Stress & Early Brain Develpment:
What, Why, and How We Can Best Support Healthy Development

Overview:

- Skills Needed To Be A Successful Adult
- Brain Development Facts
- STRESS!
- Childhood Trauma & Distress
- Supporting Children's Healthy Brain Development
- Three Things

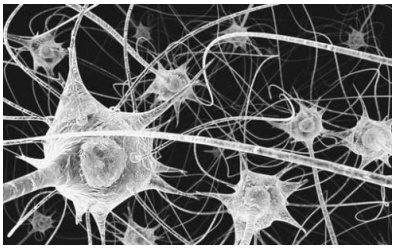
What does life look like as an adult?

Video: Building Core Capabilities for Life | Center on the Developing Child, Harvard University

Brain Development Facts

Recent research shows that the earliest years are most critical for brain development and future learning. Some of the most important findings are that the infant brain:

- Develops through a combination of nature and nurture.
- Begins development in the prenatal stage.
- Contains about 86 billion brain cells (neurons) at birth.
- Grows to fit its' environment by connections (or synapses) made between neurons.
- Uses synapses to send brain impulses, controlling the body, mind, feelings, memory and language.
- Is wired on a "use it or lose it" system. Synapses are created and strengthened with use, and wither away if unused.
- Is dependent on the quality of the relationship between the infant and primary caregiver. (National Scientific Council on the Developing Child, 2010b)



Neurons connecting with each other

Research has found that the architecture and functioning of the infant brain is determined by the *quality* of the first relationships – the attachment between a baby and his/her primary caregiver. This relationship "sculpts" the brain for future learning, behavior, relationships, feelings and health. Studies show that for optimal development, the infant brain needs a secure attachment with at least one primary caregiver who provides responsive, reliable and affectionate care.

The main ingredient needed is the "serve and return" relationship between children and primary caregivers. This reciprocal back-and-forth interaction happens when children reach out to adults, and adults respond in kind.

Research has found that a close relationship with an adult who provides consistent, responsive care can strengthen attachment. Babies learn trust when cared for by adults who know them and respond to their cues. Like dance partners, babies and caregivers learn each other's moves and signals. Infants can become frustrated or even stop trying to connect with adults in a setting in which caregivers change constantly. This is why the high rate of turnover in infant and toddler childcare is especially concerning.

YOU CANNOT SPOIL A BABY! Responding to infants' cues quickly and reliably not only promotes security and enhances brain development, but research has shown it also makes babies cry less.

Executive functions

One part of brain development has received special attention. The prefrontal cortex part of the brain (behind your forehead) houses executive functions. Executive functioning:

- Is the brain's "Air Traffic Control System", enabling the brain and body to deal with multiple information and distractions at one time.
- Can be broken down into three skill area: Working Memory, Inhibitory Control and Mental Flexibility.

Is associated with good child outcomes, success in school, and life-long benefits

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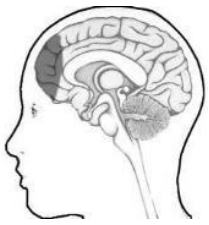
In your opinion…
What factors can negatively impact healthy brain development?

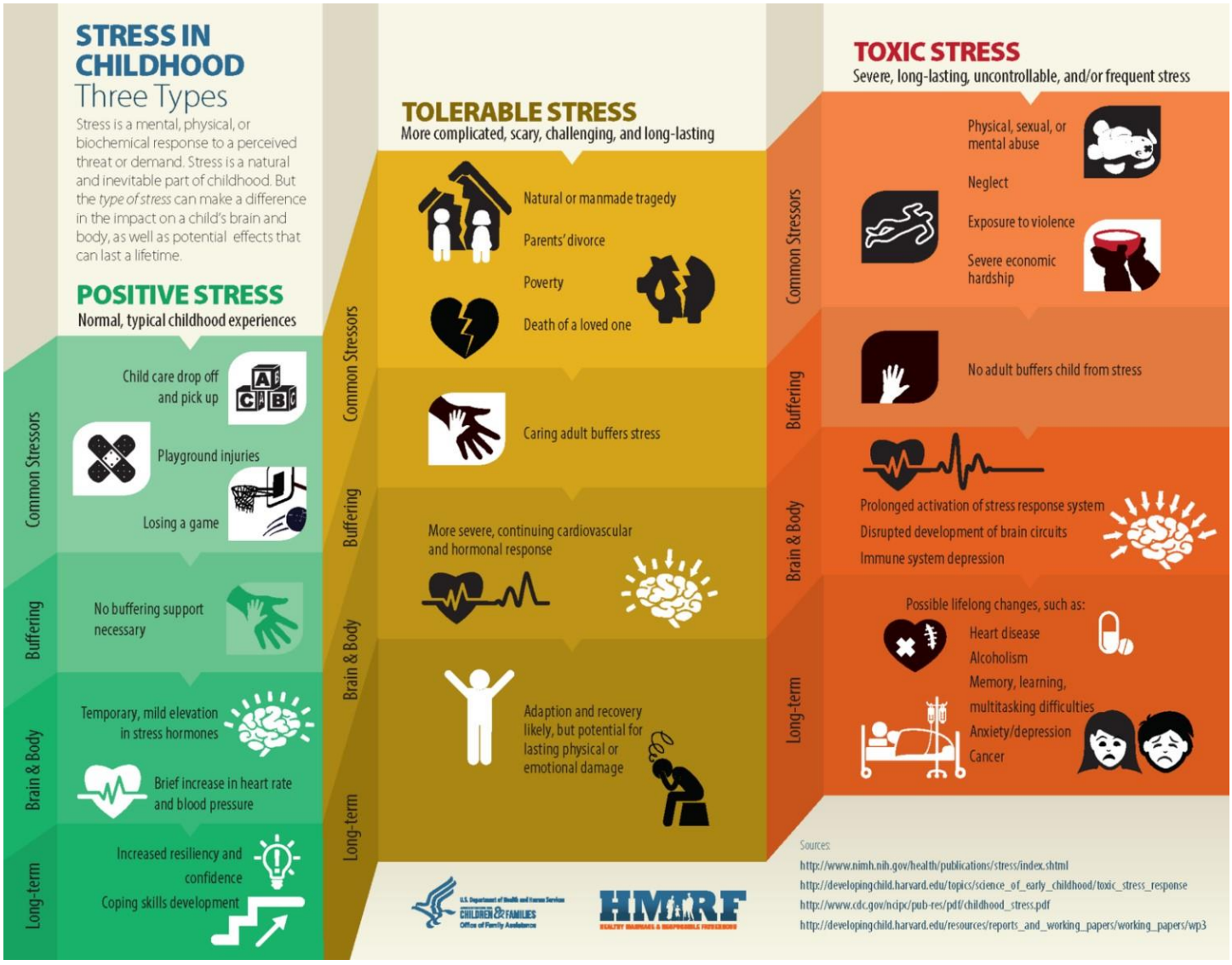


STRESS!

Brief increases in heart rate, mild elevations in stress hormone levels.

Serious, temporary stress responses, buffered by supportive relationships.

Prolonged activation of stress response systems in the absence of protective relationships.



ACEs – Adverse Childhood Experiences

https://www.cdc.gov/violenceprevention/childabuseandneglect/aces/fastfact.html

ACEs are common.

Preventing ACEs could potentially reduce a large number of health conditions

Some children are at greater risk than others

ACEs are costly.

ACEs and associated conditions, such as living in under-resourced or racially segregated neighborhoods, frequently moving, and experiencing food insecurity, can cause toxic stress (extended or prolonged stress). Toxic stress from ACEs can change brain development and affect such things as attention, decision-making, learning, and response to stress.

Causes of Trauma & Distress in Children

Early Childhood trauma is described as those experiences that affect a child between the ages of 0 – 6 years old. Children are at a very vulnerable stage in their development, and as such, create a skewed picture of the world and the people in it when they experience trauma and major life changes at this early age.
While children may not fully understand what is happening to and around them, they are clearly affected by it in ways that show themselves, socially, emotionally, physically, and cognitively. Severe (and even less severe) trauma and distress will have consequences throughout the child's life into adulthood; because how we view the world is formed in childhood.

Causes of Trauma and Distress:

- Moving
- Divorce/ Separation
- Illness and disease of self or close other
- Hospitalization and surgery of self or close other
- Death of a family member, care giver, or close friend
- Domestic abuse of self or close other
- Physical, emotional, or sexual abuse
- Neglect
- Abandonment
- Adoption
- Fostering
- Natural Disasters
- War

- _____
- _____
- _____

Consequences of Childhood Trauma & Distress

Young children experience and process trauma and distress very differently from older children and adults, primarily because their brains are still developing and shaping their understanding of their world. Their understanding of events is often inaccurate because they have limited understanding of the cause and effect relationship, and will fully internalize the events. Children have a sensory experience of events (loud noises, scary images, pain, sudden movements) which results in them feeling out of control and unsafe in the world. Consequently children will develop 'coping skills' to manage their fears, insecurities, need for control, and distrust

of the people in the world. These coping skills present as behaviors in children, some of which are difficult to understand, manage, or even connect to the original trauma.

So what do the consequences look like?

- Associated with reduced size of the brain cortex (responsible for memory, attention, perceptual awareness, thinking, language, and consciousness)
- Associated with lower IQ
- Attachment difficulties/ disorders
- Difficulty in regulating emotions, feeling fearful and unsafe, on high alert
- Poor/ slow developmental/ academic progress
- Aggression
- Anger
- Opposition
- Loss of control/ temper tantrums
- Difficulty following routines and rules
- Bedwetting/ other regressive behaviors
- Eating difficulties/ disorders
- Hoarding
- Depression
- Cutting/ hurting oneself
- Poor social skills
- Poor emotional development (self-confidence, positive body image, self-love)
- Headaches, stomach aches
- Sleep disruptions, including insomnia, nightmares
- Post-Traumatic Stress Disorder

Supporting Children's Healthy (Brain) Development

1. Understand the Developmental Ages & Stages of Young Children

2. Work Cooperatively with the Family

3. Become Informed and Educated

4. Take care of Yourself

5. Use Consistent Techniques and Strategies with your Children

6. Be Sincerely Involved with the Child

Your actions/ responses

The environment

The program

In order to receive your certificate, please go to
https://www.surveylegend.com/s/2brp
and complete the survey