

Brain Architecture Game

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Early Brain Growth and Development

- Brain development foundations happens by age 3.
- Emotional center of the brain develops very early.
- Emotional reactions are very important to brain development.
 - Early abuse and neglect do more harm than to an older child because a young child cannot reason through it, but the emotional response still occurs.

Brain Growth Continues

- The connections in our brains that are used grow.
- Those connections not used are pruned away.
- Experiences influence brain development.
 - Children learn to expect what they experience.
 - Positive experience builds trust, language, listening, and interaction skills.

Executive Function

- Decision making
- Working memory
- Mental flexibility
- Self-control
 - All of these are enhanced by playing games such as:
 - Peek-a-Boo
 - Imitation games
 - Follow the leader
 - Active games
 - Story telling, etc.

Stress

- Humans experience three levels of stress
 - Positive stress – brief increase in heartrate, mild elevations in stress hormone levels.
 - Tolerable stress – serious, temporary stress responses, buffered by supportive relationships.
 - Toxic Stress – prolonged activation of stress response systems in the absence of protective relationships.

Center for the Developing Child, Harvard University,
<http://developingchild.harvard.edu/science/key-concepts/toxic-stress>

Responding to Stress

- Increased education:
 - Decreases adult stress and length of life.
 - Increases health of future generations.
 - Reduces infant mortality rate.
- Socio-economic status affects:
 - Words heard in the home by children which affects:
 - Language development
 - Reading ability
 - Writing ability

