

Brain Development of Children



Here is a summary of what scientists know about the brain development of children:

- Brain development is a combination of genetics and the environment. It is the genes (or what your kid inherited from you) that create the structure of the circuit – but it is the combination of nutrition, the environment, and stimulation that determines how the circuit is “wired” or connected together. Developing the brain is all about wiring it in the most efficient way.
- Your kid is biologically prepared to learn. That’s why a 3 year old’s brain is two and a half times more active than an adult’s. It has more synapses (gaps between nerve fibers that make your child more sensitive to learning), and the density of the synapses remain high throughout the first 10 years of life.
- Brain cell connections (the “wiring” of the brain) are also created when your child forms attachments to parents, family members, and caregivers.
- The quality, quantity and consistency of stimulation from your child’s early experiences contribute to the structure of his brain and its capacities. The effect of these experiences lasts for the rest of his life.
- There are “windows of opportunities” in your child’s mental development where his brain is particularly efficient at specific types of learning. There are critical periods where your child readily absorbs specific skills. This Optimal Window occurs when the connections of the brain develops at the most rapid rate. The Next Optimal Window is when the wiring of the brain is strengthened. Rewiring is when the brain make further adaptations to the existing wiring. Note that brain development is not a step-by-step process, but more like a wave.

WINDOW FOR	OPTIMAL WINDOW	NEXT BEST OPPORTUNITY	FURTHER REWIRING POSSIBLE
Emotional Intelligence	0 to 24 months	2-5 years	any age
Motor Development	0 to 24 months	2-5 years	decreases with age
Vision	0 to 2 years	2-5 years	
Early Sounds	4-8 months	8 months – 5 years	any age
Music	0-36 months	3-10 years	any age
Thinking Skills	0-48 months	4-10 years	any age
Second Language	5-10 years		any age

According to the [National Institute of Child Health and Human Development](#) , a child should immediately be evaluated for autism if the child:

- Doesn't babble or coo by 12 months of age.
- Doesn't point, wave, grasp or make other gestures by 12 months.
- Doesn't say single words by 16 months.
- Doesn't say two-word phrases on his or her own by 24 months.
- Has any loss of any language or social skill at any age.