

The Transformative 10: Nourishing the Brain

The first 1000 days are fully recognized as setting the foundations of a child's lifelong health.

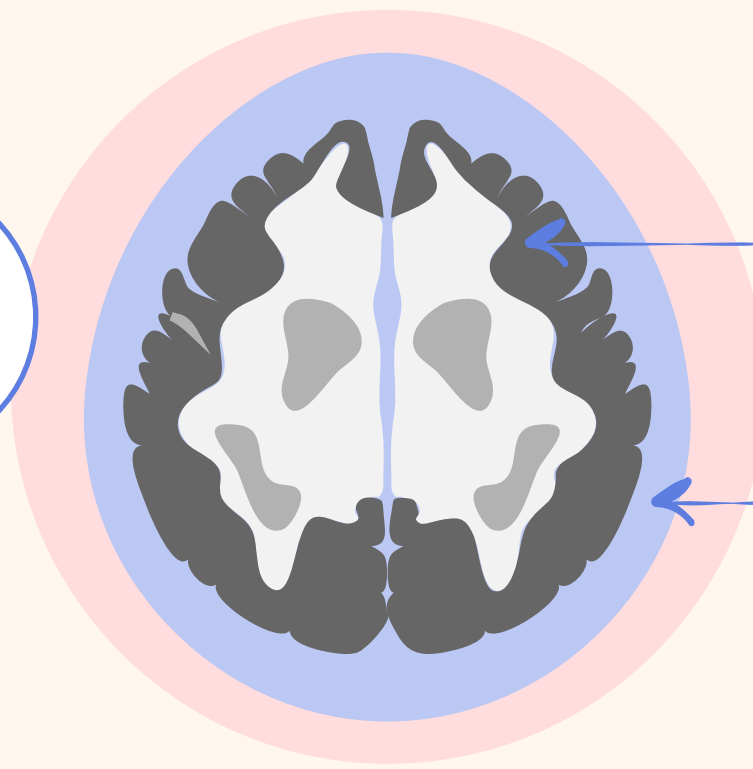
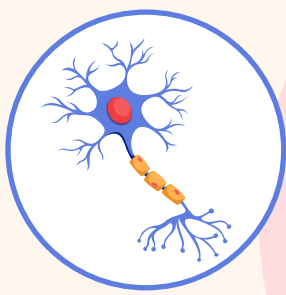
However, are you aware that the ultimate realization of an individual's potential requires a successful bridging from early childhood to adulthood which lies between 5 to 15 years of age: The Transformative 10 years?

The brain undergoes tremendous structural and functional changes during

THE TRANSFORMATIVE 10

Brain efficiency

The brain eliminates extra synapses (brain connections) that are no longer needed. This process (known as 'synaptic pruning') increases brain efficiency to develop executive functions to learn, set goals, and socialise



Grey matter (processes information)

Growth of grey matter peaks around 10–12 years of age

Brain volume

The brain reaches its final size between 10 and 12 years

The parietal and temporal association areas, responsible for language skills and numeracy, undergo peak development in the school years.

DID YOU KNOW?

There are
5 ESSENTIAL NUTRIENTS
for adequate growth and brain function



Myelin and neurotransmitter synthesis and metabolism



Neurogenesis
Neuronal migration
Synaptogenesis
Neurotransmitter modulation



Neuronal processes, including the regulation of membrane fluidity and gene expression



Myelin formation, synaptogenesis, and neurotransmitter synthesis



All five essential nutrients are critical for brain development, cognitive performance and academic achievement.

KEY TAKE AWAYS



Between 5 and 15 years of age grey matter volume peaks and the brain reaches its final adult volume. This period is marked by the highest rate of development in specific areas of the brain, including those related to complex functions like memory, problem-solving, language, and social behaviors.



Brain growth, and development during this period lay the foundation for cognitive, motor, and socio-emotional skills, and academic performance throughout the rest of childhood and adulthood.



Brain growth and development during the school years are highly dependent on adequate nutrition, and particularly five essential nutrients: iron, zinc, DHA, folate and vitamin B12.

References

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