ENSURING A POSITIVE TRAJECTORY IS CRUCIAL.

Brain development is at its most malleable and flexible during the first years of life, offering opportunities to build strong foundations for cognitive, social and emotional health. Toxic stress, early childhood adversity, social exclusion and discrimination cause harm at all ages, but are particularly damaging in the earliest years of life.

Research on brain development points to the critical need for constant and consistent nurturing of young children during the earliest years of life. Stress, particularly when there are few protective factors present, can lead to toxic stress that is damaging to the developing brain. Toxic stress is characterized by the prolonged activation of the stress response system, in the absence of protective relationships.

Epigenetics shows our environment and our experiences impact how well brain synapses connect and can also affect the human genome itself and be transmitted to future generations. The image below (Figure 1) shows the dramatic impact that negative stimulation can have on the temporal lobe.

**Figure 1.**

Adverse childhood experiences (ACEs) are broadly defined as incidents during childhood that harm social, cognitive and emotional functioning. The original ACEs study surveyed more than 17,000 adults about childhood exposure to 10 types of adverse childhood experiences: physical, sexual and psychological abuse; emotional and physical neglect; and household dysfunction (substance abuse, divorce, mental illness, battered mother and criminal behavior). The study found adverse childhood experiences were linked to increased risk of a broad range of adult health problems, including diabetes, stroke, depression and some forms of cancer. For example, those

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experiencing four or more ACEs compared with those with zero are 6 times more likely to have depression. In recent years, the conceptualization of ACEs has expanded beyond the ten indicators used in the original study to examine how factors such as economic hardship, neighborhood violence and exposure to racism are linked to toxic stress and in turn shape child development and lifelong health.

Along with research on the negative impacts of unmitigated stress and early childhood adversity on children’s growth and development, there is also a growing body of research on factors contributing to a positive development.

The Center for the Study of Social Policy’s (CSSP) Strengthening Families Framework identifies five protective factors. The protective factors are a research-informed approach that increases a family’s strengths, enhances child development and reduces the likelihood of child abuse and neglect. When any family has protective factors, they are better able to handle a crisis. They are also better able to prevent toxic stress and the damaging effects adverse childhood experiences can have on young children.

The chart below shows how a child’s trajectory is impacted by the different social determinants (risk and protective factors). Increasing the protective factors in all families, especially those with young children, will significantly improve the young child’s health trajectory. A higher health trajectory combined with the protective factors helps reduce future health, social and developmental issues that keep a child from reaching their full potential.

**Figure 2.**

Additional Resources:

- Center for Disease Control and Prevention: http://www.cdc.gov/ace/
- Harvard Center on the Developing Child: http://developingchild.harvard.edu/