How many connections does the average neuron, or brain cell, make with other neurons?

(A) 25
(B) 150
(C) 500
(D) 3500
(E) 7000

Supporting Children's Early Brain Development

Presented:
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Our Incredible Brains
Session Objectives

At the end of this presentation, you should be able to:

• Identify the growing brain as a work in progress - an enormous amount of brain development occurs in the first five years of life
• Describe how a child's early experiences shape the physical development of the brain
• Explain at least three ways to support children's learning and brain development

Session Agenda

Here's what we're doing today:

1. Brain development: Children's earliest experiences build their brains
2. Discuss research-based strategies for supporting children's brain development
3. Learn and share strategies that you use with your colleagues

Rapid Brain Growth

Percentage of Adult Volume

Birth 25% 1 year 5 years 10 years 18 years

Gray's Clinical Neuroanatomy, 2010
Neurons Build the Brain

Neurons Work In Networks

Learning = Neural Connections

Neural connections grow stronger with experience
Connections Form Rapidly In the Developing Brain

Adapted From LeRoy Conel, Harvard University Press, 1959

1 month
3 months
6 months
4 years
6 years

Adapted From LeRoy Conel, Harvard University Press, 1959
Pruning connections results in a thriving brain.

Connections are refined by experience.
Pruning connections results in a thriving brain.

Connections AreRefined by Experience

Primed and Ready to Learn

Development

Plasticity
Over the course of childhood, we build our brains.

Our experiences, and the frequency of those experiences influence shape how our brains are wired.

Supporting Early Brain Development Everyday

How do you support early brain development in the children that you work with?

In Order to Care For Others, You Must Care For Yourself

“it’s hard work and it’s serious... Build in time for yourself and take care of yourself so it is a combination of taking care of children and taking care of yourself.”

“You have to understand the signs of stress, understand when you are overwhelmed, and how you communicate that and how you take care of yourself.”

Tailored, Back-and-forth Interactions

Share Your Thinking

Share Your Thinking
Responsive Caregiving Provides Regulatory Support

- Prefrontal cortex

Create Predictable Routines

- Predictable routines

Wrap Up: Building Healthy Brains Together

- Children’s brains are built. An enormous amount of brain development occurs in the first five years.
- Early childhood experiences shape the physical development of the brain.
- Children learn best in the context of relationships and in environments where they feel safe, secure and free to explore their world.
How are you going to take what we’ve learned today and apply it to your work with children and their families? What additional tools or information might you need to support your work?

Resources

- Early Childhood Learning & Knowledge Center

Thank you!

Please fill out a survey: