


Professional Development Series on  
 Childhood Trauma:  
 Starting With the Basics!

*Baby Brains to Adolescent Brains*  
 June 19, 2019

*Sponsored by*  
 Leaders In Transformational Education (LITE)




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Welcome  
 and  
 Introductions

WHO IS "IN THE ROOM" TODAY?  
 ANNE STUDZINSKI  
 MICHELLE ARNOLD  
 LITE! Our hosts...




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Many  
 Thanks

*Illinois Childhood Trauma  
 Coalition, Illinois Collaboration  
 on Youth, Dr. Gene Griffin,  
 Lurie Children's Hospital, Dr.  
 Bruce Perry, Dr. Abigail Baird,  
 Dr. Jim Garbarino, Dr. Jay  
 Geidd, Linda Delimata, ICMHP,  
 UIC & NU researchers, & the  
 many youth & family  
 organizations that have  
 become trauma informed!*




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**AGENDA**

- Welcome & Introductions
- Overview of the Series
- Group Activity
- Brain Basics
- Baby Brains
- School Aged Brains
- Teenaged Brains
- Group Activity
- Surveys




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**Overview of the Series**

**Today!**  
*Baby Brains to Adolescent Brains*

**June 27, 2019**  
 9-Noon  
*Trauma's Impact & Universal Response*

**June 28, 2019**  
 9-Noon  
*Taking Care Of Yourself & Others*




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**Take Good Care ...**

*When you talk about trauma and traumatic events, you never know who is in the room. The information may be disturbing to some people. Please take care of yourself: take deep breaths, feel free to move around, stand up or leave the room.*




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DESCRIBE THE CHILDREN YOU  
WORK WITH



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### Brain Basics



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### Neurons & Synapses

- Birth - few synapses formed, related to bodily functions.
- A million+ new neural connections form every second of the first few years of life



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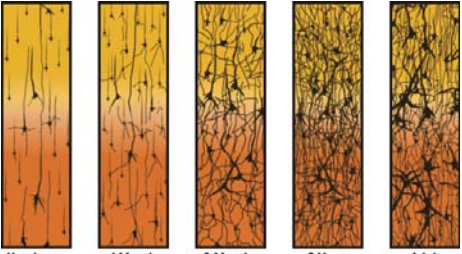
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### Rapid Growth of Connections



Newborn    1 Month    9 Months    2 Years    Adult

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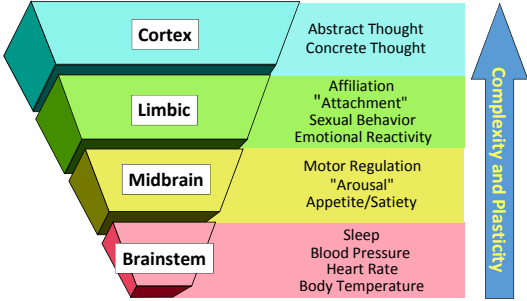
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### Complexity & Hierarchy of Brain Functioning



<b>Cortex</b>	Abstract Thought Concrete Thought
<b>Limbic</b>	Affiliation "Attachment" Sexual Behavior Emotional Reactivity
<b>Midbrain</b>	Motor Regulation "Arousal" Appetite/Satiety
<b>Brainstem</b>	Sleep Blood Pressure Heart Rate Body Temperature

Complexity and Plasticity ↑

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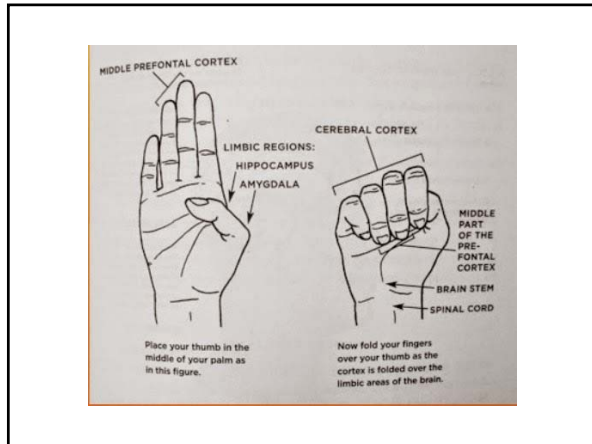
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### Plasticity

- Lower parts of the brain (e.g. brain stem) are less flexible or less plastic.
- Higher parts of the brain (e.g. cortex) are more plastic.
- Cortex plasticity decreases as a child gets older.
- However, some plasticity remains which allows us to keep learning throughout our lives.

*Perry (2006)*



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## Baby Brains

What was happening with the children before they arrived at your program?



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### Baby Development

- Physical - Crawling, walking, running
- Emotional - Watching, smiling, attachment
- Cognitive (thinking) - Talking, listening



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### Video on Brain Architecture

[http://www.youtube.com/watch?v=VNNsN9IJkws&feature=player\\_embedded](http://www.youtube.com/watch?v=VNNsN9IJkws&feature=player_embedded)

Center on the Developing Child  HARVARD UNIVERSITY

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### Shaping the Organizing Brain

- Babies are NOT passive to their environment
- Babies are continuously processing the world
- They connect to that world through all their senses
  - The sounds (& tones & words) they hear
  - The faces & objects they see
  - What they touch and how they are touched (skin on skin)
  - What they smell & What they taste



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### Brain Basics – Critical Periods

- For some aspects of brain development, timing is critical.
- Important abilities will be lost or diminished if they don't develop at the right time (e.g. vision, attachment, language)

***Childhood experiences impact how the brain develops***




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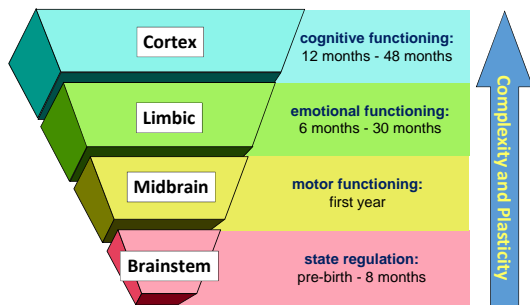
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### Complexity & Hierarchy of Brain Functioning




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### And what about memory?

***The organizing framework for children's development is based on the creation of memories.***

- Implicit Memory – perceiving the environment & recalling it in unconscious ways
- Explicit Memory – conscious memories, tied to language development

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### Developing memory

*Same pattern:*

- Motor memory
- Emotional memory
- Cognitive memory



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### “Serve and Return”

- Use “Serve and Return” to immediately establish attachment.
- “Serve and Return” are ongoing interactions between the baby and grown-ups.



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### Benefits of Serve & Return

- Stable and supportive relationships, language-rich environments, and mutually responsive, interactions with adults.
- Promotes healthy brain architecture and adaptive regulatory systems.



<https://developingchild.harvard.edu/resources/three-core-concepts-in-early-development/>

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### Development in Ages 3 - 5

- ✓ Language – A typical child will learn 300 words by age 3, 1500 by age 4, and 2,500 by age 5.
- ✓ Exploration – Starting to climb, hop, swing... may be clumsy and frustrated!
- ✓ Conflict and Resolution
- ✓ Learning & Practice
- ✓ Self-Regulation



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### Activity Before the Break!

Given what you heard today, what advice would you give to...

1. Meghan and Harry
2. Kate and William



Let's break into groups and then share!

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Let's take a break!



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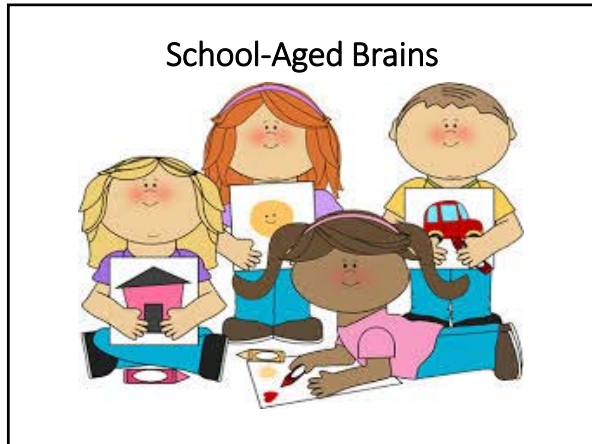
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 At this age children begin to read, perform basic math functions, to write, and to understand time.

 Children this age might seem to be centered on self, and to want things their way. One of their developmental tasks is to learn how to deal with disappointment and frustration.

 They are learning how to have friends, and how to be a friend. They usually choose one good friend at this age.

 This is the stage where children begin to see the connection between their behavior and the reaction of others.

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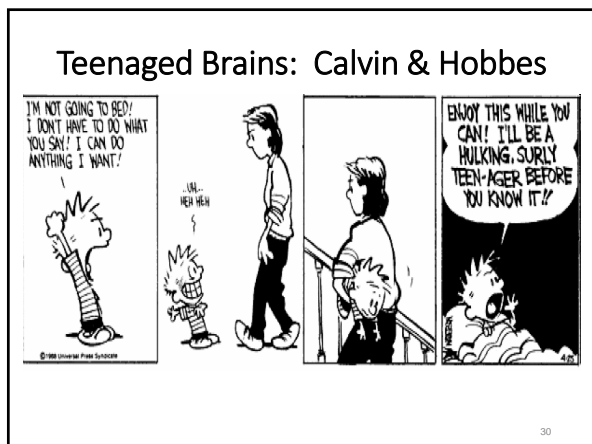
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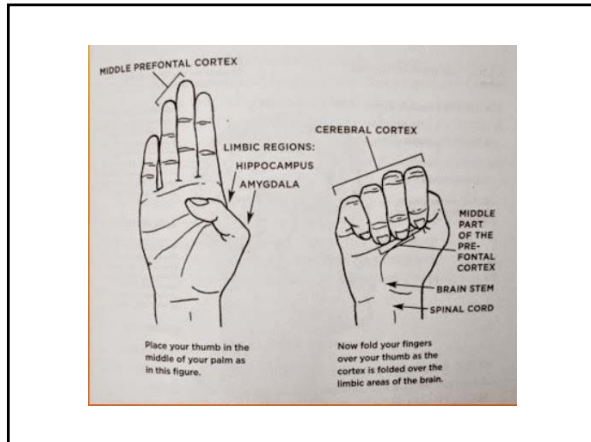
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### Teenage Development

- Physical Appearance
- Emotional rollercoaster
- Cognitive – always the last

***A teenager’s physical development will often occur AHEAD of their emotional or cognitive development.***




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### Puberty!

*In Addition to physical changes...*

- Strong emotions emerge – moody
- Thinking in abstracts instead of concrete only
- Judgment is not yet developed, but practicing
- Peer relationships important – peer pressure is most significant during this age
- Engagement in “risky” behaviors
- Testing independence but still need/want adults
- “Teen Rebellion” begins




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### Teens and Decision-Making

*Teens make decisions differently than adults.*

- They rely more on their “emotional” centers than their “thinking” centers (*Baird*)
- They often think before they act but they are using a different set of “values” to make these decisions
- They often choose actions that are much riskier than adults would choose



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### Why are they like that?

**Risk & Reward**  
*What they overcome makes them stronger – shows them they can survive!*

**Thinking Before Acting**  
*“What were you thinking?” “I don’t know.”*

**Peer Pressure**

*New research suggests it’s adaptive!*



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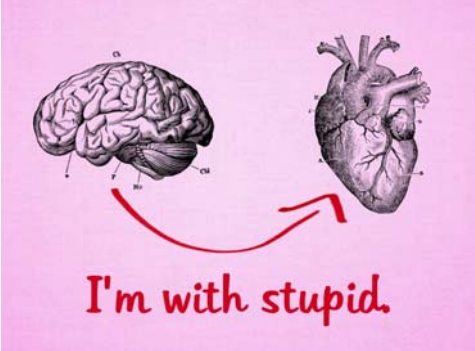
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*I'm with stupid.*



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But ...

Kids can do amazing things!

- Hot cognition
- Cold cognition



*They just need grown-ups to help them along!*

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### Law & Policy

U.S. Supreme Court relied on developmental research in deciding:

- Roper v Simmons (2005)
- Graham v Florida (2010)
- Miller v Alabama (2012)

Teenagers are not as *culpable* as adults and there is always hope for rehabilitation



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IN OTHER WORDS...



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### When You Return Next Week

A funny story that makes you think about what you learned today about brains

*Consider sharing your observations!*

Check out Websites:

- NCTSN.org
- Look Through Their Eyes.org
- Or another resource from list!



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Survey, Please!

**And THANK YOU!**

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What are your aspirations for the children you work with?

See you on the 27th

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