



THE IMPACT OF TRAUMA AND SUBSTANCE ABUSE ON BRAIN DEVELOPMENT IN CHILDREN

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RISK FACTORS FOR *CHILDREN*

- GENETIC VULNERABILITY
- NEUROBIOLOGICAL TRAUMA



**THE NEUROLOGICAL
IMPACT OF CHILDHOOD
TRAUMA**

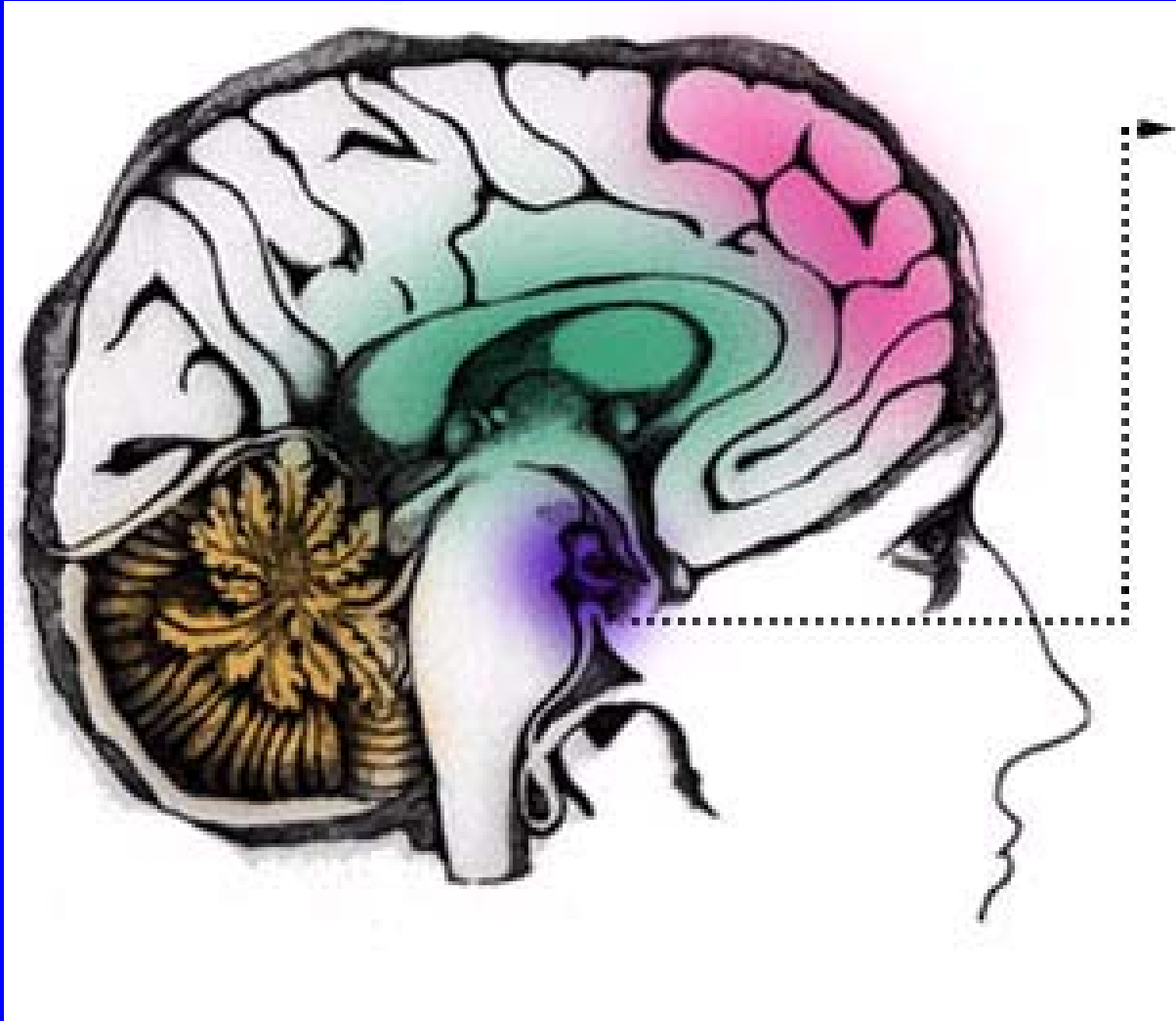
PRIMARY TRAUMA IN CHILDREN*

- ❖ **Each year 5 million children in U.S. experience an extreme traumatic event**
- ❖ **40% will develop some form of chronic neuro-psychiatric problem**
- ❖ **Most problems classified as anxiety disorders with post-traumatic stress disorder being most common**
- ❖ **Trauma event will impair emotional, academic and/or social functioning**

TRAUMA ENVIRONMENTS

- Substance Abusing Homes
- Family Violence
- Sexual and Physical Abuse

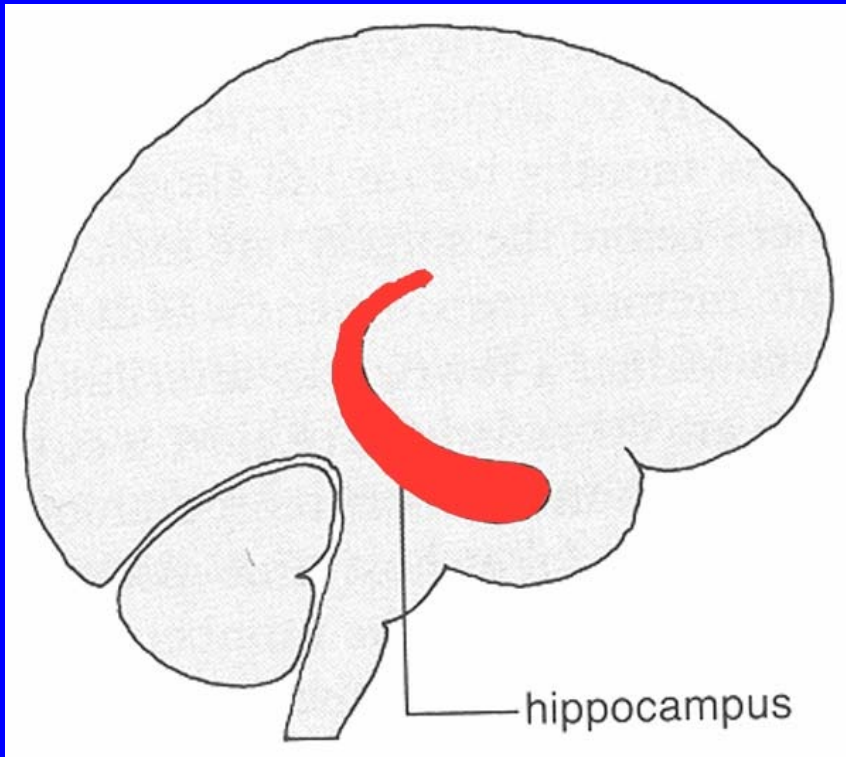
The Pathway of Fear in the Brain



Amygdala

- Brain's rapid response system to fear that sends the body into high alert

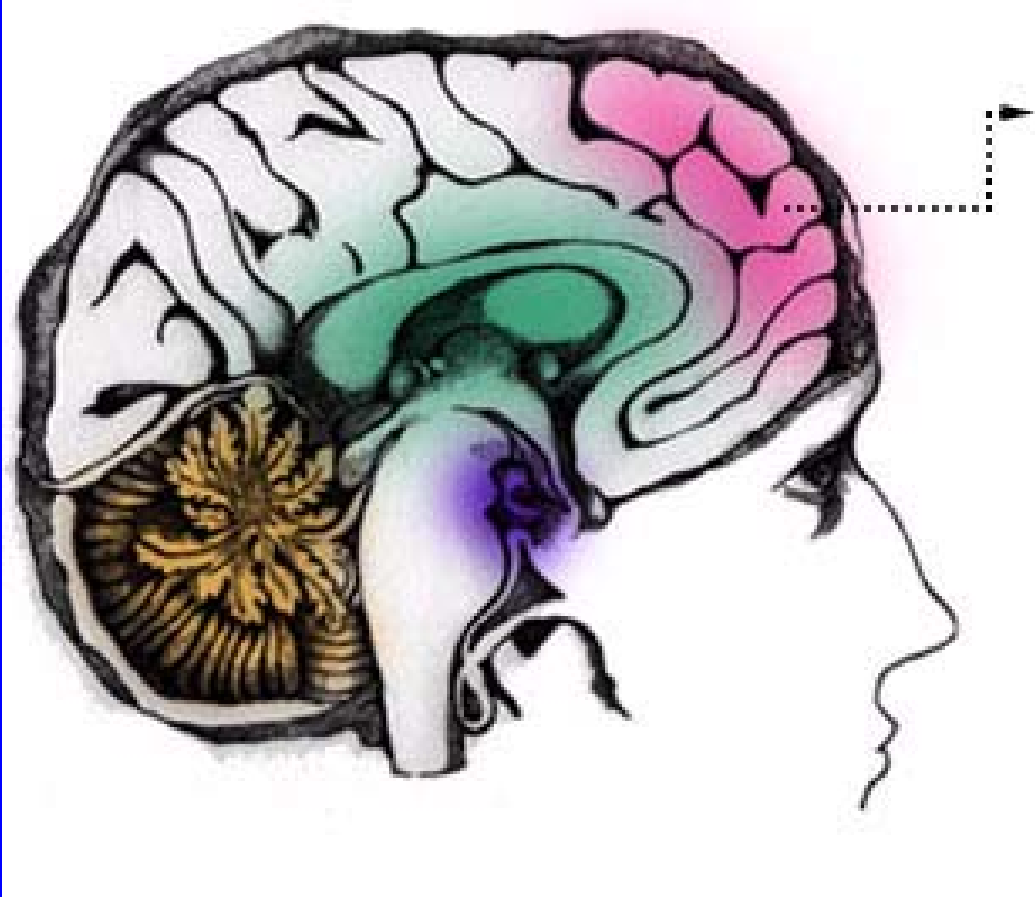
Pathway of Fear in the Brain



Hippocampus

- Processing and storing information
- Evaluate threats by putting them into context of previous experiences

Thinking Through Fear



FRONTAL CORTEX

- **Reins in the amygdala and calms the body if the threat is determined to be insignificant**

What Does This Mean in Terms of Behavior?

- More impulsive, reactive brain -
 “Always on the ready” (hypervigilance)
- Persistent physiological hyperarousal & hyperactivity
- Less able to get to the
 “thinking/rationale” brain under stress
- Empathy/compassion must be learned

What Does This Mean in Terms of Skill Development?

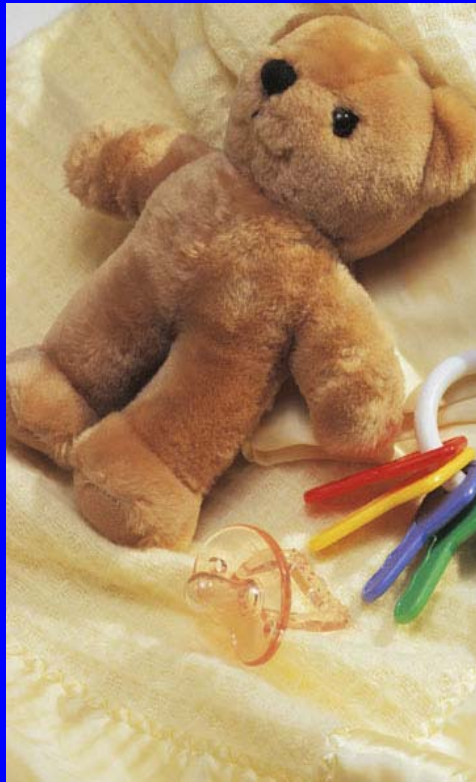
- Focus on visual vs. verbal clues
- Remember what you do more than what you say
- Reading problems
- Speech problems

IQ and Reading Deficits in Young Children

- Exposure to violence and experiencing trauma-related distress are associated with lower IQ scores and reading deficits
- Children experiencing both violence exposure and trauma-related distress had a 7.5-point decrement in IQ and a 9.8-point decrement in reading achievement

Children's Reaction to Trauma

Children 5 years old & younger may experience:

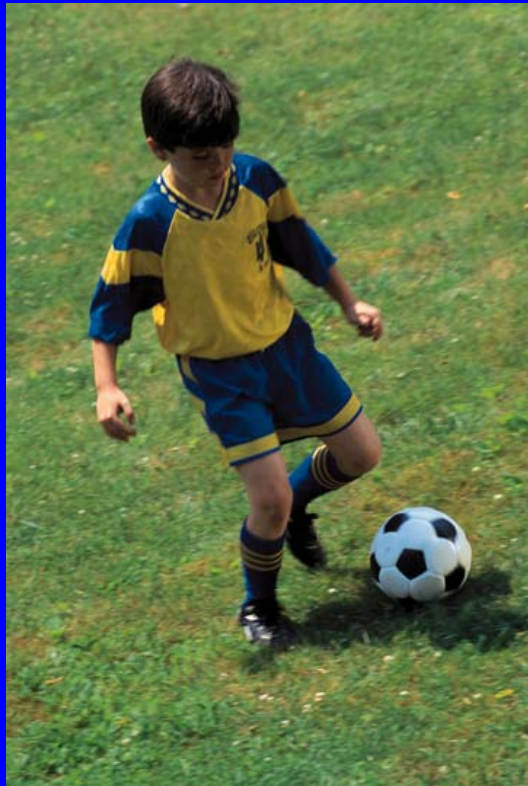


- **Intrusive thoughts, memories, difficulty concentrating**
- **Withdraw from everyday activities and people**
- **Repetitive talk or play about the event**
- **Irrational fears**

Sources: JAMA, August 2000; Boston Child Witness to Violence Project

Children's Reaction to Trauma

Along with the previous reactions, children 6-11 years old may also:



- Become irritable, depressed, anxious and feel guilty about the abuse and not stopping it
- Increased aggression, difficulty controlling anger
- Emotionally numb, detachment/dissociation
- Increased distractibility, difficulty concentrating at school
- “Hero Child”

Children's Reaction to Trauma

Along with the previous reactions, adolescents 12 to 17 years old may also:

- Have flashbacks
- Avoid any reminders of the trauma
- Abuse drugs and alcohol→
 - fill emotional emptiness
 - profoundly exaggerates predisposition to violent behavior in traumatized youth
- Have suicidal ideation



SYMPTOMS OF CHILDHOOD TRAUMA

- Attachment Problems
- Aggression
- Eating Disorders
- Alcohol and Drug Abuse
- Cutting
- Withdrawal
- Suicidal Behavior
- Detachment
- Anxiety

CHILDREN LIVING IN SUBSTANCE ABUSING HOMES

HIGH RISK OF:

- Antisocial behavior
- Low self-esteem
- Risky sexual behavior
- Substance abuse
- Mental health problems



CHILDREN OF SUBSTANCE ABUSING PARENTS



High Risk of:

- ADHD
- Conduct Disorders
- ODD
- Depression
- Anxiety



INTERVENTION

TREATMENT



SUPPORTING TRAUMATIZED CHILDREN-Interventions

- Parenting Skills for Caretakers of Traumatized Children
- Socialization Skills for Children

SUPPORTING TRAUMATIZED CHILDREN-Treatment

- ◆ Parent-Child Interaction Therapy (PCIT)
- ◆ Trauma-Focused Cognitive-Behavioral Therapy (CBT)
- ◆ Trauma-Focused Play Therapy



COMMUNITY COORDINATION

- ◆ Mental Health
 - ◆ CPS
 - ◆ Drug and Alcohol Treatment
 - ◆ Community Agencies
 - ◆ Schools
 - ◆ Courts/Probation/Law Enforcement
 - ◆ Community Resources
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RESOURCES

www.nida.nih.gov (National Institute on Drug Abuse)

www.uclaisap.org (UCLA)

nidanotes@masimax.com (NIDA newsletter)

www.zerotothree.com (Zero to Three)

www.childtrauma.org (Child Trauma Academy)

www.apsac.org (American Professional Society on the Abuse of Children)

<http://tfcbt.musc.edu/> (Treatment Course)

www.casacolumbia.org (Columbia University)