



First Steps

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Infant and Toddler Brain Building

Our children do not come with instructions. Parents Reaching Out provides resources that help families make informed decisions about the care and education of their children. We thank the Parent Education Network, a project of Parents Helping Parents of Wyoming, Inc. for permitting us to share their *Thoughts for Tots* in this information series.

The first years of your baby's life are the most important years for his or her brain development. At birth, infants have all the brain cells they will ever have, but they do not have the connections or "wiring" between these cells. From birth to about age three, an infant's or toddler's brain undergoes powerful growth based on the stimulation the child is exposed to and the nurturing he or she gets.

"At birth a child's brain contains 100 billion brain cells, or neurons. Few of these are connected....These neuron connections are made through life experiences and attachments with adults during a baby's first few years. These connections are called synapses. As more and more connections are formed, the brain becomes a complex network of synapses. This is referred to as the wiring of the brain. The number of synapses develops rapidly during early childhood."

Source: Paula Wiggins, Texas Child Care, 2000

Why Is It Important to Stimulate a Child's Brain?

- The brain is developed the most in the first three years of life.
- Young children's brains are especially able to develop connections that will be used later in life.
- All experiences either create a new synapse connection or make an old connection stronger.
- The more experiences a child has, the more connections are made.
- The more connections, the more ways the brain has to understand new things later in life.
- The ability to learn new things and make new connections gets harder as a person grows older.



Source: DeBord, Karen, State Specialist—Child Development, College of Agriculture & Life Sciences, NC State University

What Are the Facts about Infant and Toddler Brain Development?

- The initial networking of the brain's synapses is nearly complete after the rapid brain development of the first 3 years.
- Stimulating experiences give your baby brain circuits that are used to build improved learning in the future.
- Babies clearly like high contrast images. (Black on white, for example.)
- The total connections in the brain can increase or decrease by 25 percent depending on the environment and stimulation.
- Visual stimulation can produce developmental advantages including advanced curiosity, awareness and concentration.
- Your baby's best toy is you!
- Interact with your baby as much as possible!

Source: Genius Babies, www.geniusbabies.com

What Can Parents Do to Help Stimulate Their Baby's Brain Growth?

Love: The most basic biological need of any child is love and affection. Lots of touching, holding, cuddling, and snuggling are vital to a child's emotional and intellectual growth. Touching and nurturing do more than just comfort a child—these actions truly help the brain to grow.



Talk: Talk to your child in a kind and gentle voice; use a wide range of vocabulary and lots of expression. Your voice is one of your child's favorite sounds, so as you're changing his/her diaper, getting ready to go in the car, walking around the yard—whatever you're doing—explain it to your child.

Provide experiences: Every new situation helps to create more brain connections for your child. Repetition is good because it strengthens already formed connections; new experiences make new connections to increase the “wiring” of your child's brain. Go for walks; show her new places and people; let him explore in a safe environment with your supervision.

Read books and play music: the sounds and rhythm of language and music help to stimulate brain growth. Looking at pictures and hearing the words are both exciting and interesting to children even when they are too young to understand the story itself. Classical music has been found to stimulate the neurons in the brain that will be used later for mathematics.

For more information call Parents Reaching Out. We offer phone consultations and provide workshops in English or Spanish to communities throughout New Mexico. This publication was developed under a grant from the New Mexico Department of Health Family Infant Toddler program. However, the views here expressed do not necessarily represent the policy of the Department of Health and should not be assumed to be an endorsement by the New Mexico Department of Health.