What are ACEs?

ACEs are Adverse Childhood Experiences – situations where a child faces some sort of trauma or intense, sustained stress.

ACEs typically fall into three categories:

• Abuse – physical, emotional, or sexual
• Neglect – physical or emotional
• Household dysfunction

The most common ACEs children face come from:

• Financial hardship
• Issues around divorce
• Seeing or being a victim of violence (including domestic violence)
• Living with someone who has a mental illness
• Living with someone who abuses drugs or alcohol
• Having a parent or caregiver in prison

ACEs can change or damage a child’s developing brain. The harm can be so bad that it only shows up decades later. ACEs can cause mental illness and physical diseases. ACEs are at the root of most violence.

Sadly, it is not rare for a child to experience these situations. It’s estimated that nearly half of U.S. children (45%) have experienced at least one ACE, while 10% have experienced at least three of these traumatic events.

What the Science Shows

This information is based on studies that show a direct link between difficulties experienced in childhood and poor mental and physical health in adulthood.

Damage From ACEs

A young child who lives with violence, abuse, and neglect is exposed to what is called “toxic stress”. This puts them at high risk for problems that lead to poor health and behavioral choices for their whole lives.

Toxic stress caused by ACEs can:

• Interfere with a child’s healthy brain development which can lead to learning difficulties
• Alter a child’s body functioning, increasing the risk of cancer, heart disease, arthritis, and many other conditions
• Change how a child’s genes are coded which can be passed from generation to generation

There is Hope

The good news is that children are generally adaptable and resilient. Studies show that the presence of just one positive adult influence in a child’s life can buffer against toxic stress and reduce the effects of ACEs. Childhood trauma isn’t something you just “get over” as you grow up but the effects of ACEs can be lessened or even prevented by introducing positive influences and ensuring appropriate care.
ACE #1
Calvin lives in an unstable home. When his father drinks, he beats Calvin and his mother.

Lifetime Impact of ACE #1
- Calvin’s father continually triggers his son’s fight, flight, or freeze response.
- This releases unnatural levels of cortisol and adrenalin into Calvin’s bloodstream which results in sustained “toxic stress”.
- The neurobiology of Calvin’s growing brain is adversely affected.
- The deadly wear and tear on Calvin’s body caused by sustained toxic stress has begun.

ACE #2
Calvin is very close to his grandmother. When she dies, he feels sad, confused, and abandoned. His mother is devastated, too. Calvin doesn’t want to upset her by talking about his feelings.

Lifetime Impact of ACE #1-2
- Stress hormones constantly wash through Calvin’s body, keeping his blood pressure high and weakening his circulatory system.
- His glucose levels are consistently raised to provide the energy he needs to stay alert. This leads to Type 2 diabetes.
- He has elevated cortisol levels which are associated with osteoporosis, arthritis, gastrointestinal disease, depression, and lymph node shrinkage, leading to the inability to ward off infections.

ACE #3
Calvin’s mother loses her job. They have to move to a more dangerous neighborhood. Every day, Calvin is afraid to walk to school. He even feels unsafe in his home.

Lifetime Impact of ACE #1-3
- The repeated release of adrenalin triggers a disproportionate inflammation response in the body.
- White blood cells respond at atypical rates, raising his risk of lupus, multiple sclerosis, rheumatoid arthritis, and fibromyalgia.
- As he grows up, Calvin is 4 times more likely to smoke and 7 times more likely to be an alcoholic.
- Calvin may die 20 years sooner than someone with no ACEs.

Calvin’s Life: ACEs and Health

As healthcare professionals know, children reach developmental milestones that indicate if they’re growing and maturing appropriately. These physical and behavioral indicators can be relatively straightforward to assess. Brain development is harder to evaluate but the emerging science of brain imaging technology makes it possible to see just how damaging ACEs are to the physiology of a young child’s brain.

Toxic stress caused by ACEs changes the way neural networks form and perform, and when hormonal systems are activated. The consequences of repeatedly activating the brain’s fight, flight, or freeze stress response within the limbic system can be extremely detrimental to health.

Physical Health Symptoms
- Upset stomach or other digestive issues (due to the repeated automatic shutting down of the digestive system)
- Migraines, headaches, skin rashes, hair loss (due to repeated constriction of blood vessels to the skin)
- Racing heartbeat, back pain, muscle aches, dizziness, fainting, sleep problems, changes in eating habits causing obesity or unwanted weight loss (due to repeated release of adrenaline and cortisol which causes chronic inflammation)

Mental Health Symptoms
- Anxiety, nervousness, and depression
- Feelings of hopelessness or helplessness
- Difficulty concentrating or following directions
- A desperate need to be “good” or “in control”
- Changes to age-appropriate thoughts, feelings, and behaviors

ACEs and a Child’s Health

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