

CONNECTIONS MATTER IN HEALTH CARE

A health practitioner's guide to addressing toxic stress

TOXIC STRESS

Stress operates along a continuum. In small or moderate doses, stress can be beneficial. However, stressful experiences in childhood that are powerful, frequent, prolonged, and in unpredictable doses can be detrimental to a child's development and life-long health. Adverse Childhood Experiences, or ACEs, are examples of traumatic or toxic stress that are now commonly acknowledged by the scientific community to be a major determinant of health outcomes.

OUTCOMES

Children who experience toxic stress are at greater risk for many negative health outcomes, even as adults. Based on data from the 2014 North Carolina Behavioral Risk Factor Surveillance System (BRFSS), on average, one out of every four adults in North Carolina have experienced significant childhood trauma.

Some of these health risks may be attributable to behaviors, such as smoking, overeating or risky sexual activity. These behaviors may have less to do with poor decision-making than fulfilling a physiological need, such as to de-stress, to protect oneself, or to feel love. A smoker, for example, may find that smoking assists in relaxing their overactive stress response.

However, the health risks of early toxic stress cannot be attributed to behavior alone. The researchers who conducted the initial ACE Study looked at patients with ACE scores of 7 or higher who didn't smoke, didn't drink to excess, and weren't overweight. They found that the risk of ischemic heart disease in this population was 360 percent higher than for patients with an ACE score of 0. Higher levels of cortisol and other stress hormones alone can affect health outcomes.

THOSE EXPERIENCING FOUR OR MORE ACEs COMPARED TO THOSE WITH ZERO ARE:

1.5x 
more likely to smoke cigarettes

2x 
more likely to have diabetes

2.3x 
more likely to report poor health

3x 
more likely to have heart disease

5x 
more likely to have clinical depression



10 TYPES OF STUDIED ADVERSE CHILDHOOD EXPERIENCES

ABUSE

- 1 Physical
- 2 Psychological
- 3 Sexual

NEGLECT

- 4 Physical
- 5 Psychological

HOUSEHOLD DYSFUNCTION

- 6 Substance abuse
- 7 Parent with mental illness
- 8 Incarcerated parent
- 9 Divorce
- 10 Domestic violence

WHAT'S WORKING

Toxic stress is more predictive of negative health and social outcomes than smoking, heavy drinking, or diet and activity level, all of which are regularly screened for during a checkup. Yet, few clinical practices assess for toxic stress or provide follow-up resources. Clinicians can effectively reduce toxic stress through broad, multi-sector partnerships and commitment. Here are examples of how physicians have begun to address toxic stress:

IN THE NATION

Nationally, many similar examples are emerging. One program in particular, run by Dr. Nadine Burke Harris through her Center for Youth Wellness in San Francisco, Calif., has emerged as a promising example. Dr. Burke Harris and her team created one of the earliest practice-wide responses to toxic stress. The model includes universal screening and follow-up with multidisciplinary rounds that include social workers and mental health providers. Their model also has a home visiting component and refers patients to resources for concerns such as hunger or parental depression. Dr. Burke Harris emphasizes a multi-generational approach whereby the clinician, the multidisciplinary team, and the referrals focus on the family as a whole rather than an individual showing signs toxic stress exposure.

FIND YOUR CONNECTION

Clinicians, as practitioners as well as community leaders, have a unique opportunity to address toxic stress in individuals and advocate for developing systems that build strong, stable, nurturing communities. Here are ways to respond:

- 1 Establish a trauma-informed environment in your clinic.** Before assessing patients for toxic stress, a practice must adopt a culture where those screened for trauma feel safe and supported. This requires an entire practice, including clinicians, assistants and office staff, to understand the impact of trauma and create a culture of safety for patients and each other.
- 2 Improve access to integrated care models that work with community resources, mental health services, and services for the whole family.** Models like 1st Five in Iowa offer examples for how a clinical practice can develop meaningful partnerships with community resources without expending a lot of clinical staff time. Adopt a multigenerational approach to addressing toxic stress by considering the physical and mental health of the family unit or support structure surrounding an individual exposed to toxic stress.
- 3 Educate peers, staff, families, colleagues, friends, and community leaders about the impact of toxic stress on health and the community.** Collaborate with others to support and develop education, outreach, prevention, and intervention strategies in your community.

To learn more about the Connections Matter community effort, visit www.ConnectionsMatterNC.org.

REFERENCES

- 1st Five Healthy Mental Development Initiative. (2015). Healthy mental development in the first five years [Brochure]. Des Moines, IA.
- Child and Family Policy Center. (2015). ACEs in Iowa: State patterns and policy implications [Report]. Des Moines, IA.
- Costanzo, L.S. (2006). BRS Physiology 4th ed. Lippincott Williams & Wilkins. 234-255.
- Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults - The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, 14(4), 245-258.
- Garner, A.S., Shonkoff, J.P., Siegel, B.S, Dobbins, M. I., Earls, M.F., McGuinn, L., ... Wood, D.L. (2015). Early childhood adversity, toxic stress, and the role of the pediatrician: Translating developmental science into lifelong health. *Pediatrics*, 129, e224-e231.
- Gudmunson, C. G., Ryherd, L. M., Bougher, K., Downey, J. C., & Zhang, D. (2013). Adverse childhood experiences in Iowa: A new way of understanding lifelong health.
- Nieman, L.K. (2015). Adrenal Steroid Biosynthesis. In: UpToDate, Post TW (Ed), UpToDate, Waltham, MA. (Accessed on May 25, 2015.)
- Center for Youth Wellness. (2015). An unhealthy dose of stress [Whitepaper]. San Francisco, CA.