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Most people know intuitively that childhood experiences shape our adult lives. It makes sense that the quality of a child's nutrition, ability to exercise in fresh air, and having enough money to ensure a safe environment would have a direct effect on physical health. Most of us also have a rarely-discussed concept that physically or emotionally abusive childhood experiences could contribute to behavioral challenges and mental illness as adults. Until recently, however, we did not have reliable data that the taboo topics of adverse childhood events (ACEs) could actually affect our physical health, dramatically increasing one's risk of hospitalization for several common diseases many decades later. All that changed in the late 1990s when the largest health care provider in California, Kaiser Permanente, released its study looking into why people were dropping out of its very successful weight loss program. Repeated in Iowa and 21 other states from 2009 to 2014, the evidence is overwhelming that emotional suffering before the age of 18 contributes to poorer health outcomes later in life. In fact, these experiences can literally shorten your life by decades.

What do we mean by an adverse childhood event (ACE)? Three groups of ACEs are defined, grouped as related to abuse, or neglect, or family/household challenges. These include physical, sexual, and psychological abuse, emotional and physical neglect, as well as exposure to other traumatic stressors, such as poverty, substance abuse in a caretaker, divorce, mental illness in a family member, having a battered mother, or criminal behavior leading to incarceration of a family member. The astonishing results of this study indicate just how common these issues are in the predominantly white, educated, middle class, primary care setting of the original study. As might be imagined, results often show more impact in less advantaged groups.

THE IMPLICATIONS

Let's look at the results of the ACE study to understand its enormous health implications. First, these painful, rarely-discussed subjects are common, in fact very common. Nearly two-thirds of study

When 4 ACEs Do Not Add Up to a Win

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participants reported at least one ACE. If you are sitting in a gathering of people and look to your right, then your left, at least two of you have had an adverse childhood experience. The most common ACEs affected approximately one in four study participants. From most to least common, these were physical abuse (28%), substance abuse (27%), parental separation/divorce (23%), and sexual abuse (21%). This last number is a composite for both men (16%) and women (28%).

ACEs also tend to occur in clusters. If you have one, the likelihood increases for additional ACEs. Some types of childhood trauma tend to involve multiple ACEs. For example, in a family where there is domestic violence, there often exists additional problems such as substance abuse, drug use,

separation/divorce, physical abuse, sexual abuse, someone in the correctional system, abandonment, etc. If you had a battered mother, the likelihood of an additional five or more ACEs increases to 48%.

A critical number to remember is having four or more ACEs. Like being exposed to higher doses of a toxin, **having four or more ACEs confers significantly increased risk of certain health conditions.** Again, this is common, affecting about one out of eight people, with some sex differences. More women than men met this criteria of four or more. And some neighborhoods have a lot more risk. For instance, at the Oklahoma University-Tulsa School of Community Medicine clinic, a study found that almost one out of three patients reported five or more ACEs.

ACES AND ILLNESS

The relationship to physical disease is astounding. Having three ACEs more than doubles your risk for heart disease or lung disease, such as COPD. In fact, having three ACEs increases your risk of heart attack 87 percent more than just having an elevated cholesterol. Of course, if you also have additional risk factors such as high blood pressure, these add on to your increased risk from ACEs. Having four or more ACEs increases the risk for the following diseases by two to four times: vision problems, arthritis, asthma, cancer, diabetes, liver or kidney disease, autoimmune diseases, and stroke.

When we look at the increased risk for certain diseases related to childhood traumas, we see some that are explainable by the markedly increased likelihood for risky health activities such as smoking, overindulging in alcohol or other substance abuse. Still, some of this probability was evaluated and found to be over and above what could be attributed to gambling with your health. For example, researchers looked at pulmonary and heart diseases not related to health-risk behaviors and found an increase in odds based on the number of ACEs. An ACE score of seven or more alone, without smoking, drinking, or being overweight, increases a woman's risk of heart disease 360 percent! Autoimmune diseases and certain cancers are not necessarily linked to dangerous health behaviors but still increase with ACEs. Sleep problems increase with more ACEs.

The more ACEs a person has, the more likely they are to need prescriptions for any medications, and particularly for medicines having an effect on mental functioning. Having several ACEs clearly shortens your life. Those who had six or more die on average 20 years earlier than those without any ACEs, and were more than twice as likely to die at age 65 or less. This is the first time we've been able to correlate some of our major health issues to incidents in childhood occurring decades earlier.

ADDRESSING THE HEALTH CONSEQUENCES OF ACES

There is also good news: we are finding methods to help address these issues once we take them out of the closet into the light of day. The behaviors, skills, and interventions that help people to recover from trauma can benefit not only those currently affected, but pay dividends with future generations. Of course, preventing these traumas should be a priority for every community, and some now have programs in place. Still, if you think that ACEs may be contributing to your current illness, consult a health care provider knowledgeable about “trauma-informed care.” Several new therapies can help reduce the effects of mental and emotional trauma on your body. You owe it to yourself to give yourself every opportunity to heal from the inside out. **h&h**

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