ARTICLE

Wondering how to support your child’s brain development?

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Building blocks of brilliance

The early years of your child's life are incredibly important for their future wellbeing and growth, one of the main reasons is that the brain undergoes rapid development from the time in the womb through early childhood.[1] The first six years of life set the foundation for children's thinking, physical abilities, language skills, and social and emotional development.[2]

During these precious early years, the brain goes through a process called synapse pruning.[3] At birth, a baby's brain has about 100 billion neurons (brain cells), 15% more than an adult's brain. Synapse is the point of contact between two brain cells. As the baby learns and grows, some brain connections strengthen based on experiences, while others fade away. Over time, weaker connections are removed, this allows reallocation of resources which enables the brain to develop stronger and more stable connections. In pruning, unnecessary connections are trimmed away to make the brain more efficient, healthy and adaptable. Synapse pruning mainly occurs in areas responsible for vision and hearing by the age of 4 to 6 years, while cognitive areas continue to blossom[4,5]. The first 8 years set the stage for future learning, health, and overall success in life[1].

Factors that influence brain development

Numerous internal and environmental factors play roles in shaping your child's brain development. Internal factors such as microbiome and genes, while environmental factors encompass sensory and motor experiences, language and cognitive interactions, exposure to music, relationships with family and friends, lifestyle choices, physical activity and of course, diet[6-9].

All nutrients including protein, fats, carbohydrates, vitamins, minerals, and water, are important for brain growth and development. However, micronutrients, such as iron, zinc, choline, iodine, folate, B12, and long-chain polyunsaturated fatty acids (LC-PUFAs) such as docosahexaenoic acid (DHA) and eicosapentaenoic acid (EPA), have been identified specifically for cognitive development[10]. DHA being a major lipid in the brain, essential for normal brain function[11].

DHA's role in cognitive function and emotional development

1. DHA is essential for the functional development of the brain in infants[12].
2. Specific role of DHA in brain development
   - DHA supports myelination (formation of an insulating layer around neurons that allows quick messaging[13]), and growth and differentiation (process of brain cells maturing and becoming specialized to carry out specific function[14]) of neurons[15]. Tissue content of the long chain, omega-3 fatty acid (n-3 LC-PUFA) docosahexaenoic acid (DHA, 22:6n-3) is important for myelination of the frontal parts of the brain[11].
   - DHA helps keep the brain flexible, which is essential for learning and memory skills[15,16].
   - The inclusion of DHA in the diet improves learning ability, whereas deficiencies of DHA are associated with deficits in learning[12].
   - DHA-rich parts of the brain are thought to be responsible for executive and higher-order cognitive activities such as planning, problem solving, and focused attention. Researchers report an association of the DHA-rich parts of brain with certain brain structures, where high-order cognitive function corresponds to a child's social, emotional and behavioral development[11].

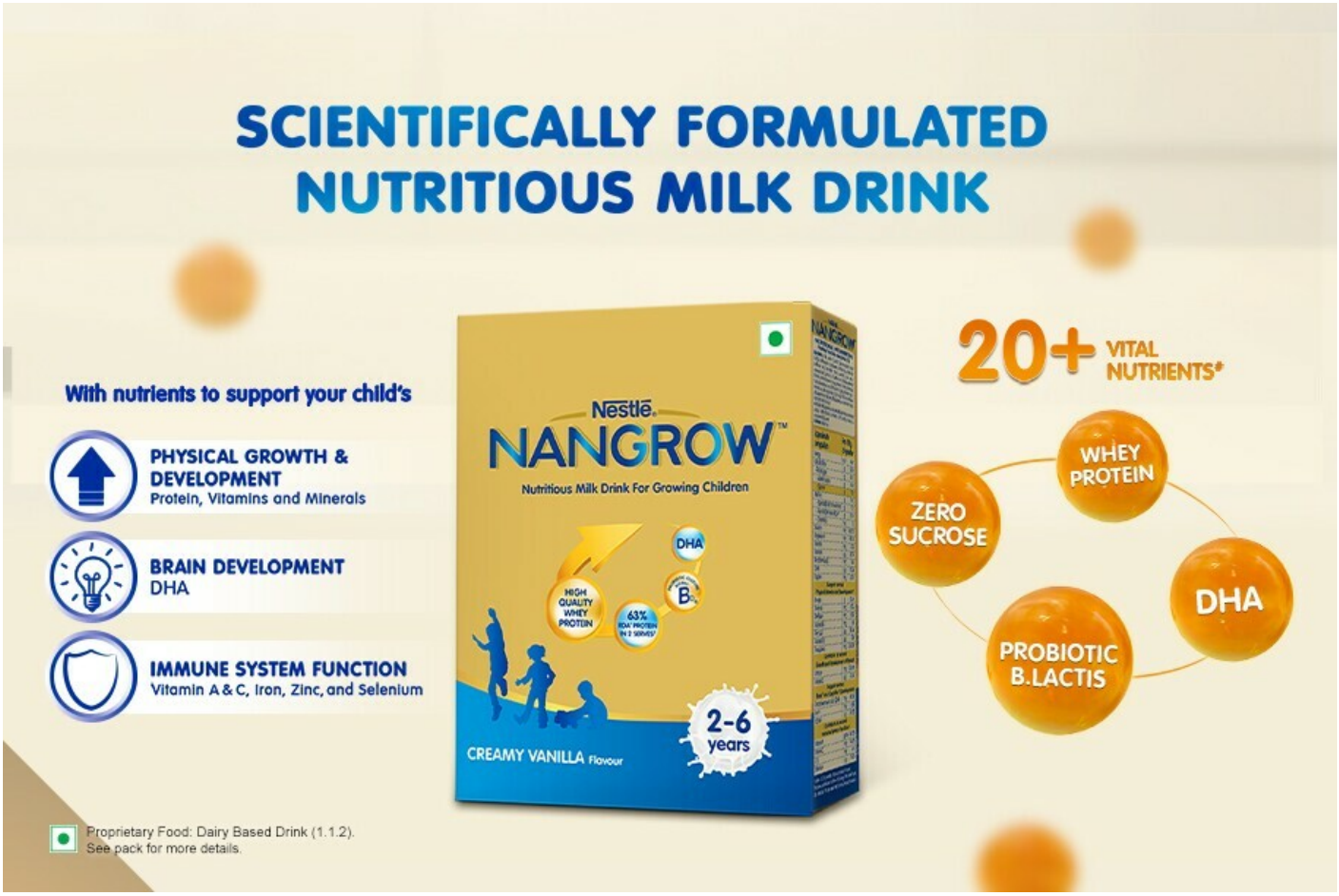
Recommendations for DHA in children

Long chain PUFA such as arachidonic acid (AA), eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA) are essential for normal brain function and development[17]. In accordance with the guidelines from ICMR-NIN, the recommended nutritional needs for children are outlined as follows[18]:

Age (years)	Amount of EPA +DHA (mg/day)(Recommended dietary allowances)

1 to 2	100
3 to 18	250

NANGROW™ is a source of balanced blend of essential nutrients, with **13.4 mg of DHA in every serving.** It is a creamy, vanilla-flavored milk drink tailored for growing children and is scientifically formulated to **help support brain and cognitive development.**



So, amid the uncertainty of tomorrow, you certainly know that your child is prepared for any possibilities that the future may hold!

Know more about the benefits of NANGROW™ and try its sample for free!

First Published on Practo

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