

Protein intake in infancy: Difference between needs and supply

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Of the 50 or so known essential macronutrients and micronutrients, protein is by far the most important for human development and health. Protein is a major structural component of all cells in the body. It functions as enzymes, hormones and transport carriers. Protein is also required for synthesis of nucleic acids, hormones, vitamins, and others. Recommended dietary allowance (RDA) of protein is the safe level of intake which will satisfy the protein needs. Both protein excess and deficiency in infancy can lead to disease. Excessive protein intake leads to increased blood concentration of non-metabolised amino acids, particularly insulin-releasing amino acids: valine, leucine, isoleucine and threonine. According to the "Early Protein Hypothesis", excessive protein intake in early life "programmes" a tendency towards increased early weight gain and formation of fat cells (adipogenic

activity). Chronic protein deficiency can result in faltering or stunting which can lead to impaired brain development, lower IQ, weakened immune systems, and greater risk of diseases like diabetes and cancer later in life. While breast milk provides the exact amount and quality of protein in the first year, Formula milk usually contain high protein quantity to compensate for the protein quality required for proper growth and development. Because of improper quantity and quality of protein unmodified Cow's Milk is not recommended for infants by all societies like AAP, ESPGHAN and WHO.

Biography

Naguib A bdelreheim has professional experience in academic appointments with the University of Sharjah, UAE, as an Assistant Professor of Paediatrics in the College of Medicine and Health Sciences. He is also the chairman of the hospital CME Committee at UHS and provides leadership, coordination and direction to both internal and external CME programs. He earned his Medical degree from Cairo University, Egypt. He completed his Master's degree from Ain Sham University, Egypt and Degree of Doctor in Pediatrics from the same university. He also has a postgraduate diploma in diabetes from Leicester University, UK.

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