

Relevant Research

- Laura Santhanam, *How the Toxic Stress of Family Separation Can Harm a Child*, PBS, June 28, 2018, (<https://www.pbs.org/newshour/health/how-the-toxic-stress-of-family-separation-can-harm-a-child>).

Excerpt:

In a situation where children are separated from their parents for a long period of time, they remain on high alert, and their bodies endure prolonged and severe toxic stress as a result. See [Harvard University Center on the Developing Child – Toxic Stress](#)

Excerpt:

When a child is primed to experience fear and anxiety, those emotions can superimpose themselves onto how the child interacts with another person, even if that person wants to nurture and love the child. This condition is called reactive attachment disorder, and it can start as early as infancy if a child's basic needs aren't met by a parent or caregiver, preventing a healthy bond from forming between them. See [Mayo Clinic's Reactive Attachment Disorder Research](#)

Excerpt:

Toxic stress is more subtle than a broken bone or distended stomach, but it can leave permanent mark on a child's brain and can "create a weak foundation for later learning, behavior, and health," according to a [2012 study](#) published in the journal *Pediatrics* that explored how adversity and toxic stress in early childhood can manifest itself throughout a child's life. After a long period of sustained toxic stress, a child who had seemed inconsolable may become quiet, dull or withdrawn. That doesn't mean they have adjusted to what's going on, those symptoms emerge because their cortisol levels are depressed and their stress levels are blunted. See American Academy of Pediatrics News & Journal Gateway, [The Lifelong Effects of Early Childhood Adversity and Toxic Stress, \(2012\)](#).

- Hillary A. Franke, [Toxic Stress: Effects, Prevention and Treatment](#), 1 *Child*. 3, 390 (2014), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4928741/>.

In this article, Franke summarizes the findings in recent studies on toxic stress and childhood adversity that followed the American Academy of Pediatrics Policy Report on the effects of toxic stress. Childhood toxic stress, Franke explains, is defined as "severe, prolonged, or repetitive adversity with a lack of the necessary nurturance or support of a caregiver to prevent an abnormal stress response." Children who experience toxic stress are at risk for long-term adverse health effects including maladaptive coping skills, poor stress management, unhealthy lifestyles, mental illness and physical disease." According to Franke, "[f]actors that place a child at risk of maltreatment overlap those with risk of toxic stress" (e.g., social isolation, poverty, non-biological relative living in the home, depression). However, if primary preventative measures are taken during early development, appropriate stress responses to adversity may result. Positive factors for child maltreatment (e.g., structured school environment, positive family changes, presence of a caring and supportive adult) may also reduce the risk of toxic stress. An

integrative approach to prevention and treatment of toxic stress, Franke argues, “necessitates individual, community and national focus.”

- Alexander C. McFarlane, Long-Term Costs of Traumatic Stress: Intertwined Physical and Psychological Consequences, 9 World Psychiatry 1, 3 (2010), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2816923/>.

This paper explores the delayed, long-term physical and psychological effects of traumatic stress. Understanding that the effects of stress need to be considered as a major environmental challenge that places an individual’s physical and psychological health at risk, this paper focuses on the development and impact of delayed Post Traumatic Stress Disorder (PTSD) as a result of subsequent adverse experiences. While the paper does not deal specifically with child separation, the focus on the impact of stressful environments following a traumatic experience speaks to the layered traumatic experiences many children experience following removal and provides insight into necessary treatment approaches. According to the paper, the majority of people who develop PTSD do not originally meet the diagnostic criteria of the disorder; rather, it is only with the passage of time that the symptoms become sufficiently severe to warrant a clinical diagnosis. This delayed form of PTSD demonstrates “how a traumatic experience can apparently lie dormant within an individual only to become manifest at some point in the future.” The paper explores the various physical and psychological symptoms that may develop in association with delayed PTSD (e.g., cardiovascular problems, obesity, morbidity) and proposes treatment that emphasizes addressing underlying psychophysiology in the early periods following exposure to adversity.

- Jack P. Shonkoff & Committee on Psychological Aspects of Child and Family Health et al., Lifelong Effects of Early Childhood Adversity and Toxic Stress, 129 Pediatrics 232 (2012).

This report presents an ecobiodevelopmental (EBD) framework that demonstrates how toxic stress “can leave a lasting signature on the genetic predispositions that affect emerging brain architecture and long-term health.” Recognizing development as “nature dancing with nurture” rather than “nature vs. nurture,” an EBD framework examines “how early experiences affect when, how, and to what degree different genes are actually activated.” This framework provides insight into the well-documented relationship between child adversity and adult health impairment. Although moderate levels of stress are essential to survival, toxic stress describes prolonged exposure to excessively high levels of stress hormones that leads to chronic “wear and tear” on bodily systems, including the brain. According to this report, alleviating toxic stress in childhood could reduce persistent health disparities associated with poverty, discrimination, or maltreatment. Ultimately, the report proposes “a new role for pediatricians to promote the development and implementation of science-based strategies to reduce toxic stress in early childhood.”

- Excessive Stress Disrupts the Architecture of the Developing Brain, Harvard U. Center on the Developing Child: National Scientific Council on the Developing Child (Jan. 2014), https://developingchild.harvard.edu/wp-content/uploads/2005/05/Stress_Disrupts_Architecture_Developing_Brain-1.pdf.

Extensive research shows that healthy development can be derailed by excessive or prolonged activation of stress response systems in the body and the brain. This paper suggests that policies affecting young children generally do not reflect awareness of the degree to which very early exposure to stressful experiences and environments can affect the architecture of the brain, the body's stress response systems, and a host of health outcomes later in life. Because a child's ability to cope with stress has consequences for mental and physical health throughout life, this paper suggests that "understanding the nature and severity of different types of stress responses to early adverse experiences can help us make better judgments about the need for interventions that reduce the risk of later negative impacts." The paper focuses on the neurological effect of toxic stress that occurs when children lack a supportive caregiver to act as a buffering agent. According to the paper, the quality of early care and education that young children receive outside the home also plays an important role in whether they experience toxic stress.