

ACEs and the Brain

When we enter environments that are threatening or harmful, our brains turn to **fight, flight, or freeze mode**.

This **toxic stress** causes the brain and body to produce an **overload of stress hormones**—such as cortisol and adrenaline—that harm the function and structure of the brain.

ACEs **disrupt neurodevelopment**. This causes structural differences in the brain, leading to abnormal neural activity, hypervigilance, decreased self-regulation, and difficulty with language processing.

Health Risks

Exposure to childhood ACEs can increase the risk of:

- Heart disease
- Liver disease
- Cancer
- Skeletal fractures
- Obesity
- Intimate partner violence
- Adolescent pregnancy
- Sexually transmitted diseases
- Smoking
- Suicide attempts
- Alcoholism
- Drug abuse
- Depression
- Anxiety

...and many more



Contact Us

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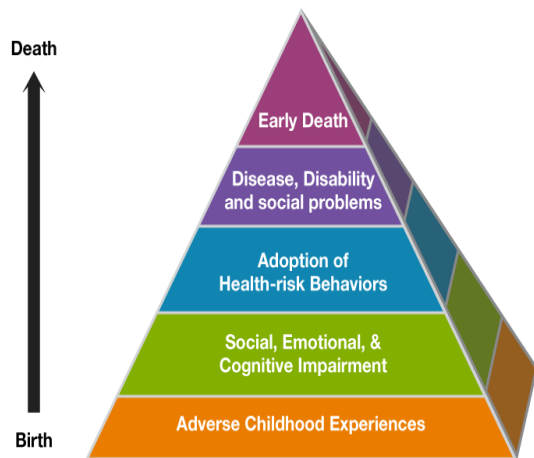
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ACE

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The Original Study

In the early 1990's medical researchers from the Centers of Disease Control and Prevention (CDC) and Kaiser Permanente partnered to explore childhood precursors of health risk behaviors, disability, disease, and premature mortality.

The study was comprised of 17,337 primarily white, middle-class adult members of the Kaiser Health Plan—making it the largest study of its kind ever done.

The researchers found that experiences while growing up deeply impact a young person and profoundly affect emotional and physical health later in life.

ACEs are very common: nearly 2/3 of adults have at least one.

ACEs are very **strong predictors of adult health risks and diseases.**

ACEs are implicated in **the top 10 leading causes of death** in the U.S.

What are ACEs?

Adverse Childhood Experiences are defined broadly as incidents of childhood abuse and household dysfunction. These childhood traumas often result in toxic stress that can harm a child's brain.

Research shows that with a score of **3 or more** ACEs, an individual becomes symptomatic and put at a **significantly higher risk for physical, behavioral and social ills.**

The 10 ACEs

1. Physical Abuse
2. Sexual Abuse
3. Emotional Abuse
4. Verbal Abuse
5. Household member with a mental illness
6. Household member with a substance abuse problem
7. Household member that is incarcerated
8. Witnessing domestic violence
9. Separation and divorce of parents
10. Exposure to neighborhood violence

ACE Scores are calculated from **the number of "yes" responses** to questions about each of the ten ACE categories—not per incident.

Each type of trauma counts as one, no matter how many times it occurs.

Begin to ask,

“What happened to you?”

rather than,

“What is wrong with you?”



What is Resilience?

Resilience is the psychological ability to successfully cope, or **“bounce back”** following severe stress and negative events.

Resiliency can be developed and nourished at any age, **in every person.**

Increased resilience helps **reduce negative effects of ACEs.**

Tips for Building Resilience

- Make connections
- Help others
- Maintain daily routines
- Form positive relationships
- Teach self-care
- Move toward goals
- Nurture a positive self-view
- Keep a hopeful attitude
- Look for opportunities for self-discovery
- Accept that change is a part of living