



Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults:

Adverse Childhood Experiences (ACE) Study

- ACEs influence a child's emotional, social, and cognitive functioning for years after the event(s) occurred.
- Sentinel study that examined the relationship between childhood adversity and increased rates of chronic diseases in adulthood.

MAIN CATEGORIES OF ACE's

- **Abuse** → emotional, physical, sexual
- **Neglect** → emotional, physical
- **Household Challenges** → i.e. Domestic violence, substance abuse, mental illness, parental divorce, incarcerated parent

How Common Are ACE's?

- 67% of the population have at least 1 ACE.
- 12.5% of the population has >4 ACEs.

RESILIENCY

- Resilience is the capacity to withstand and recover from difficulties.
- For children to develop resilience, it is **essential** that they have at least one stable and committed relationship with an adult.
- Social connection, self-efficacy, and sources of culture, tradition, and faith help foster resiliency.



Pathophysiology of Toxic Stress

- This occurs when a child experiences severe, frequent, or prolonged adversity without the necessary support of a caregiver.
- The hypothalamus-pituitary-adrenal axis is primarily affected, resulting in elevated cortisol, epinephrine, and norepinephrine levels leading to a chronic stress response.
- Toxic stress causes long-lasting changes in the hippocampus, amygdala, and prefrontal cortex – areas important in regulating fear, reward, memory, and impulse control.

Relevance: ACEs Linked to Higher Rates of Chronic Health Conditions

- An ACE score 4 or more was associated with...
 - 11x the level of intravenous drug abuse
 - 2-4x more likely to have 50+ sexual partners
 - 14x the number of suicide attempts and 4.5x higher rates of depression
 - 2x the level of liver disease
 - 3x the level of lung disease



MANAGEMENT

- Healthcare providers should be **trained to recognize ACEs** and provide **trauma informed care** to alleviate further stress and re-traumatization for patients.
- Core principles of trauma informed care include **safety, trustworthiness, peer support, collaboration, empowerment, humility and responsiveness.**
- **Early recognition of ACEs** allows us to advocate for and implement supports for positive childhood experiences (PCEs) that may help mitigate negative long-term effects.

February 2025

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