

## Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are extremely stressful or traumatic events. ACEs are strongly related to the development and prevalence of a wide range of health problems throughout a person's lifespan, including those associated with substance misuse.

ACEs include:

- Physical abuse
- Sexual abuse
- Emotional abuse
- Physical neglect
- Emotional neglect
- Intimate partner violence
- Mother treated violently
- Substance misuse within household
- Household mental illness
- Parental separation or divorce
- Incarcerated household member

ACEs are a good example of the types of complex issues that the prevention workforce often faces. The negative effects of ACEs are felt throughout the nation and can affect people of all backgrounds.



Many studies have examined the relationship between ACEs and a variety of known risk factors for disease, disability, and early mortality. The Division of Violence Prevention at the Centers for Disease Control and Prevention (CDC), in partnership with Kaiser Permanente, conducted a landmark ACE study from 1995 to 1997 with more than 17,000 participants. The study found:

- **ACEs are common.** For example, 28% of study participants reported physical abuse and 21% reported sexual abuse. Many also reported experiencing a divorce or parental separation, or having a parent with a mental and/or substance use disorder.
- **ACEs cluster.** Almost 40% of the Kaiser sample reported two or more ACEs and 12.5% experienced four or more. Because ACEs cluster, many subsequent studies now look at the cumulative effects of ACEs rather than the individual effects of each.
- **ACEs have a dose-response relationship with many health problems.** As researchers followed participants over time, they discovered that a person's cumulative ACEs score has a strong, graded relationship to numerous health, social, and behavioral problems throughout their lifespan, including substance use disorders. Furthermore, many problems related to ACEs tend to be comorbid or co-occurring.

## **ACEs Research and Behavioral Health**

Research has demonstrated a strong relationship between ACEs, substance use disorders, and behavioral problems. When children are exposed to chronic stressful events, their neurodevelopment can be disrupted. As a result, the child's cognitive functioning or ability to cope with negative or disruptive emotions may be impaired. Over time, and often during adolescence, the child may adopt negative coping mechanisms, such as substance use or self-harm. Eventually, these unhealthy coping mechanisms can contribute to disease, disability, and social problems, as well as premature mortality.

## **ACEs and Substance Use**

- **Early initiation of alcohol use.** Efforts to prevent underage drinking may not be effective unless ACEs are addressed as a contributing factor. Underage drinking prevention programs may not work as intended unless they help youth recognize and cope with stressors of abuse, household dysfunction, and other adverse experiences.

- **Higher risk of mental and substance use disorders as an older adult (50+ years).** ACEs such as childhood abuse (physical, sexual, psychological) and parental substance abuse are associated with a higher risk of developing a substance use disorder.
- **Continued tobacco use during adulthood.** Prevalence ratios for current and ever smoking increased as ACEs scores increased, according to a 2011 study on ACEs and smoking status.
- **Prescription drug use.** For every additional ACE score, the rate of number of prescription drugs used increased by 62%, according to a 2017 study of adverse childhood experiences and adolescent prescription drug use.
- **Lifetime illicit drug use, drug dependency, and self-reported addiction.** Each ACE increased the likelihood of early initiation into illicit drug use by 2- to 4-fold, according to a 2003 study on childhood abuse, neglect, and household dysfunction and the risk of illicit drug use.

## ACEs and Behavioral Problems

- **Suicide attempts.** ACEs in any category increased the risk of attempted suicide by 2- to 5-fold throughout a person's lifespan, according to a 2001 study. According to a recent 2017 article, individuals who reported *6 or more ACEs* had 24.36 times increased odds of attempting suicide.
- **Lifetime depressive episodes.** Exposure to ACEs may increase the risk of experiencing depressive disorders well into adulthood—sometimes decades after ACEs occur.
- **Sleep disturbances in adults.** People with a history of ACEs have a higher likelihood of experiencing self-reported sleep disorders, according to a 2015 systematic review of research studies on ACEs and sleep disturbances in adults.
- **High-risk sexual behaviors.** Women with ACEs have reported risky sexual behaviors, including early intercourse, having had 30 or more sexual partners, and perceiving themselves to be at risk for HIV/AIDS. Sexual minorities who experience ACEs also demonstrate earlier sexual debut according to a 2015 study.
- **Fetal mortality.** Fetal deaths attributed to adolescent pregnancy may result from underlying ACEs rather than adolescent pregnancy, according to a 2004 study of the association between ACEs and adolescent pregnancy.

- **Pregnancy outcomes.** Each additional ACE a mother experienced during early childhood is associated with decreased birth weight and gestational age of her infant at birth, according to a 2016 study on the association between ACEs and pregnancy outcomes
- **Negative physical health outcomes.** Experiencing adverse childhood family experiences may increase the risk for long-term physical health problems (e.g., diabetes, heart attack) in adults.
- **Poor dental health.** Children who have experienced at least one ACE are more likely to have poor dental health.