What are ACEs? **Adverse Childhood Experiences**

From 1995 to 1997, a landmark study by the Centers for Disease Control and Kaiser Permanente uncovered the profound connection between Adverse Childhood Experiences (ACEs) - experiences of abuse, neglect, and household dysfunction before the age of 18 - and adults' physical, emotional and social health outcomes. Unlike previous studies that focused on a single type of adversity, the ACE Study broadened the picture to look at multiple types of childhood stressors.

The ACE Study measured ten types of trauma, each of which counts as one point in an individual’s ACE score.

The ACE Study found that:

- **ACEs are common.** Two-thirds of adults report at least one ACE.
- **ACEs rarely occur in isolation.**
- **ACEs are highly interrelated and tend to occur in clusters.** If there is one ACE present, there is an 87% chance of at least one other ACE and a 50% chance of three or more.
- **ACEs have a dose-response relationship with health problems.**

The ACE Study also measured a wide array of health and social problems, and found that ACEs have a strong cumulative impact on the risk of common health and social problems. The research showed that people who report higher ACE scores are more likely to have health and social problems – in fact, as the ACE score goes up the percentage of people with health and social problems also goes up.

**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)

Viewed through a public health lens, ACEs are widely prevalent; highly interrelated; and intergenerational. They have a cumulative stressor (dose-response) effect; they affect multiple domains of health and social function, and they are associated with comorbidity.
How Does this Happen?

The **ACE Pyramid** is a life course model that helps us understand how adverse childhood experiences **disrupt neurodevelopment**, which in turn leads to **social, emotional and cognitive adaptations** that can then lead to the risk factors for **major causes of disease, disability, social problems, and early death**.

Since the time of the ACE Study, breakthrough research in developmental neuroscience and epigenetics show us that the hypothesis of the ACE Study is biologically sound. Neuroscience and epigenetic discoveries help us to understand the progression of adversity from preconception throughout the life course.

The ACE Pyramid shows us **how adverse childhood experiences (ACEs) influence human development in predictable ways**. This is important because **what is predictable is preventable**.

What Can Be Done About ACEs?

The wide-ranging health and social consequences of ACEs underscores the importance of preventing ACEs before they happen. Safe, stable and nurturing relationships and environments can have a positive impact on a broad range of health problems, and on the development of skills that will help children reach their full potential. The **Centers for Disease Control has identified strategies that address the needs of children and their families**. They include:

- **Home visiting to pregnant women and families with newborns**
- **Parenting training programs**
- **Intimate partner violence prevention**
- **Social support for parents**
- **Parent support programs for teens and teen pregnancy prevention programs**
- **Mental illness and substance abuse treatment**
- **High quality child care**
- **Sufficient Income support for lower income families**

The Magnitude of the Solution

The ACE Study has brought cohesion and synergy to work across the nation with its finding that **the cumulative stress of ACEs are a powerful determinate of the public's health and a strong common driver of mental, physical and behavioral health costs**. In the state of Washington, the **Washington State Family Policy Council** looked at a variety of poor health and social outcomes and determined the percentage that can be attributed to ACEs. **The gray area across the pie chart represents the portion of risk attributable to ACEs**. Like an oil spill, it defies predetermined boundaries and becomes everyone's problem. HOWEVER...

when programs, communities, policies and systems work together to address and prevent the cumulative impacts of adverse childhood experiences, it’s like placing a sponge in the center of this oil slick...as we succeed together in reducing the prevalence of ACEs, we will bring the rates of all these problems down AT ONCE!

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