

ACEs, trauma, toxic stress

What would you do or say if somebody came along and told you the secret to living 20 years longer? What if somebody told you they had the secret to reducing suicide risk by 1,200 percent? How about if they told you they knew how to reduce the likelihood of you becoming addicted to alcohol by seven times? You would probably say this person had discovered some sort of magical (or mythical) source of health and longevity. Or, considering how skeptical we all are these days, you might just write that person off as crazy. However, if that person was talking to you about the effects of adverse childhood experiences and the health effects of toxic stress, they would in fact be coming at you with real science and be worth listening to.



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This was exactly the topic discussed at the recent Public Health Annual Conference put on by our friends from the Division of Public Health and Community Services. The reason I wanted to choose this topic for today's column is that you are going to be hearing a lot about it in the months and years to come, and how each of us individually, and all of us collectively, learn and embrace this new knowledge can have profound consequences for our community down the road.

So, what exactly are "ACEs," or adverse childhood experiences? Back in the period of 1995-1997, about 20 years ago, researchers with Kaiser Permanente and the CDC began looking at the effects of various types of traumatic experiences that many of us experience in childhood. They did so initially by simply observing incidences such as that young people who experience childhood sex abuse are much more likely to be obese as adults. Over time, they expanded their research to include a full battery of questions related to one's childhood experiences. The questionnaire they developed included 10 different questions, including "Were your parents separated or divorced?" and "Did a member

of your household go to prison?" as well as other questions that touched on mental illness, violence, etc. These 10 questions are simply answered yes or no, and then the number of "yes" answers are added up. The higher your score, the more likely the person was to have poor outcomes in later life. You can easily take the ACEs and score yourself online.

The researchers ultimately administered the test to thousands of individuals, and what they found is that those with a score of six or more did, in fact, live 20 years shorter than those with no ACEs. Take a moment and think about how profound that is. What is the worth of 20 years in your life? For me, it's the difference between meeting my grandkids and seeing them grow to be young adults ... or not meeting them at all. All the other outcomes mentioned in the first paragraph of this article are also closely correlated to high or low ACEs scores.

So, why is it that these experiences can have such profound effects on our lives? The answer can be summed up by the term "toxic stress." As human beings, we are wired to protect ourselves against danger. For many thousands of years, human beings worried about daily dangers like those posed by wild animals or human enemies. These were daily, existential threats. What developed in us has been called "flight, freeze or fight." The body reacts to these threats by pumping out chemicals like adrenaline and cortisol. And when the threat is gone, under normal circumstances, the body returns to a normal state. However, in our modern environment, the threats are different in that the periods of duration for the response can be much longer. For example, a child who lives with an abusive parent can go literally hours and hours in a state of heightened stress, and as a result throughout that entire period, these chemicals like cortisol are pumping throughout the body and the brain. The long-term consequences are that the brain is literally re-wired to know no other state of being. This can kill or deaden parts of the brain that are for higher reasoning, effectively putting the caveman brain in

charge, the result of which is shorter life spans, more depression and mental illness, higher rates of suicide, more substance abuse and increased violence.

Are these outcomes inevitable and what can be done? Of course, there are many people who experience unbelievable trauma and go on to live wonderful, long and productive lives. Bad outcomes are not inevitable. However, they are much more likely. As a response, the answer for how to increase positive outcomes lies in creating an environment that focuses on human connectedness and is supportive. Building a person's self esteem is the key to reversing the effects of toxic stress, and there is a growing body of work that explores concrete ways to do so. For example, it has now been demonstrated that the practice of meditation and mindfulness can undo the brain effects of toxic stress, opening new neural pathways once closed by the chemicals like adrenaline and cortisol.

This topic is much too expansive for a simple article like this to explore in great depth, but I hope I've given you just a little bit of a teaser. With the support of our Public Health Department, we will be working together to create a more resilient community, one that understands the types of trauma which can have bad long-term consequences, works toward reversing the effects of these traumas and strives to create a culture of prevention that keeps them from happening in the first place.

Where you can start is simply by going to your computer and doing a little bit of light research on the topic. The CDC has a lot of information and you can just Google the terms ACEs, adverse childhood experiences, toxic stress and trauma informed. I encourage you to do so, and to think about your own life and the lives of those in your family or other relationship circles.

Just doing that much can make a big difference. If we all do so, just imagine the possibilities, because GREAT THINGS HAPPEN WHEN WE LIVE UNITED.

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