

Nutrition and Child development: A review

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Abstract

Appropriate nutrient is a vital factor influencing growth and immunity. Nutrition is very essential during pregnancy and infancy, which are critical periods for the formation of brain, putting out the foundation for the development of cognitive, cognitive, motor, and socio-emotional skills throughout childhood and adulthood. Certain nutrients have critical role in brain development and their deficiency causes severe life-taking risks. Deficiency of iodine leads to cretinism and other neural disorders while deficiency of iron results into disruptive mental, cognitive, emotional and behavioural functions. Likewise, deficiency of zinc and choline leads to alterations in attention, activity, neuropsychological behaviour and perception and construction of human intelligence respectively. The consequences of inadequate nutritional status during childhood may have long-lasting ill-effects on the health and performance of children during their adult years. Hence, young children need to develop healthy eating habits along with some physical activities at an early stage. It is really essential for children to consume all sorts of nutrients in their daily diet.

Keywords: Nutrition; Cretinism; Neural Disorders; Neuropsychological

Conclusion

Nutrition is the root over which development depends. If children do not get proper amount of macro and micronutrients, they become ill, suffer from severe deficiencies and diseases that continues up to adulthood and even the consequences are life-long and sometimes results into death.

Balanced nutritional diet is the key for children's overall development. Under-nutrition not only affects physical growth and maturation which ultimately affect growth rate, body weight and height but also adversely affect the motor and mental development. Malnourishment causes children to have less energy and less interest for learning which negatively affects cognitive development and academic performance. A balanced diet must contain adequate amount of carbohydrate, protein, fat, vitamins, minerals and fibres. Each of these nutrient plays an important role in overall growth and development of children.

Although all nutrients are required for brain development, few nutrients have higher impact on early brain development including protein, fat, iron, zinc, iodine, choline and vitamin B12. Iodine is important for cognitive development. Especially in pregnant women, it is a vital nutrient responsible for brain development all over the world. Prevention of iodine deficiency while pregnancy leads to healthy brain development of the foetus. Iron is an integral part of haemoglobin, which supplies oxygen for the brain to perform proper function. Likewise, choline is also an essential nutrient which helps in formation of neurotransmitter and responsible for construction of human intelligence.

Another vital micronutrient, which contributes in brain development is zinc. Though, the association between zinc deficiency with brain development are unclear, it appears that deficiency of zinc may result into children's inappropriate neuropsychologic functioning, activity, or motor development and therefore negatively affects cognitive performance. Therefore, adequate nutrition becomes a pillar for children's overall growth and development.