Overview of Early Childhood

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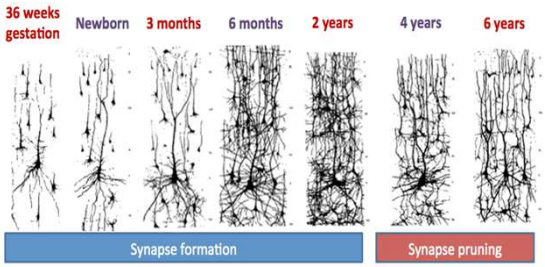
Thanks and Overview

- Angel Rhodes (director for early childhood initiatives at FutureReady Columbus) and I are co-leading a brief introductory session to provide an overview of key issues:
  - brain development and early education program effects,
  - an overview of what's happening in Ohio today.
- Goal is to provide a backdrop for two panels, the first focused on ***quality in early childhood*** and then second on the ***cost of quality***.

Early Brain Development

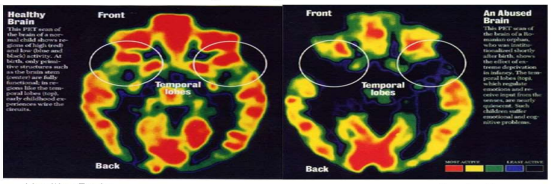
- Neural pathways are being formed from birth forward through **synaptogenesis**
- **Peak brain development** for cognitive and social-emotional development is birth to 5 years: sensitive period for risk and promise
- Brain is **highly plastic and dependent on experiences** for pathway formation

Synaptogenesis



Brain Development and Abuse & Neglect

Structural Brain Changes due to Early Experiences



Healthy Brain Deprivation

"The Two Year Window"

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Adverse Childhood Experiences and the Brain

- Ongoing exposure to **toxic stress** negatively affects important areas of the brain:
  - Memory
  - Self-regulation
  - Cognition and language
- **Poverty detracts** from caregivers' ability to stimulate the child:
  - Conversations with child
  - Sensitive interactions
  - Positivity and caring

Early Childhood Programming

- Provides important opportunities for early stimulation during critical period of brain development
  - Attentive, sensitive caregivers
  - Opportunities for play and creativity
  - Exposure to skilled peers
  - Engagement in intentional teaching of early language, social-emotional skills
- Provides critical supports for caregivers in the workforce
  - Opportunities for basic or advanced education
  - Support during employment

Return on Investment

Investments 'in high-quality programs returns 13 percent per child annually—a rate of return comparable to returns on a savings account or the stock market'

(Heckman et al., 2016)