



# Understanding Trauma and the Brain: Building Competence in the Adoption, Child Welfare and Mental Health Workforce

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# Trauma and the Brain

## Plan for today

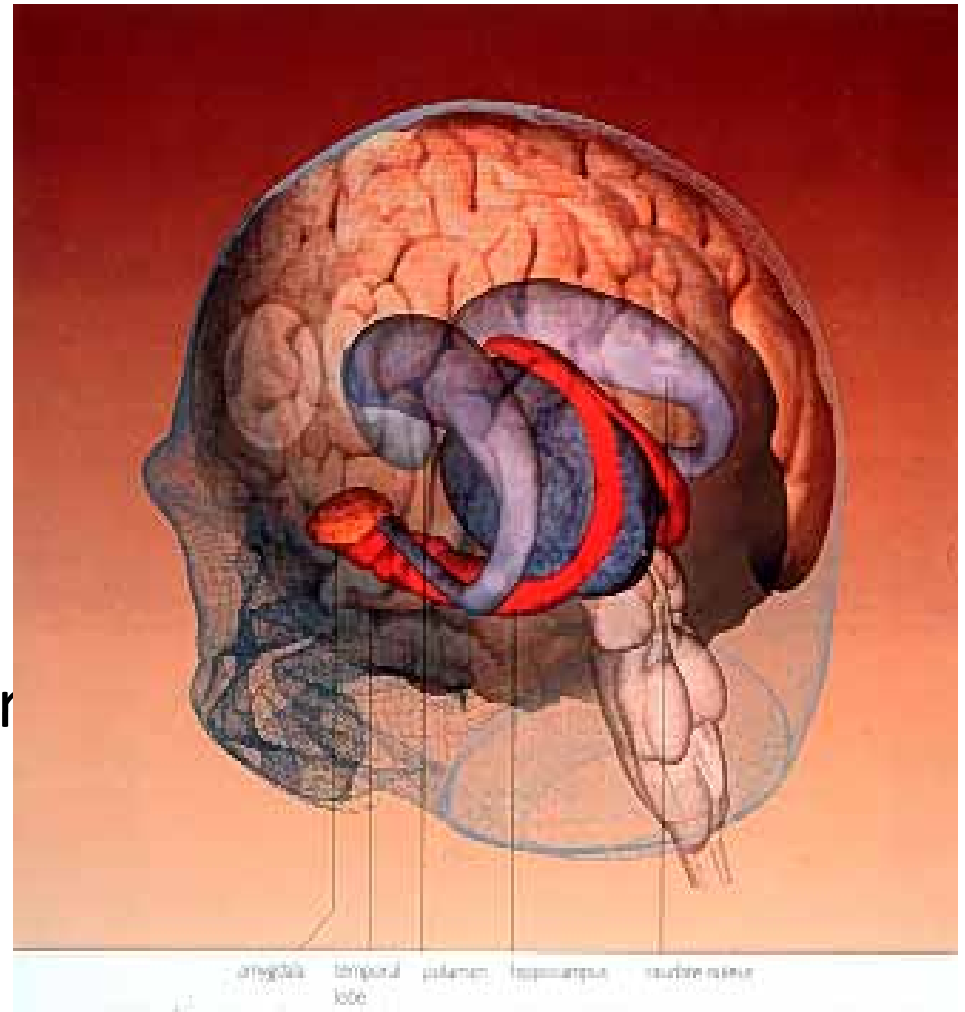
- Brain Basics
- Hand Model of the Brain – Dan Siegel
  - It's the whole system, not just the brain
  - Parenting from the Inside Out
    - Siegel and Hartzell
- Trauma and Brain Basics

## A new vocabulary

- Long term potentiation
- Neural networks
- Neuroplasticity
- Neurogenesis
- Neuroception/Interoception
- Implicit & explicit memory

# Brain Basics

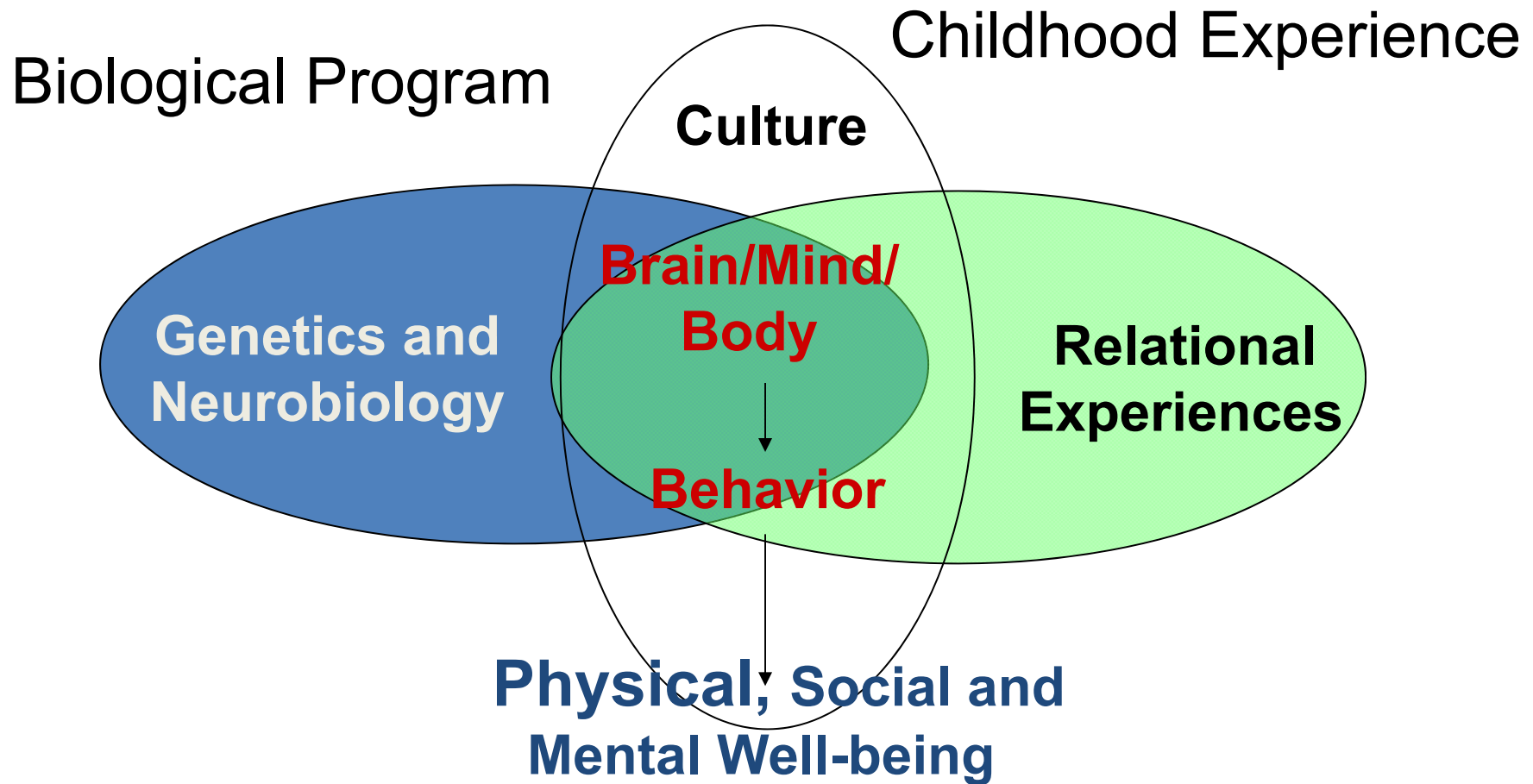
- 3 levels of the brain
  - Brainstem, reptilian brain
  - Limbic system, mammalian brain
  - Cortex, human brain
- Neurons that fire together, wire together
- Remember, it's the whole system



# Key Principles of Early Brain and Child Development

- **Critical periods** imply timing is important
- **Early relationships** program the stress regulation and social-emotional neurological systems
- **Adversity/toxic stress** impacts brain development and function
- **Resiliency** comes with strong attachment and relational experiences

# Eco-biodevelopmental Model

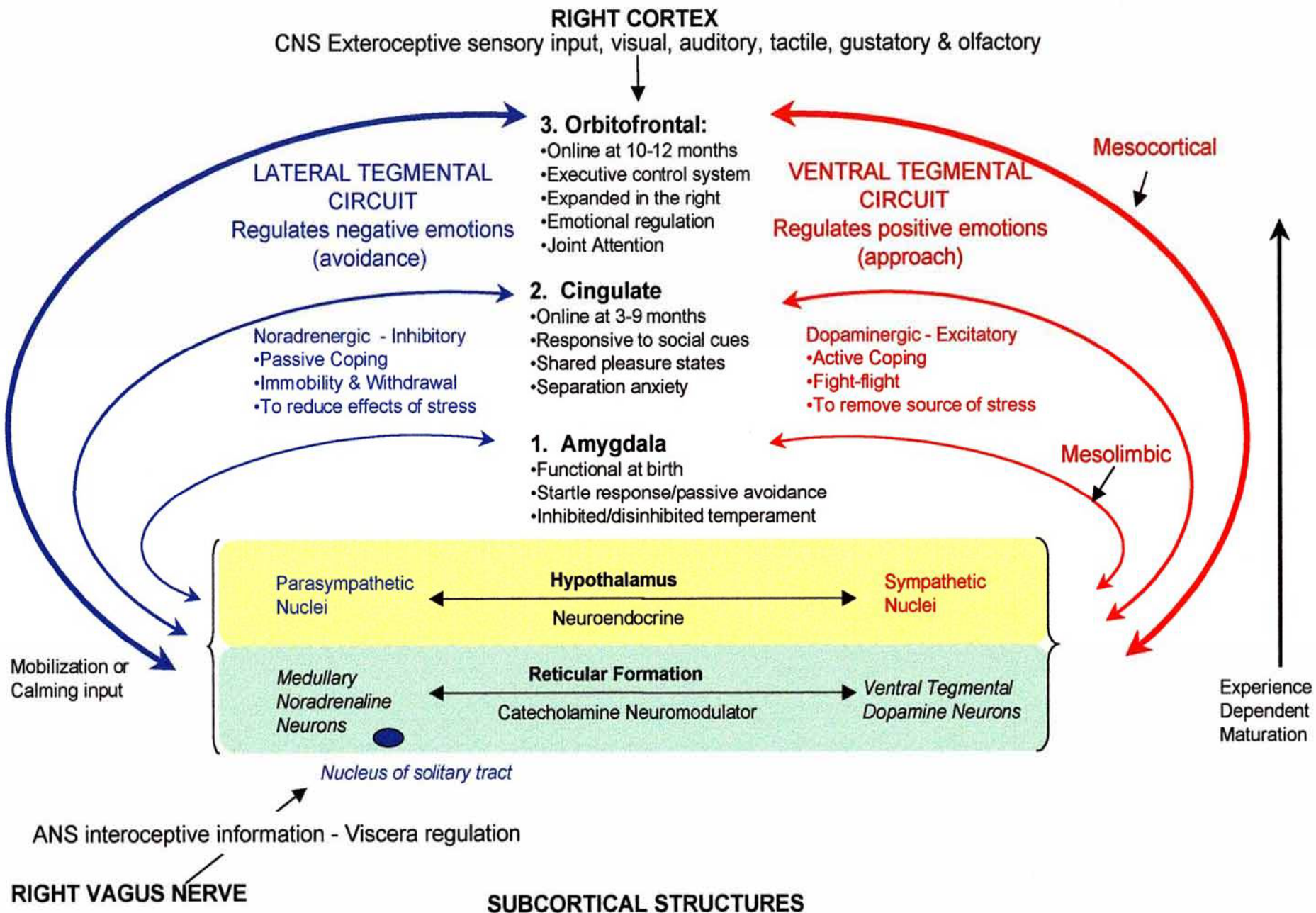


# Regulation of Affect

1. Right brain development by relational co-regulation
2. Early childhood sensitive period
3. Core skill for social and emotional well-being



# SCHORE'S RIGHT BRAIN DUAL CORTICOLIMBIC-AUTONOMIC CIRCUITS





**Humans are  
“affiliating” beings -  
never developing in  
isolation....**

....development  
proceeds through and  
by relationships.



# Trauma and Brain Basics

# Three Levels of Stress Response

## Positive

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

## Tolerable

Serious, temporary stress responses,  
buffered by supportive relationships.

## Toxic

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

# Additional Sources of Stress

- Children in the child welfare system frequently face other sources of ongoing stress that can challenge workers' ability to intervene. Some of these sources of stress include:
  - Poverty
  - Discrimination
  - Separations from parent/siblings
  - Frequent moves
  - School problems
  - Traumatic grief and loss
  - Refugee or immigrant experiences

# Adversity/Toxic Stress

“Social-emotional buffering is the primary factor distinguishing level of stress”

Andy Garner, MD, COPACFH

- Toxic stress occurs when there is an absence of social-emotional buffering
- **Metric for adversity** is the body's stress response system
- Implications: “Toxic stress is the key intergenerational transmitter of social and health disparities”

# Neglect

- Lack of a specific sensory input during development results in abnormal development of the brain.
- The abnormal development is in those brain systems which *sense, perceive, process, “interpret”,* and *“act on”* information related to that specific sensory deprivation.

# 3 Year Old Children

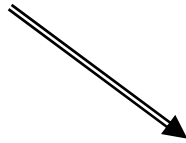


Normal

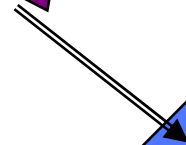


Extreme Neglect

**Traumatic  
Event**



**Prolonged  
Alarm  
Reaction**



**Altered  
Neural  
Systems**



# Attachment and Emotional Regulation

- Emotional/Affect regulation
  - Regulation
  - Dysregulation
  - Co-regulation
  - RB to RB (Schore)
- Adult attachment style - professionals and parents
- Self regulation skills - professionals and parents

## Key concepts

- Attachment Styles
  - Secure
  - Insecure (ambivalent, avoidant, disorganized)
  - Earned Secure (Sroufe)
- Child and Adult Styles

# Attachment System

J. Bowlby, M. Ainsworth, M. Main

- An inborn system in the brain that influences and organizes motivational, emotional and memory processes with respect to significant care-giving figures
- Involves seeking of proximity and protection from danger
- Provides communication processes with others
- Highly responsive to indications of danger
- Serves to create a central foundation from which the mind develops

# AAI Classifications and Corresponding Patterns in Infant Strange Situation Behavior

M. Main

- Adult state of mind with respect to attachment
  - Secure/autonomous (F)
  - Dismissing (D)
  - Preoccupied (E)
  - Unresolved/Disorganized (U)
- Child state of mind with respect to attachment
  - Secure (B)
  - Avoidant (A)
  - Resistant or ambivalent C
  - Disorganized/disoriented (D)

# Adverse Childhood Experience ACE Study

- 18,000 participants in a study on trauma and health. Largest study on Trauma
- Sponsored by Kaiser and Center of Disease Control
- Average participant was over 50
- Measured how amounts of trauma affected health

# ACE Categories

- Abuse
  - Psychological by parents
  - Physical by parents
  - Sexual (anyone)
  - Emotional neglect
  - Physical Neglect
- Household
  - Substance abuse
  - Mental Illness
  - Parent separation /divorce
  - Mother treated violently
  - Imprisoned household member

# Adverse Childhood Experiences Score

Number of categories of adverse childhood experiences are summed ...

<i>ACE score</i>	<i>Prevalence</i>
0	48%
1	25%
2	13%
3	7%
4 or more	7%



- More than *half have at least one ACE*
- If one category of ACE is present, there is an 86% likelihood of additional categories

# Evidence from ACE Study indicates...

Adverse childhood experiences are the most **basic cause** of health risk behaviors, morbidity, disability, mortality, and healthcare costs



# Attachment and Emotional Regulation Rupture and Repair

- If a person can attach, a person can heal.

## New vocabulary/key concepts

- Mirror neurons
- Coherent narrative
- Contingent communication
- Attunement
- **Earned Secure Attachment**

# The Power of Relational Experiences to Heal

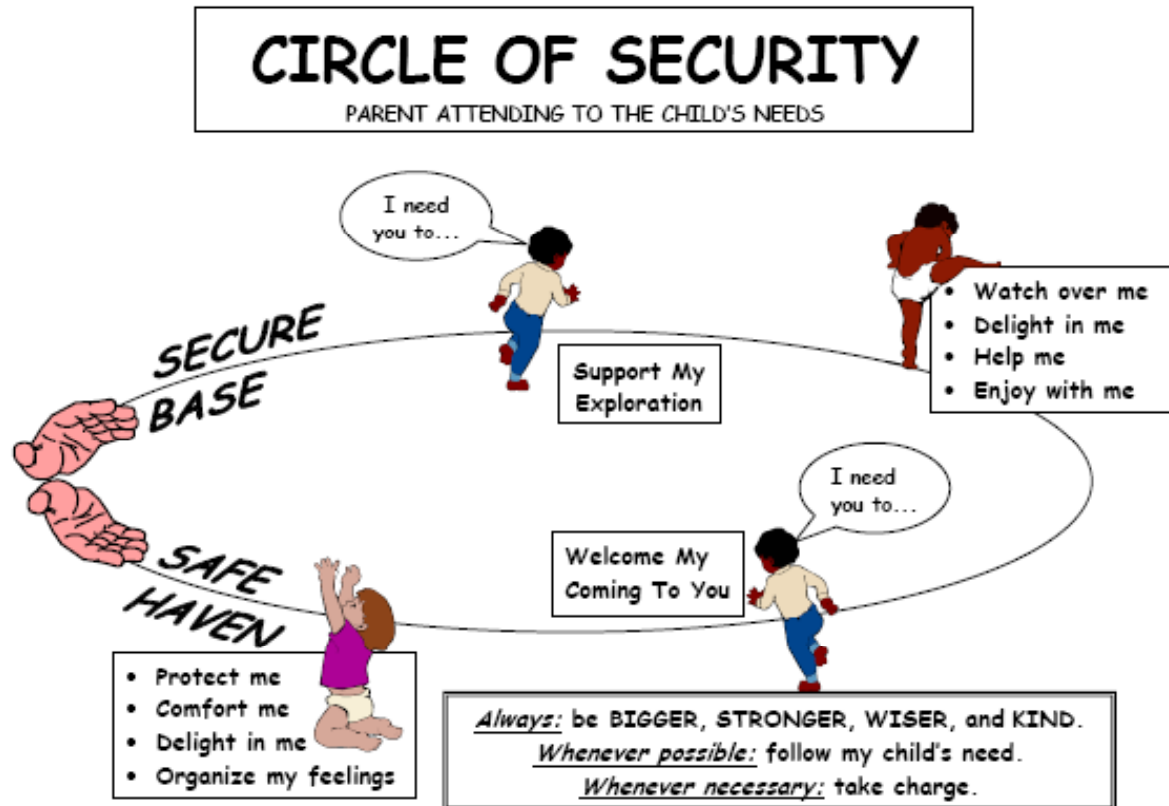
- Mental health experiences
- Developmental disabilities experiences
- Co-regulation management for stress
- Relational regulation of fear and pain
- Premature nursery and stress monitoring

# Mutual Regulation of Emotion

- The experience of being able to share a broad range of emotions with your attachment figures promotes security of attachment
- The freedom to experience a full range of emotions without fear of losing coherency and predictability is a central component to feeling internally secure

# Circle of Security

## Parent Attending to the Child's Needs



© 1998 Cooper, Hoffman, Marvin, & Powell  
circleofsecurity.org

# Therapy with Adoptive and Foster Families

## Certificate Program

### Workshops and Online Courses

*Video streaming available*

*All workshops are 7 CEU hours*

*All Online Courses are 10 CEU hours*

Sept. Workshop: **Overview of Adoption & Child Welfare Systems**

Sept. Workshop: **Central Elements of Preserving Placements**

Oct. Online Course: **Clinical Practice with Adoptive and Foster Families**

Nov. Workshop: **Fetal Alcohol Spectrum Disorders (FASD) and Other Drug Effects**

Nov. Workshop: **The Impact of Abuse, Trauma, and Neglect on Child Neurodevelopment**

Jan. Online course: **Attachment and Bonding**

Feb. Online workshop: **Clinical Practice with Diverse Adoptive and Foster Families**

Mar Workshop: **Trauma and Dissociative Disorders: In Adoptive & Foster Families**



# **Therapy with Adoptive and Foster Families**

## **Certificate Program**

### **Workshops and Online Courses**

Mar. Workshop: **Promoting Positive Sexual Development Following Abuse**

Total hours: 100

April Online Course: **Family-Based Therapeutic Strategies: Coaching Adoptive and Foster Parents**

Includes a Program Wiki page filled with resources and information

May Workshop: **Putting Adoption/Foster Care Therapy into Practice (2-days)**

Final Project: Case Study or Training Program



# **Understanding Trauma and the Brain: Building Competence in the Adoption, Child Welfare and Mental Health Workforce**

**Thank you!!!**

Classes, workshops and certificates in  
**Therapy with Adoptive and Foster Families**

**Interpersonal Neurobiology**

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