

- Child development

The life-long impact of brain development

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DID you know that the first five years of a child's brain development will determine how successful the child will be for the rest of his life?



There's a phase called the "critical period" --- a phase where the brain cell connections are more flexible and receptive to the influence of life experiences. If you miss out on this window of opportunity, it might be harder for your child to cope with the ever-changing world.

Based on "Why Early Childhood Matters" published in First Things First (<https://www.firstthingsfirst.org/early-childhoodmatters/brain-development/>), 90% of brain growth happens before kindergarten. Newborn babies have all of the brain cells they'll have for the rest of their life, but the synapses, or connections, between these cells are what make the brain work. These connections enable us to do just about everything - including moving, thinking, and communicating.

Research confirms that the first five years of life are considered to be a rapid and dynamic period for brain development. Most brain processes during that period will have an impact on the developing brain. Much like electrical wires -- or the fiber optics that connect us to the internet -- billions of brain cells called neurons send electrical signals to communicate to each other. These connections form circuits and become the basic foundation of brain architecture. Circuits and connections multiply at a really fast phase and are strengthened through repeated use. Experiences and environment dictate which circuits and connections get more used.

Studies also show that in the first five years, nutrition plays a crucial role in brain development. Two experts - Sarah Cusick, Ph.D., and Michael Georgieff, MD published an article on PubMed Central, a biomedical and life sciences journal literature from the US National Library of Medicine entitled "The Role of Nutrition in Brain Development: The Golden Opportunity of the First 1,000 days". The medical journal says that among the factors that influence early brain development, three stand out as having particularly intense effects: Provision of optimal nutrition including brain food; presence of strong social support and/or secure attachment, and the reduction of toxic stress and inflammation.