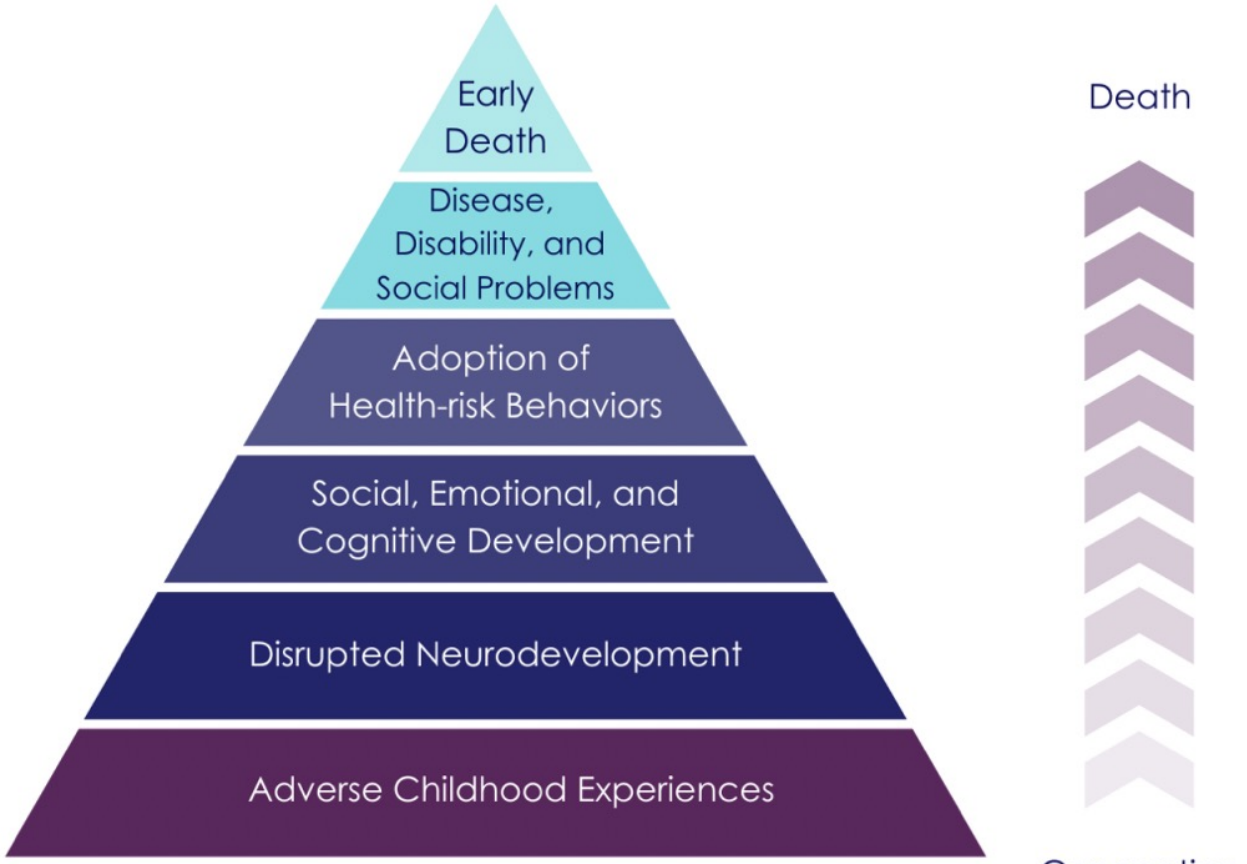
- Threatening experiences results in the preparation of the body to respond by increasing heart rate, blood pressure, and stress hormones, such as cortisol.
- Activation of children's response systems are buffered and brought back to baseline with the presence of supportive relationships with adults.
  - This results in the development of healthy stress response systems
- In cases where there are no supportive relationships, and the stress response is extreme and long-lasting the brain's architecture becomes damaged and weakened.
  - This negatively impacts development across the life course.



Adverse Childhood Experiences (ACEs)

The ACE Study

- The first and largest study conducted in the 1990's by the Kaiser Permanente Health Care Organization and the CDC
  - Led by Dr. Vincent Felitti and Colleagues
- Results indicated that higher ACEs increased the odds of having negative developmental & health outcomes in adulthood.
- Numerous studies have also shown how ACEs impacts children across the life course.



Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

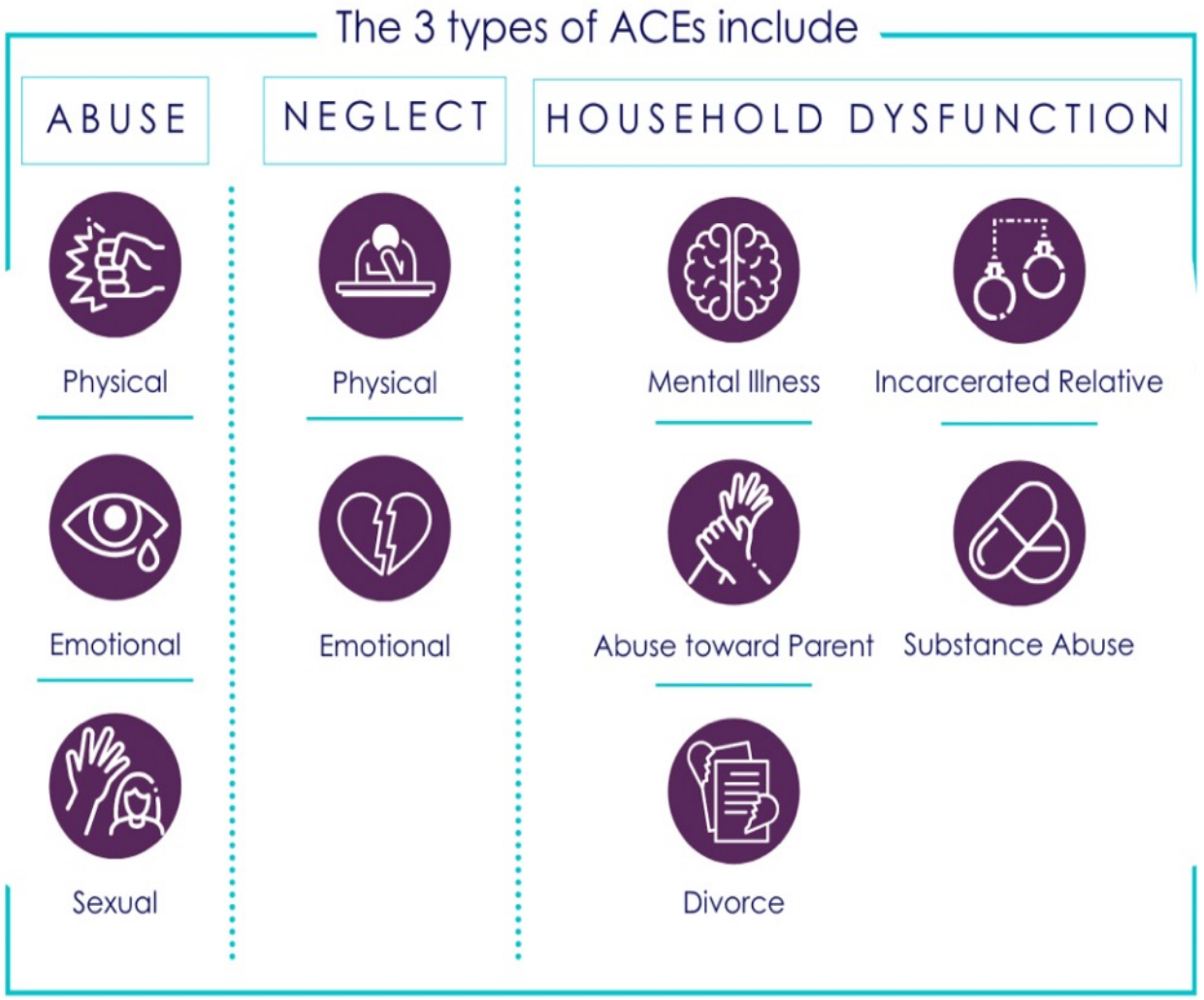
Adverse Childhood Experiences (ACEs)

- ACEs refers to a range of negative and potentially traumatic experiences occurring prior to age 18 (Felitti et al., 1998)

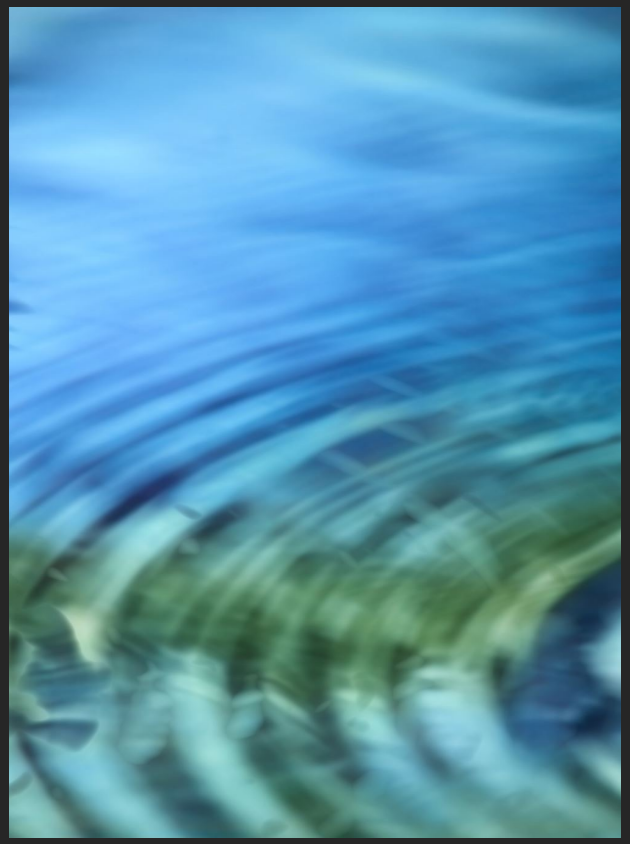
- These typically include 10 items across three broad areas”
  - Abuse
  - Neglect
  - Household Dysfunction

- These 10 items are often referred to as conventional ACEs.

- ACEs occurs among individuals regardless of socioeconomic status.
  - However, minority populations and those of lower SES have higher rates



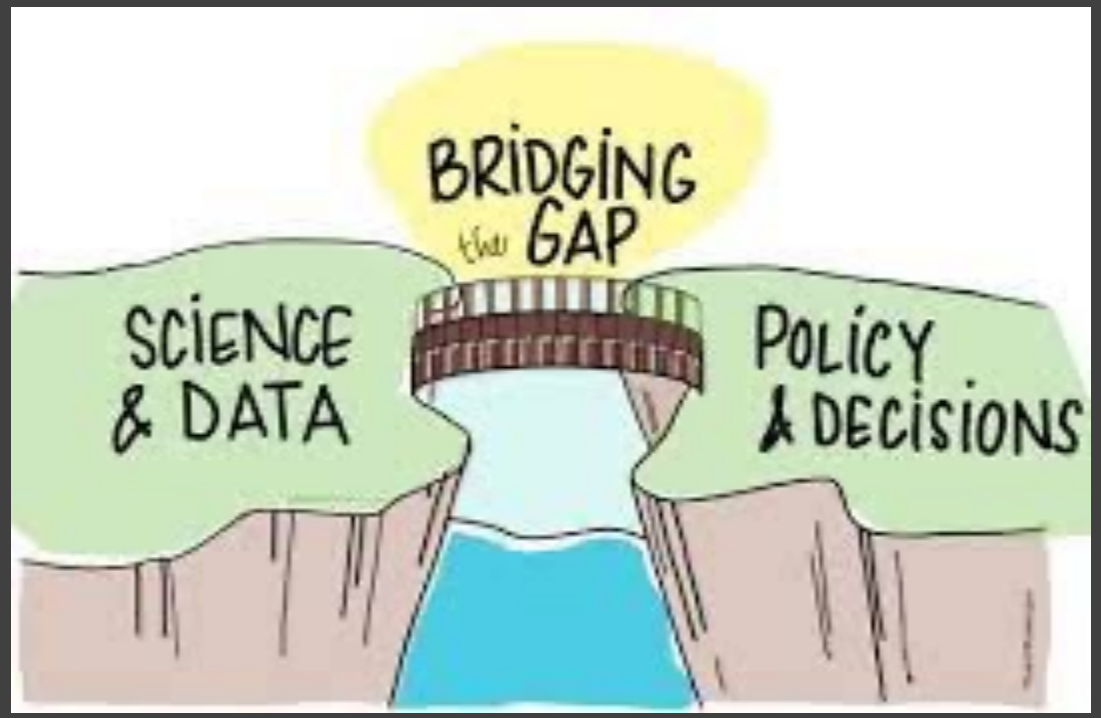
Misconceptions About ACEs . . .



Science **does not** support the claim that infants and young children are too young to be affected by significant stresses that negatively impact their family and caregiving environments - **to the contrary!**

No credible scientific evidence that supports the conclusion that all young children who have been exposed to significant early stresses will always develop stress-related disorders

Science-Policy Gap



- If science has presented us with knowledge that significant stressors in early life can have long-term effects on children's ability to adapt, learn and cope with stress throughout their lives (in addition to negative health outcomes), what gets in the way to develop policies/practices targeted to address these issues?

- Need for a broadening of narrative – more attention to the links between early adversity and poverty.

Examining ACEs Through Social Work Lens

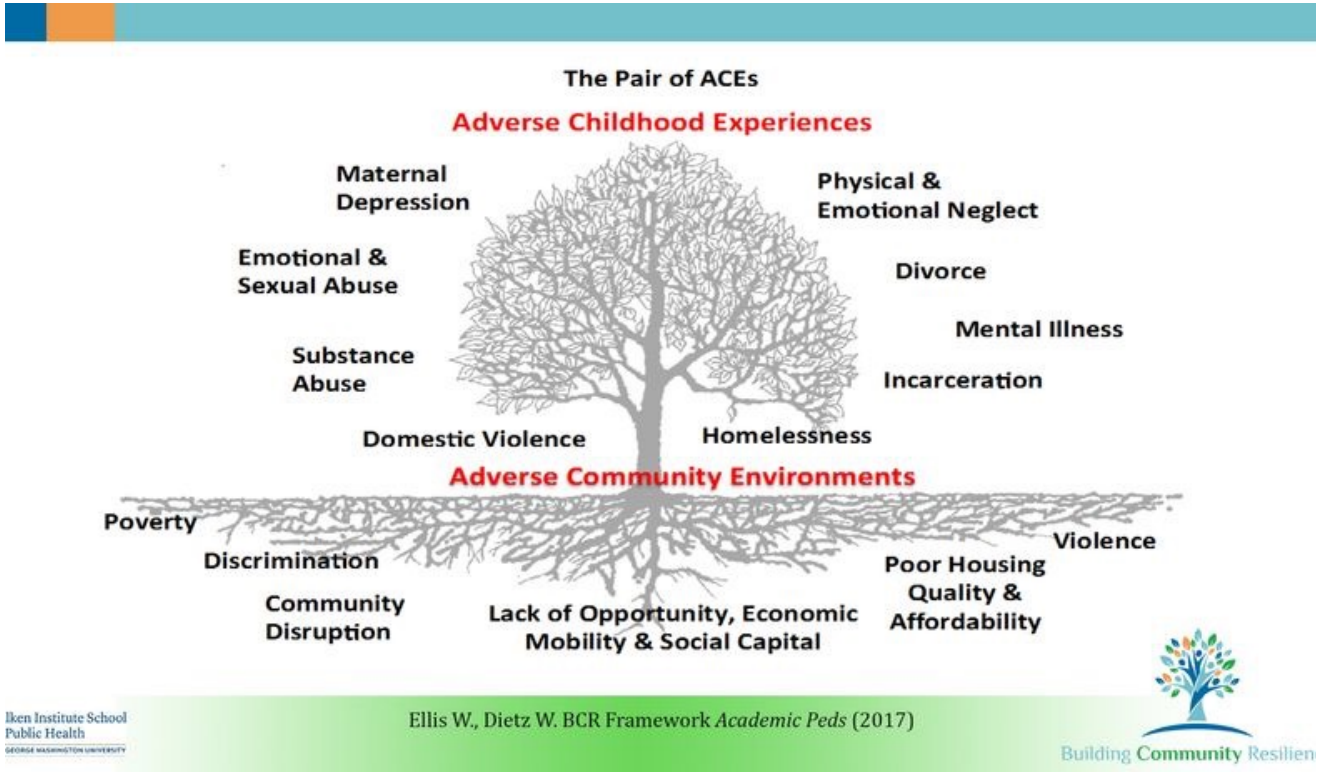
- **Importance of primary prevention**
- **Protecting the developing child from exposure to toxic stress**
- **Intervention at various points along trajectory**
- **Quality of early caregiver relationships are key**
- Empathetic, consistent, attuned care = protective factor of children who experience early adversity and stress (NSCDC, 2014).
- 1st year is critical for prefrontal cortex (biological basis of attachment)
- **Early attachment and caregiving patterns directly influence the development of the frontal limbic system in the brain's right hemisphere → a key neurobiological substrate of the emerging capacity for affect regulation, self-understanding, and the understanding of others (**Cozolino, 2010; Fonagy & Higgit, 2004; Fonagy & Allison, 2012; Hofer, 1995).

Importance of Caregiving Relationships

- Relationships children have with their caregivers play critical roles in regulating stress hormone production during the early years of life.
  - Have a more controlled stress hormone reaction
  - Able to explore the world, meet challenges, get scared, and not sustain the adverse impact of chronically elevated levels of cortisol
- Presence of a sensitive and responsive caregiver can prevent elevations in cortisol
- Quality of the early care and education plays an important role
- Young children who are neglected or abused have abnormal patterns of cortisol production
- Children who grow up in conditions of economic hardship often exhibit elevated stress hormone levels.

Content adapted from Dean Shapiro

Expanding the ACE Domains . . .

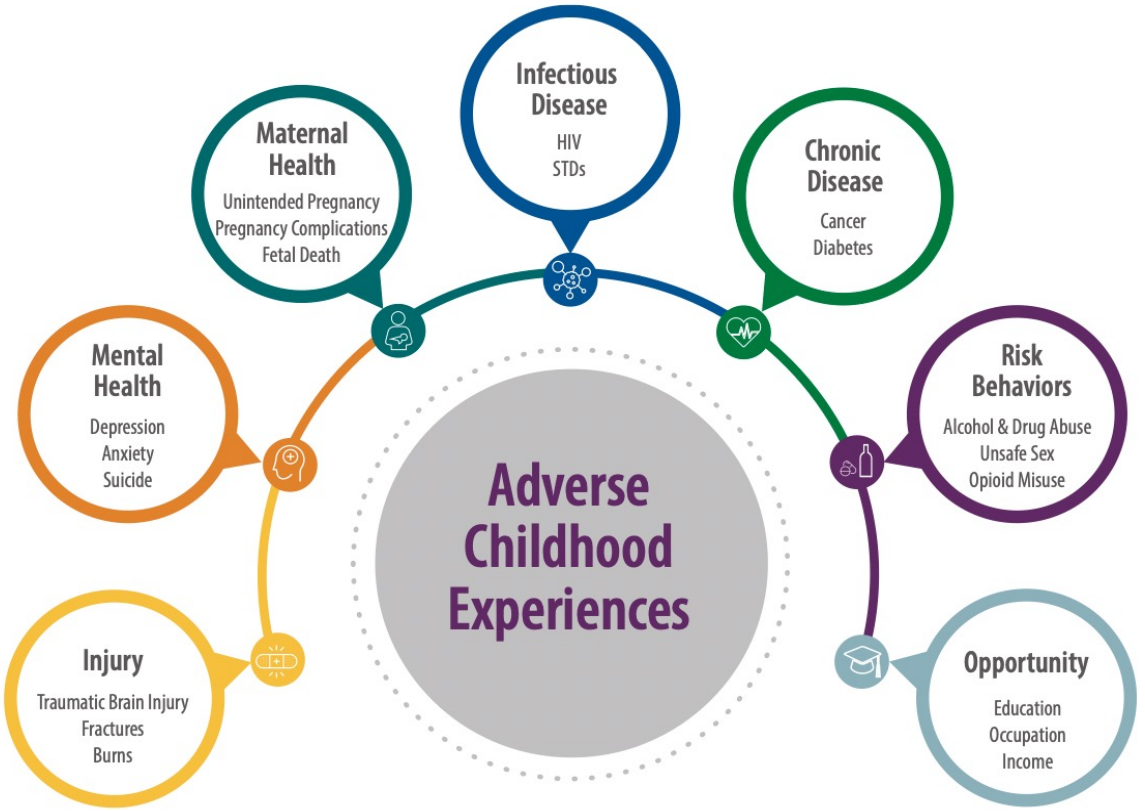


- Although the conventional ACEs is more common in the literature.
- Researchers have long called for an expansion to the ACE domains to include community/environmental factors (Cronholm et al. 2019; Finkelhor et al. 2017).
- The Pair of ACEs shown the connection between the home and community environments
  - Community-level adversities foster the creation of familial adversities.
  - Adverse community environment anchors children's' familial environment

Impact of Early Adversity Across the Life Course

- ACEs has been shown to be associated with more than 40 negative outcomes
  - Health risk behaviors
  - Chronic heal conditions
  - Infectious diseases
  - Limited educational & economic opportunity
  - Early death

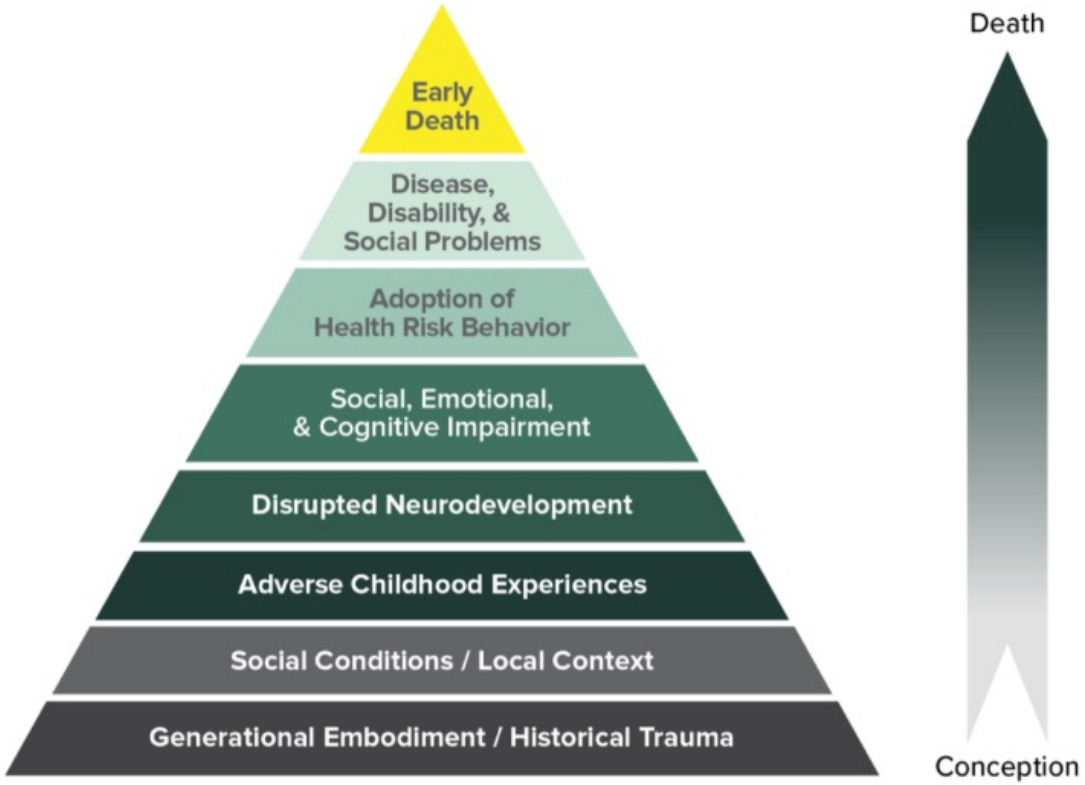
- Negative impact of ACEs begin in childhood and lasting throughout the life course



Source: https://www.cdc.gov/injury/pdfs/priority/ACEs-Strategic-Plan_Final_508.pdf

Relationship Between ACEs and Developmental Risk Factors Throughout the Life Course

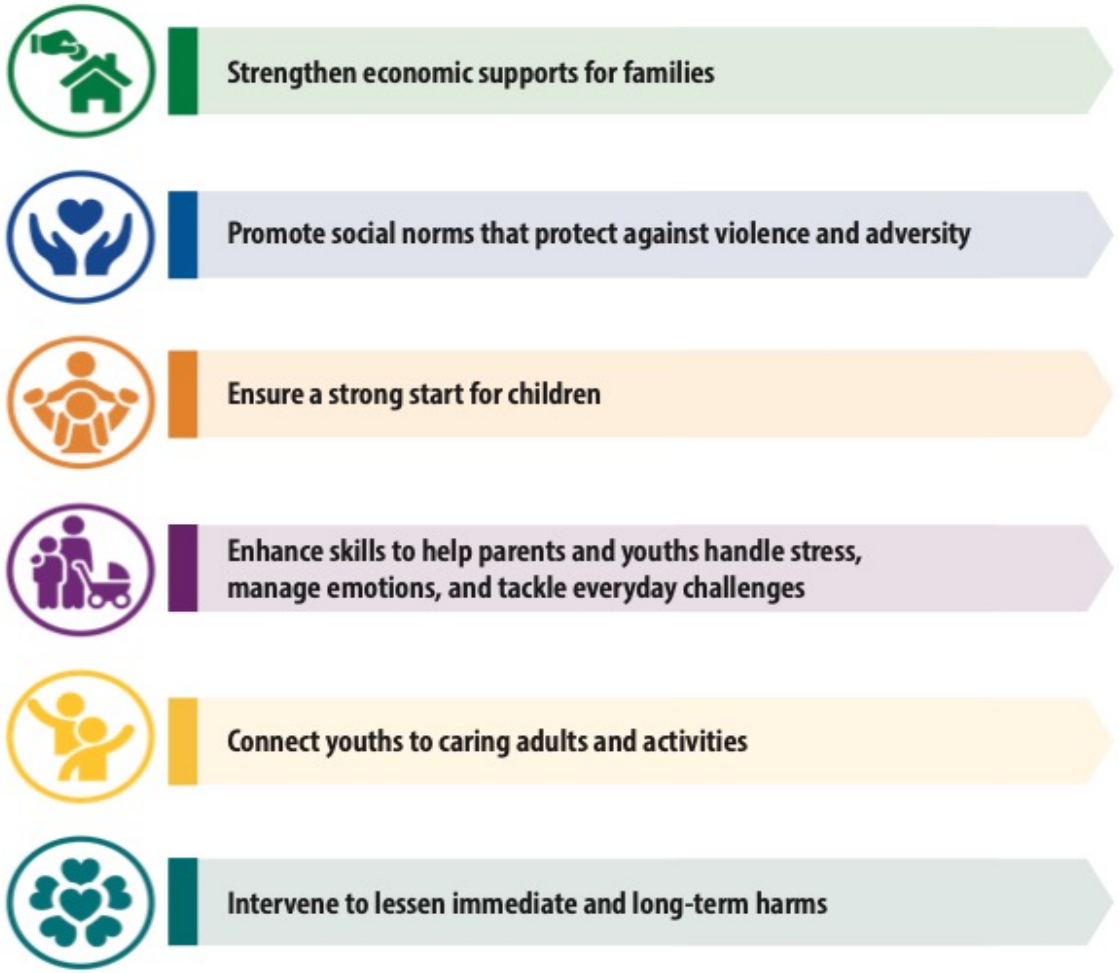
- ACEs are common across all populations
- Social and economic conditions increases risk for ACEs
  - Early mortality
- Graded dose-response relationship between ACEs and negative health and overall wellbeing.



Mechanism by which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan

Source: https://www.cdc.gov/violenceprevention/aces/about.html

Strategies to Aid in the Prevention of ACEs. . .



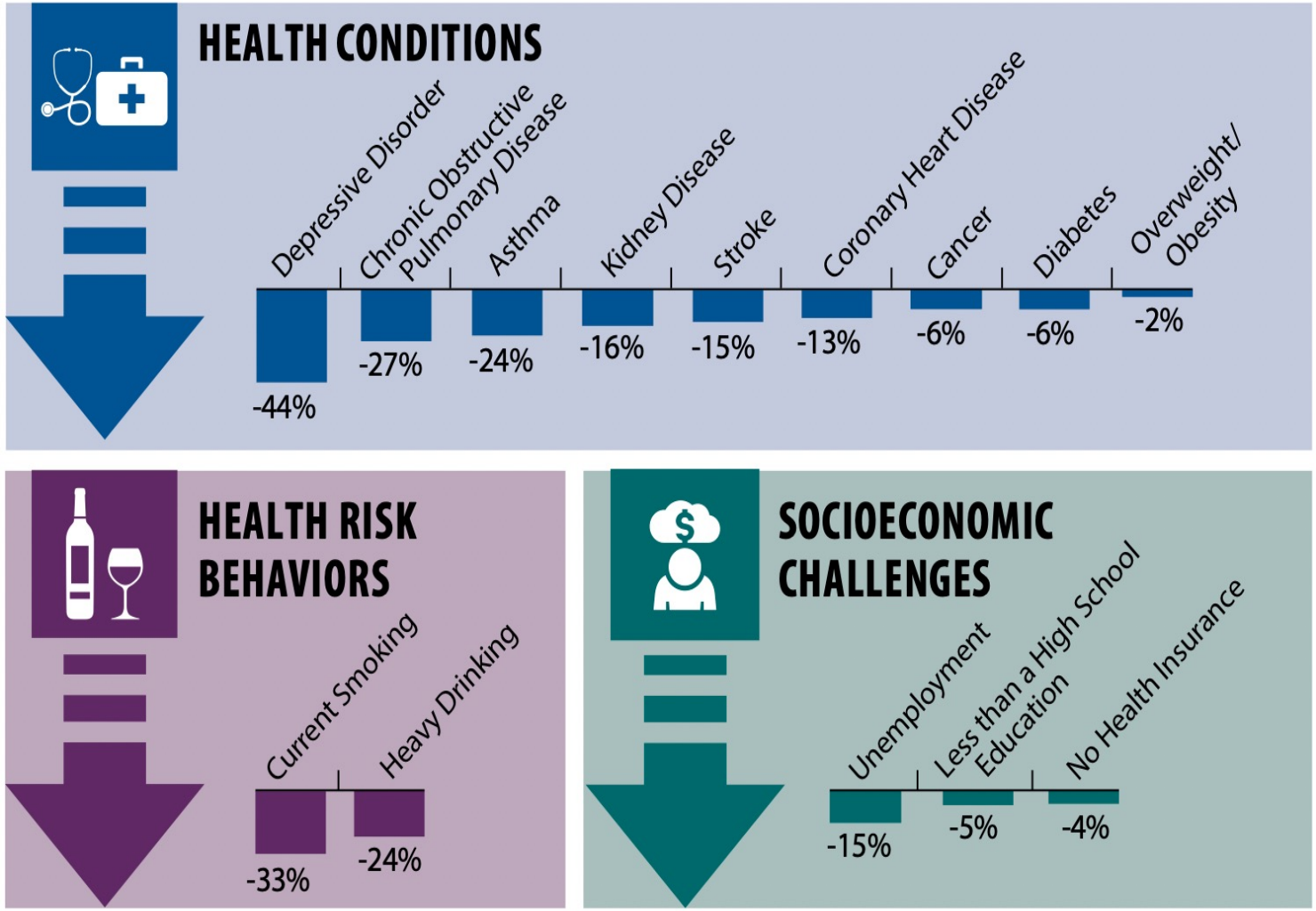
How can we as social workers help with preventing and/or reducing ACEs?

Source: https://www.cdc.gov/injury/pdfs/priority/ACEs-Strategic-Plan_Final_508.pdf

Prevention of ACEs May Result in . . .

- Higher academic achievement

- Reduction in:
  - Depression
  - Suicidal behaviors
  - Arrests & Incarceration rates
  - Substance use



Connecting the Brain to Rest of Body

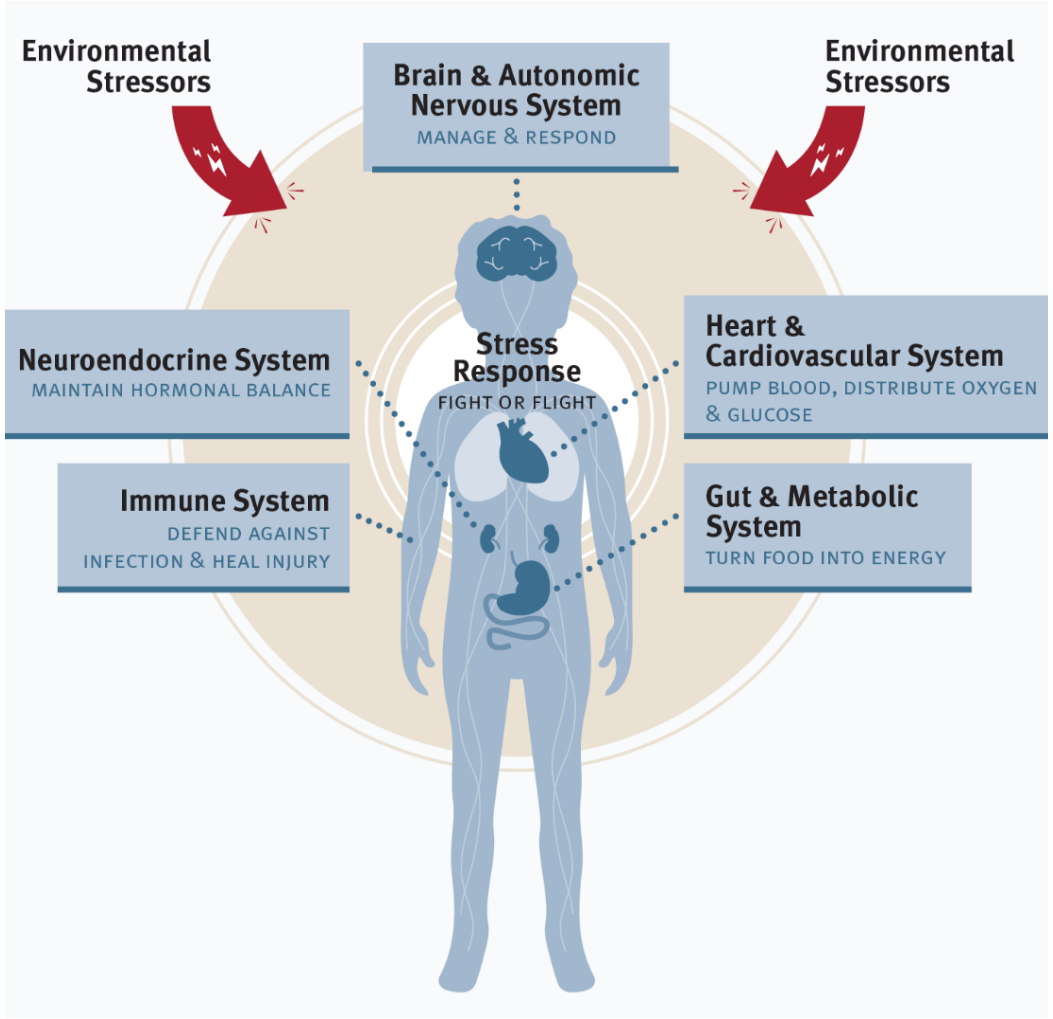
All biological systems in the body interact with each other and adapt to the contexts in which a child is developing—for better or for worse.

Excessive and persistent adversity early in life can overload biological systems and lead to long-term consequences.

The brain's developing circuits are highly sensitive to the disruptive effects of elevated stress activation.

Early, frequent activation of the immune system, which defends the body against infection and a variety of toxic substances, can impact lifelong health.

The combination of stress and inflammation is especially threatening to health and well-being through its effects on the cardiometabolic system.



Source: https://developingchild.harvard.edu/resources/inbrief-connecting-the-brain-to-the-rest-of-the-body/?utm_source=newsletter&utm_medium=email&utm_campaign=september_2020

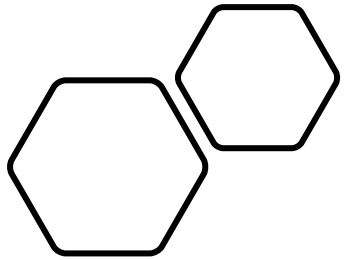
Small Group Activity (30 Minutes)

https://youtu.be/95ovIJ3dsNk

After watching Dr. Nadine Burke Harris' TED talk titled *How Childhood Trauma Affects Health Across a Lifetime*, in your small groups provide responses to the below questions:

1. What is your opinion on ACE research studies?
2. Do you think ACE studies are culturally sensitive?
3. When working with children in a research setting, what are some guidelines we need to follow?
4. Do you believe health-care professionals should be required to screen trauma patients and include such patients in research projects?

Food For Thought



“ The single most important thing we need today is the courage to look this problem [ACEs] in the face and say: *'This is real. This is all of us*.’”
(Dr. Nadine Burke Harris)