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Welcome and Brain Smart Start

Welcome to RTS Webinar Wednesdays!

- Presenter – Elandriel Lewis, Manager of Early Learning and Training

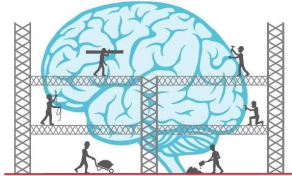
Brain Smart Start

- Unite and Connect
 - Please use the chat box to share your name, where you work, and a highlight from this past week.
- Disengage the Stress
 - S.T.A.R. Breathing
- Commit
 - What do you give yourself permission to do during today's webinar?
 - Share in the chat box if you are willing

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The Role of Life Experiences in Shaping Brain Development

**BUILDING STRONG BRAINS
TENNESSEE**



Elandriel Lewis
Manager, Early Learning and Training
United Way of Greater Nashville

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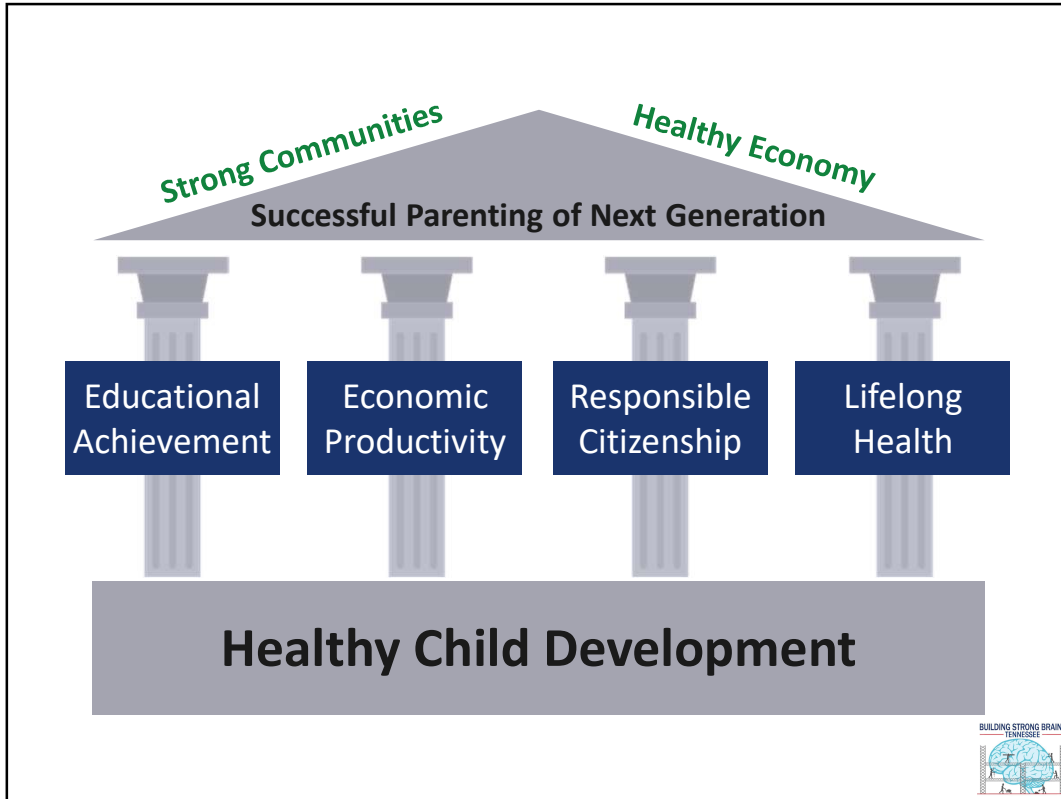
Building Strong Brains Tennessee

Mission

We work to change the culture of Tennessee so that the state's overarching philosophy, policies, programs and practices for children, youth and young adults utilize the latest brain science to prevent and mitigate the impact of adverse childhood experiences.



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Four Core Concepts of Development


- 1 **Brain Architecture** is established early in life and supports lifelong learning, behavior and health.
- 2 Stable, caring relationships and "**Serve and Return**" interactions shape brain architecture.
- 3 **Toxic Stress** in the early years of life can derail healthy development.
- 4 **Resilience** can be built through "Serve and Return" relationships, improving self-regulation skills and executive function. Though there are sensitive periods of brain development in early childhood and adolescence, resilience can be strengthened at any age.




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Three Core Concepts in Early Development

1 Experiences Build Brain Architecture


NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD
Center on the Developing Child  HARVARD UNIVERSITY

<https://www.youtube.com/watch?v=VNNsN9Ujkw8&t=31s>




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Brain Architecture Supports Lifelong Learning, Behavior and Health



- Brains are built over time, starting in the earliest years of life. Simple skills come first; more complex skills build on top of them.
- Cognitive, emotional and social capabilities are inextricably intertwined throughout the life course.
- A strong foundation in the early years improves the odds for positive outcomes and a weak foundation increases the odds of later difficulties.



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Brain Architecture

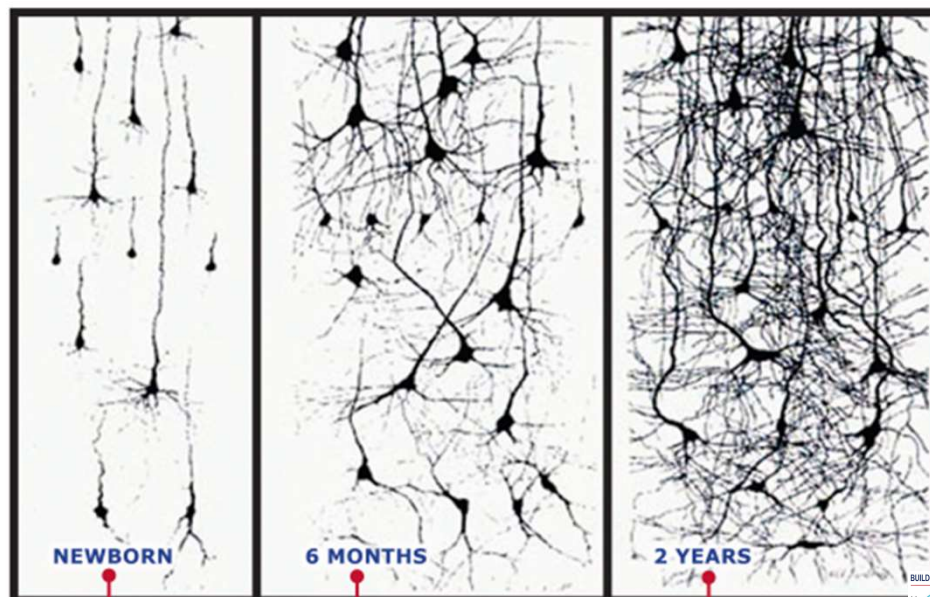


The early years of life matter because early experiences affect the architecture of the maturing brain. As it emerges, the quality of that architecture establishes either a sturdy or a fragile foundation for all of the development and behavior that follows. Getting things right the first time is easier than trying to fix them later.



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More Than **ONE MILLION** New Neural Connections Per Second



Source: Center on the Developing Child at Harvard University, 2009




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Three Core Concepts in Early Development

2 Serve & Return Interaction Shapes Brain Circuitry

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Center on the Developing Child  HARVARD UNIVERSITY

https://www.youtube.com/watch?v=m_5u8-QSh6A/



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Serve & Return Interactions Build Brains and Skills

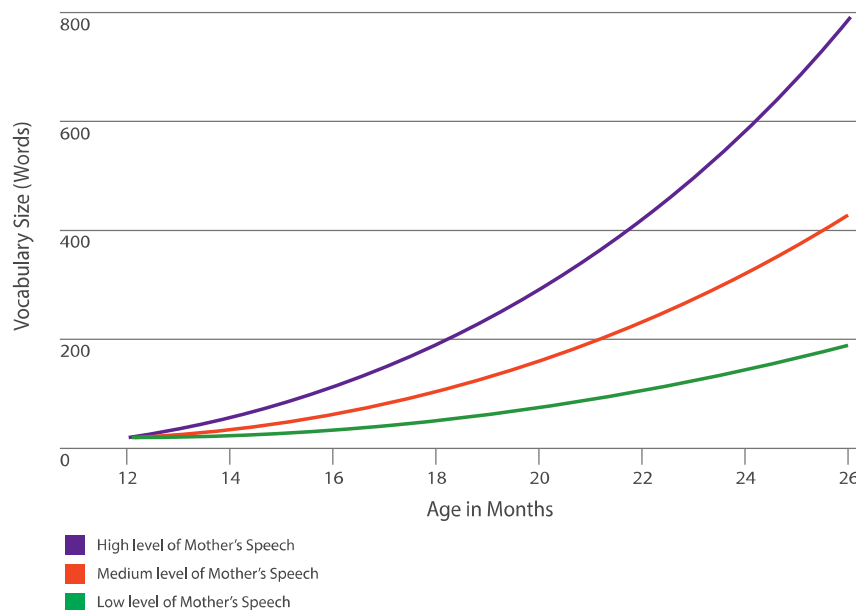
- Young children naturally seek interaction through babbling, facial expressions and gestures, and adults respond in kind.
- These “serve and return” interactions are essential for the development of healthy brain circuits.
- Therefore, systems that support the quality of relationships in early care settings, communities and homes also support the development of sturdy brain architecture.
- Quality relationships continue to be vital in adolescence in order to reinforce brain architecture and build resilience.



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Working for Kids: Building Skills™

MOTHER'S SPEECH AND CHILD VOCABULARY



Sources: Cameron, n.d.; Huttenlocher et al., 1991



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Adolescent Brain Development: A Period of Vulnerabilities and Opportunities



The brain starts to undergo a **“remodeling”** project in adolescence, making it an opportune time to build resilience.

- **Air Traffic Control:** Before and during puberty, a second period of rapid neural growth occurs in the prefrontal cortex.
- **“Use it or lose it”:** The adolescent brain strengthens the neural connections that are used most often and prunes away those that aren’t used as frequently.
- **Integration:** The *corpus callosum*, which relays information between different parts of the brain, also undergoes waves of growth during adolescence, improving self-regulation.

Sources: Siegel, 2015; Spinks, n.d.



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Three Core Concepts in Early Development


3 Toxic Stress Derails Healthy Development

NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD
Center on the Developing Child  HARVARD UNIVERSITY

<https://www.youtube.com/watch?v=rVwFkcOZHJw/>






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Positive Stress	Tolerable Stress	Toxic Stress
		
<p>Short, stressful events like meeting new people or starting the first day of school are healthy for brain development. They prepare the brain and body for stressful situations later in life.</p>	<p>Tragic, unavoidable events like a natural disaster or losing a loved one aren't good for us. But if supportive caregivers are around to buffer the stress response, these events won't do lasting damage to the brain and body.</p>	<p>Ongoing, repeated exposure to abuse or neglect is bad for brain development. If no supportive adults are present to help buffer the stress response, stress hormones will damage developing structures in the child's brain. The result is an increased vulnerability to lifelong physical and mental health problems, including addiction.</p>

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Body's Response to Different Types of Stress

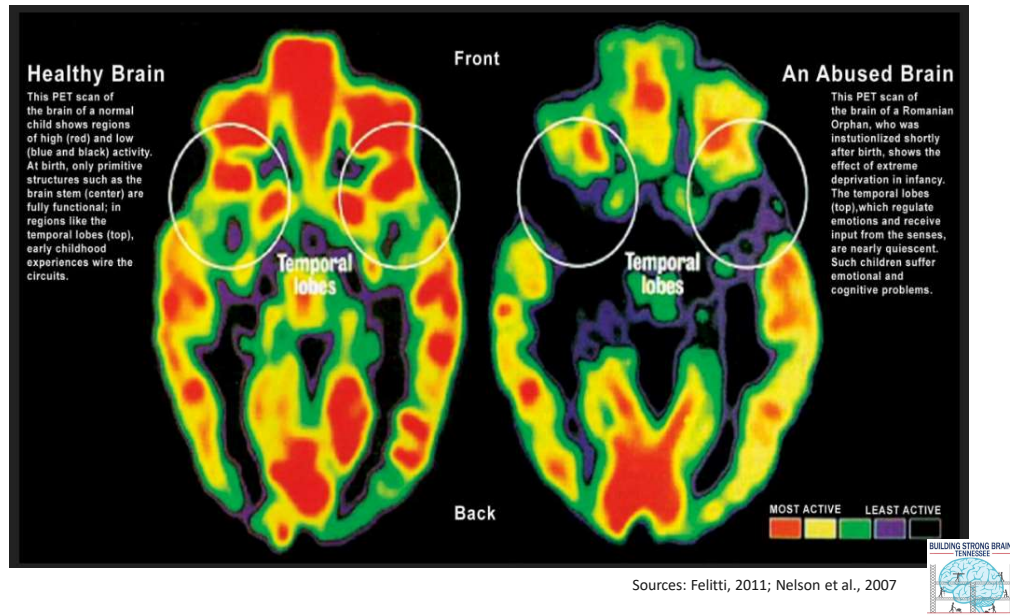
POSITIVE	TOLERABLE	TOXIC
		
<p>A normal and essential part of healthy development</p> <p>EXAMPLES <i>getting a vaccine, first day of school</i></p>	<p>Response to a more severe stressor, limited in duration</p> <p>EXAMPLES <i>loss of a loved one, a broken bone</i></p>	<p>Experiencing strong, frequent, and/or prolonged adversity</p> <p>EXAMPLES <i>physical or emotional abuse, exposure to violence</i></p>

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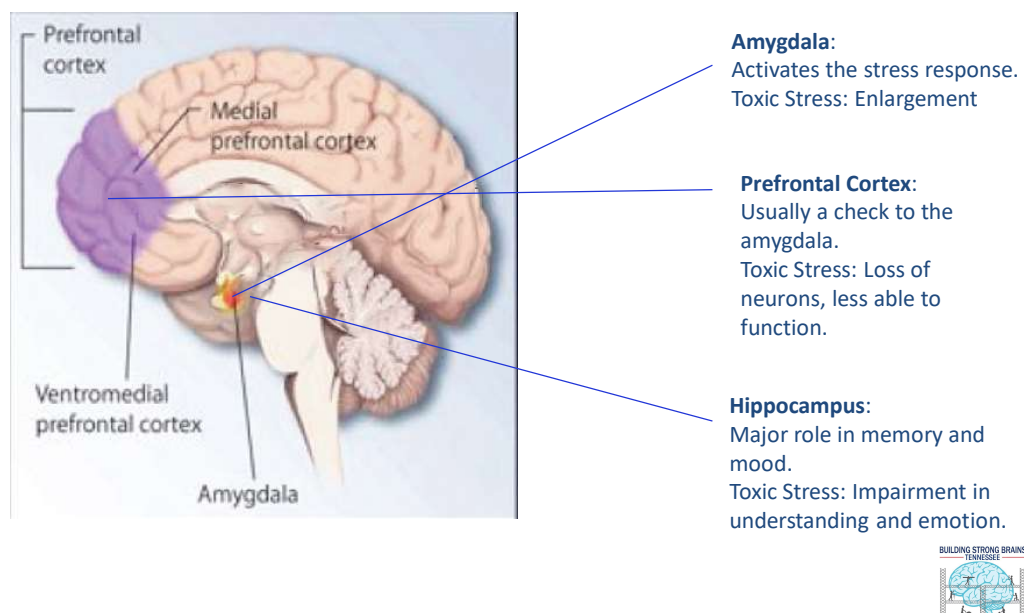
Experience Alters Brain Development

Healthy vs. Neglected Brain



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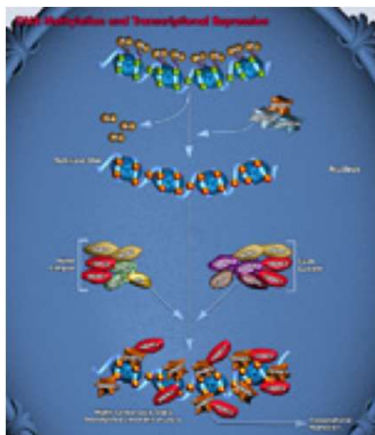
Toxic Stress Alters Brain Development



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Toxic Stress Changes Gene Expression

Epigenetics



Intergenerational
Transmission of Stress
Response in Male Mice



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An “Air Traffic Control System” in the Brain



- Executive functioning is a group of skills that help us to focus on multiple streams of information at the same time, set goals and make plans, make decisions in light of available information, revise plans and resist hasty actions.
- Executive functioning is a key biological foundation of school readiness, as well as outcomes in health and employability.
- Although there are sensitive periods of development, executive functioning can be built along any point in the lifespan.



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How Brains are Built

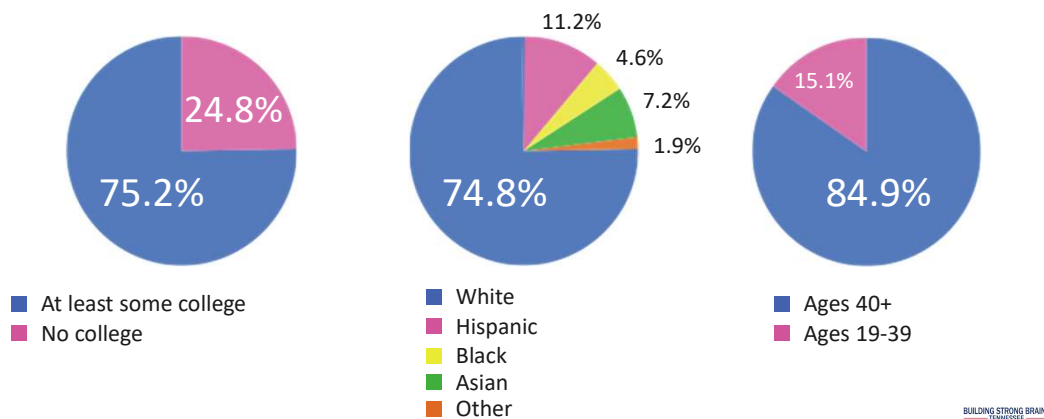
https://www.youtube.com/watch?v=ttFE6_aa_os



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ACE Study Demographics

Participants were mostly white, middle-aged, college educated and insured. They didn't face many of life's challenges such as poverty or racism.

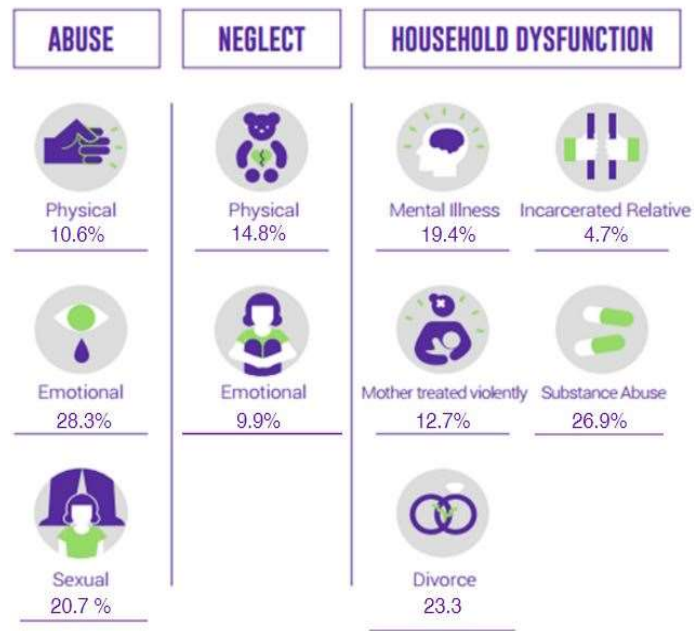


Source: Centers for Disease Control and Prevention, 2016



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Adverse Childhood Experiences

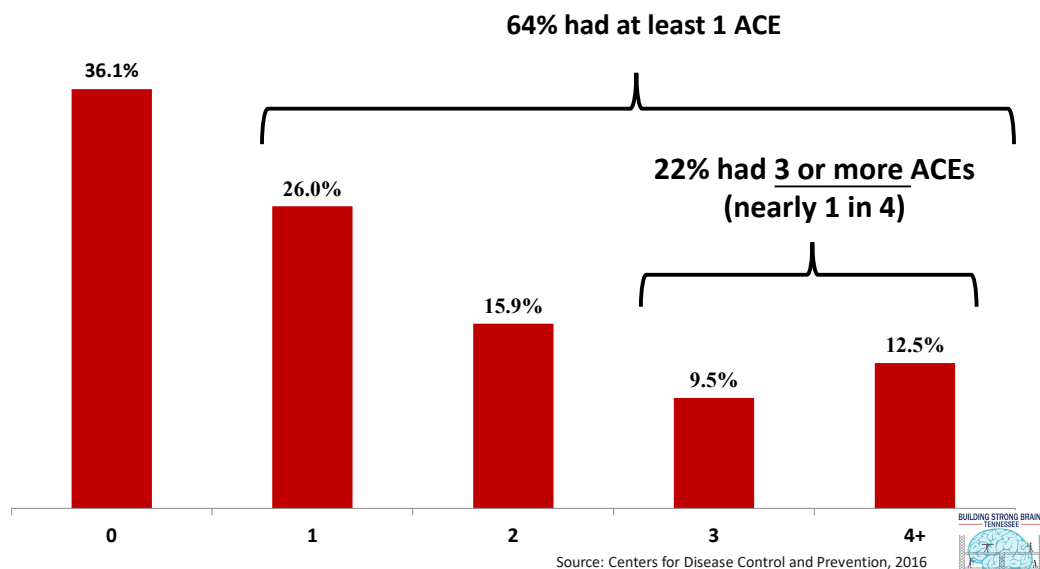


Sources: Center for Youth Wellness, n.d.; Centers for Disease Control and Prevention, 2016



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Number of ACEs Experienced Before Age 18 by Adults in CDC-Kaiser ACE Study 1997



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ACEs Can Have Lasting Effects On...



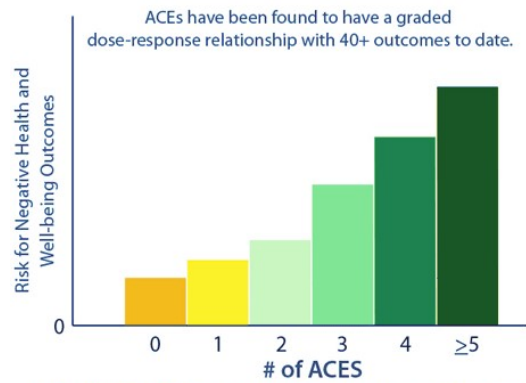
Health (obesity, diabetes, depression, suicide attempts, STDs, heart disease, cancer, stroke, COPD, broken bones)



Behaviors (smoking, alcoholism, drug use)



Life Potential (graduation rates, academic achievement, lost time from work)



Source: Centers for Disease Control and Prevention, 2016



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Adverse Childhood Experiences

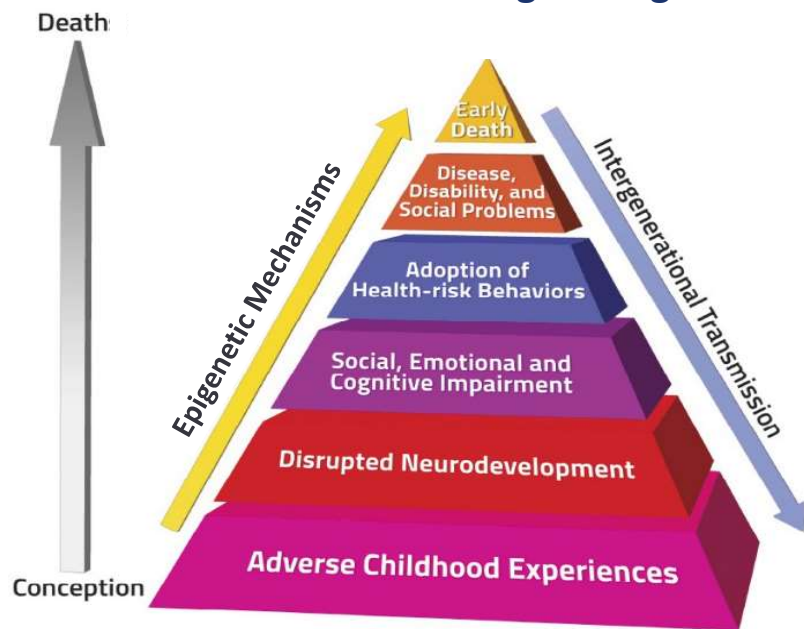


<https://www.youtube.com/watch?v=ccKFcfXx-c>



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Mechanisms by Which Adverse Childhood Experiences Influence Health and Well-being Throughout the Lifespan



Source: Anda, n.d.



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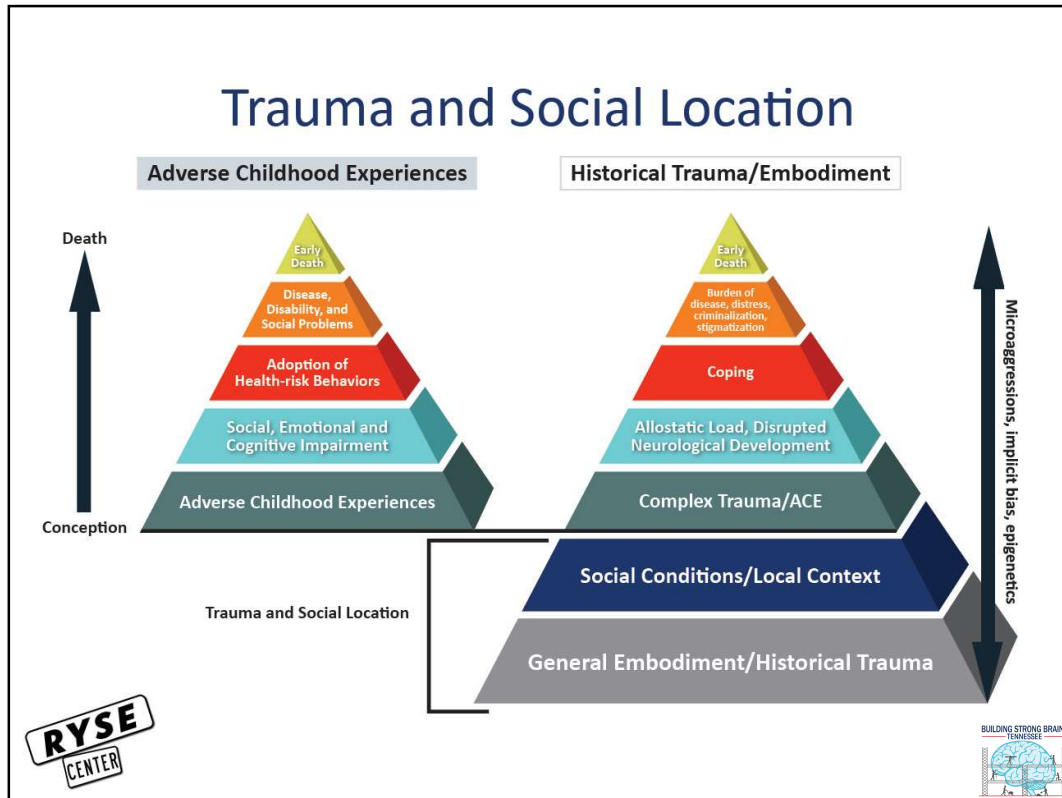
New Additions to the ACEs Questionnaire

The Philadelphia ACE Study Questions

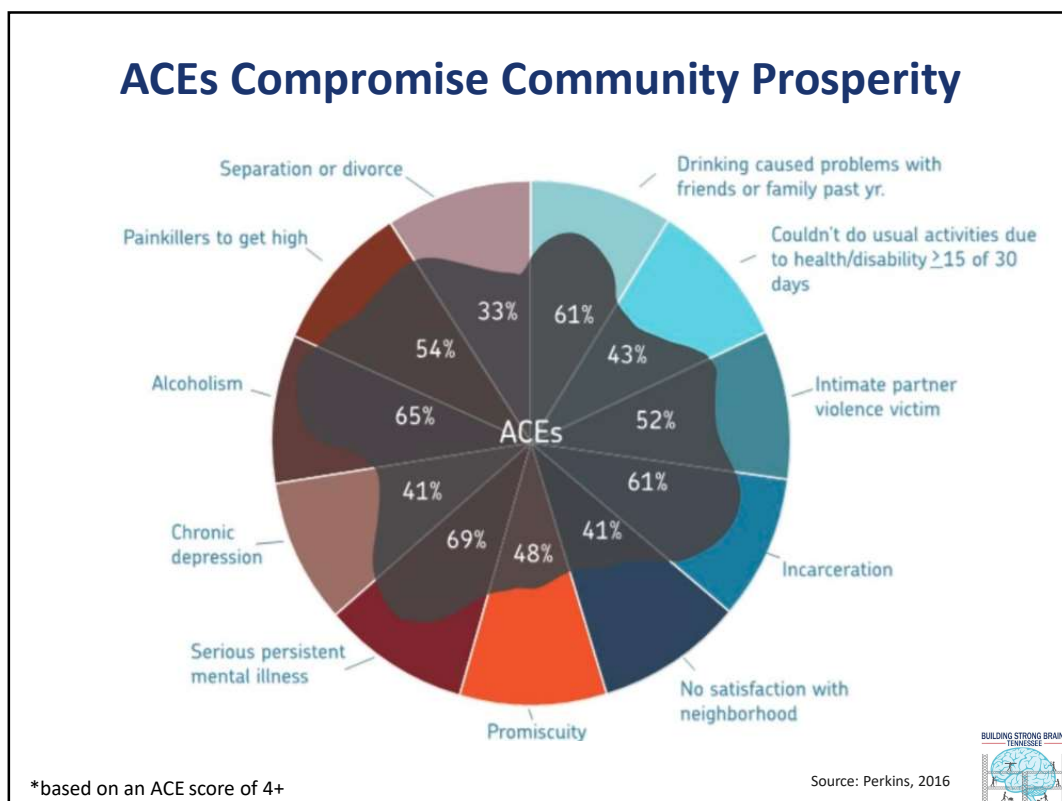
Conventional ACEs	Expanded ACEs
Physical Abuse	Witnessing Violence
Emotional Abuse	
Sexual Abuse	Living in Unsafe Neighborhoods
Emotional Neglect	
Physical Neglect	Experiencing Racism
Domestic Violence	
Household Substance Abuse	Living in Foster Care
Incarcerated Care Provider	
Mental Illness in the Home	Experiencing Bullying



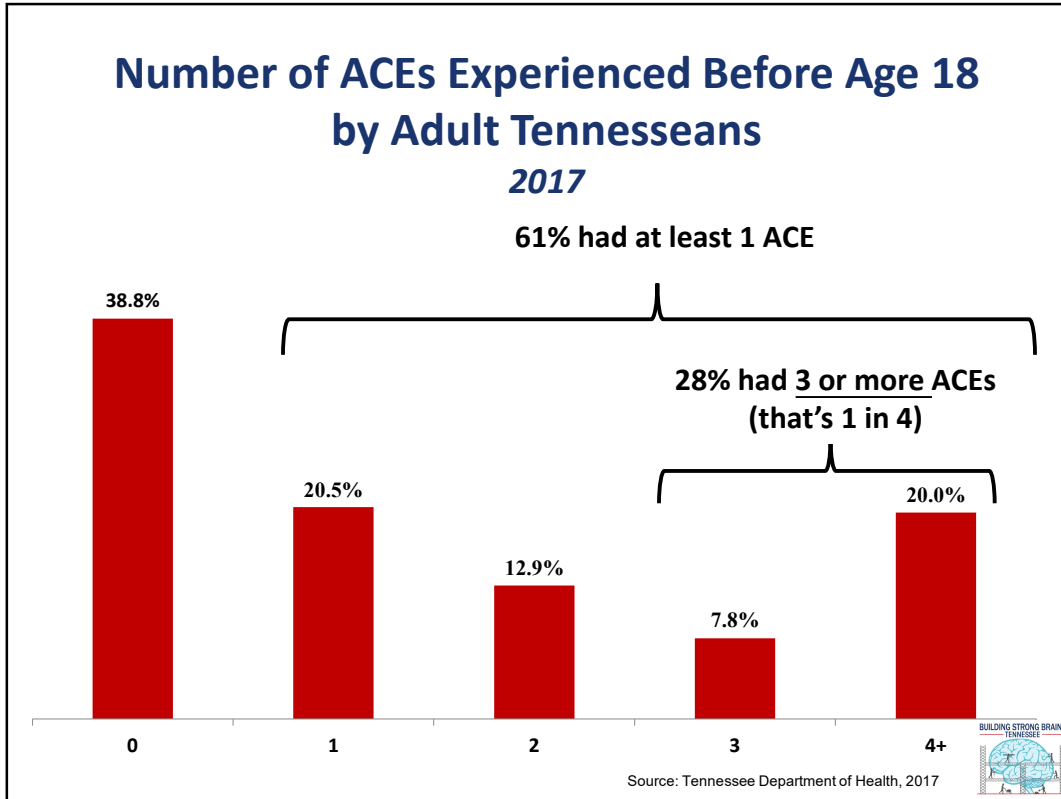
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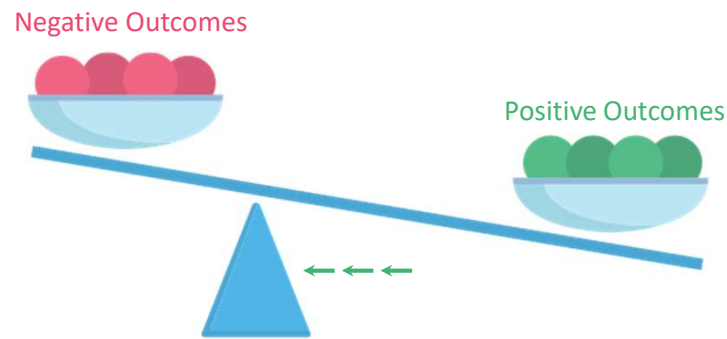
Fostering Resilience

https://www.youtube.com/watch?v=3Ytt7QQ9_4o&t=10s

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Fostering Resilience



Overtime, the cumulative impact of positive life experiences and coping skills can shift the fulcrum's position, making it easier to achieve positive outcomes.



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Ensure Every Child's Relationships and Environments Are:



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Improving Air Traffic Control Helps with Stress Management Across the Lifespan

Focusing Attention

Problem Solving

Planning Ahead

Behavior Regulation

Controlling Impulses

Adjusting to New Circumstances



Executive Function and Self Regulation Skills can be built at any point across the lifespan.

Source: Cameron, n.d.



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Build Executive Functioning in Childhood and Adolescence



Sports and Physical Activity



Goal Setting, Planning and Monitoring



Yoga, Meditation and Mindfulness Activities



Journaling and Self-Talk



Logic Puzzles and Computer Games



Theater, Music and Dance

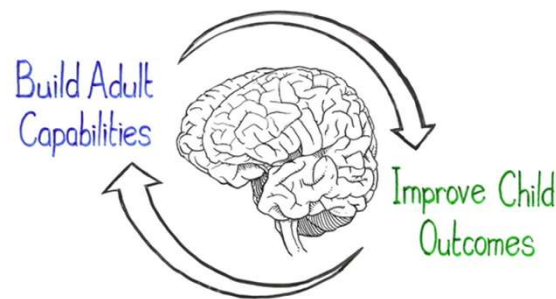
Source: Center on the Developing Child at Harvard University, 2014



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Use a Two- and Three-Generation Approach

- Early Childhood intervention also promotes healthy parenting by those children as adults
- Early “Child” Intervention needs to include focus on adult development as caregivers and on those skills inherent to caring for others
- Ensuring healthier, more mindful, socially connected caregivers positively impacts child health (and also the next generation)



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What CAN Be Done About ACEs Across the Lifespan?



Adopt Trauma-Informed School Policies and Practices



Access to High-Quality, Affordable Childcare and Pre-K



Home Visiting to Pregnant Women and Families with Newborns



Business and Organization Policies that support working parents



Access to Integrated Healthcare



Parent Support Programs for Teens and Teen Pregnancy Prevention Programs



Infant and Early Childhood Mental Health Services and Supports



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What CAN Be Done About ACEs Across the Lifespan?



Access to Mental Health and Substance Abuse Treatment



Sufficient Income Support for Low-Income Families



Intimate Partner Violence Prevention



Bringing Community Development and Childhood Development together



Health System Investment in Communities



Social Supports for Parents

...and so much more



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The New Norm: Shifting the Conversation...

What is wrong with you?

TO

What has happened to you?



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Further Information

Tennessee Commission on Children and Youth Website
<https://www.tn.gov/tccy/topic/tccy-aces>

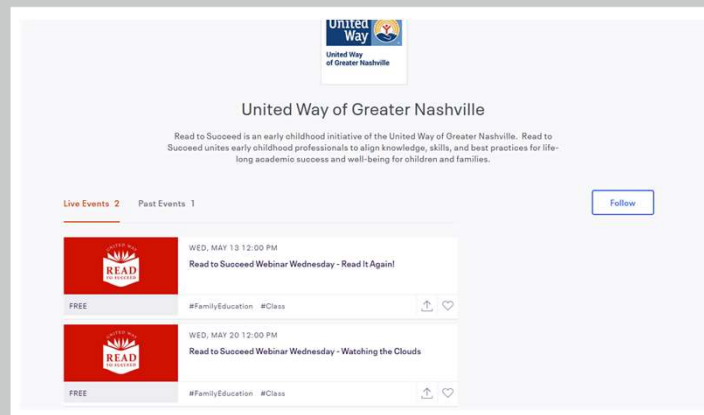
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Read to Succeed Training

Here are the links to Read to Succeed webinars for early childhood learning professionals including teachers, instructional coaches

FIND WEBINAR RECORDINGS... <https://bit.ly/2GfW1yb>

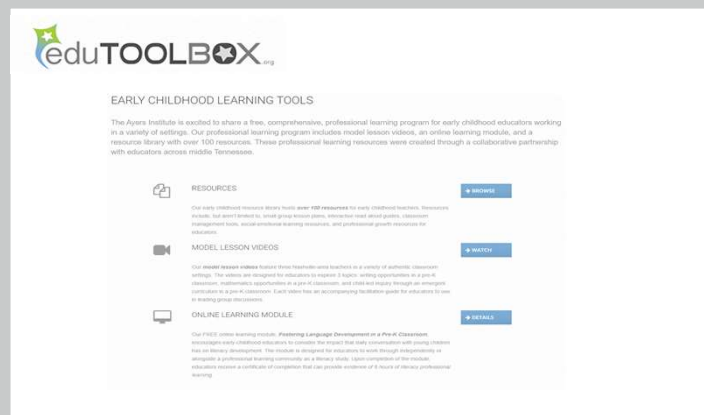
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FIND AND
REGISTER FOR
FUTURE WEBINARS

<https://bit.ly/2YqWLqV>


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FIND MORE
EDUCATIONAL
OPPORTUNITIES

<https://www.edutoolbox.org/earlylearning>

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GoVoteTN

Welcome to the Tennessee Online Voter Registration System

Online Voter Registration: You must have a Tennessee driver's license or Tennessee Department of Safety and Homeland Security (D) in order to submit this application online. If you do not have a Tennessee driver's license or Tennessee Department of Safety and Homeland Security (D), you will be able to print the [voter registration form](#) and submit by mail.

TN requirements to vote:

- You must be a U.S. Citizen
- You must be a resident of Tennessee
- You must be at least 18 years old prior to the next election
- If you have been convicted of a felony, your eligibility to register and vote depends upon the crime you were convicted of and the date of your conviction. If your conviction made you ineligible, you may regain your eligibility. If your conviction has been expunged or if you have had your voting rights restored, unless you were convicted of a crime that restricted your previously ineligible to vote. [Learn more about eligibility](#)

Instructions:

Fill in all the required fields on the application.

An online application for a new voter registration must be submitted at least thirty (30) days before the next election.


or

A printed voter registration application for a new voter registration must be postmarked or hand delivered to the proper county election commission office at least thirty (30) days before the next election.

Voter registration records are public records, open to inspection by any citizen of Tennessee (including social security and driver's license numbers).

View frequently asked questions about online voter registration or call 877-855-4855 for additional information.

Click "NEXT" to start the online voter registration process.



PAYING ATTENTION TO HOW OUR GOVERNMENT IS HANDLING COVID-19?

Take 2 minutes to register to vote at your current address.


The COVID-19 outbreak exposes just how much your local, state, and federal government affects your daily life. Your vote is your way of making an impact on the decisions our government makes. Register online now with your state.

REGISTER TO VOTE!

- General Info on Registering to Vote - https://vote.dosomething.org/?resource=web_source_details:hellobar
- Register to Vote in TN - <https://gov.govote.tn.gov/>

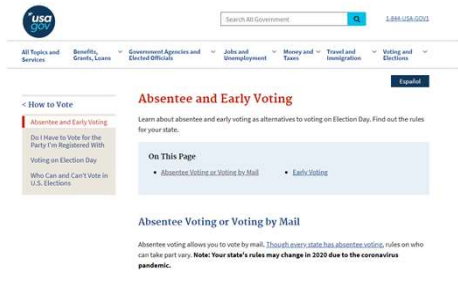
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GET AN ABSENTEE BALLOT!



ABSENTEE BY-MAIL BALLOT INFORMATION

Tennessee Secretary of State



Absentee and Early Voting

Learn about absentee and early voting as alternatives to voting on Election Day. Find out the rules for your state.

On This Page

- [Absentee Voting or Voting by Mail](#)
- [Early Voting](#)

Absentee Voting or Voting by Mail

Absentee voting allows you to vote by mail. *Though every state has absentee voting, rules on who can take part vary. Note: Your state's rules may change in 2020 due to the coronavirus pandemic.*

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