NUTRITION IN ADOLESCENT GROWTH AND DEVELOPMENT

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Background. Adolescence is a nutritionally sensitive phase for growth, where the advantages of healthy nutrition extend to many other physiological systems. In the teenage years, growth and development are transformative and have major implications for an individual's health during later life as well as for the health of any prospective children. **Objective of the study.** to assess and analyze the formative role of nutrition in the timing and pattern of growth and development in adolescence. **Material and methods.** The research includes analysis of bibliographic sources identified in PubMed, NCBI, Research Gate, Medline, between the period 2014-2024. **Results.** The present teen generation is growing up in a period of unprecedented change in food environments, where the nutritional problems of micronutrient deficiency and food insecurity persist, and overweight and obesity are on the increase. Iron deficiency in adolescents results in compromised growth, decreased cognitive function and decreased immune function. The onset and duration of puberty differ significantly between adolescents living in environments with varying childhood nutrition. Malnutrition in adolescents is multifactorial, in that if one physiological system is impaired, the development of other systems will also be compromised. **Conclusion.** Nutritional factors play a vital role in the timing and pattern of puberty, with consequences for linear growth in adulthood, body composition, fat mass accumulation, maturation of other physiological systems, and risk of non-communicable diseases in adulthood. Nutritional effects in adolescent development extend beyond musculoskeletal growth to cardiorespiratory capacity, neurological development and immunity. **Keywords:** nutrition, growth, puberty.

THE SUBCLINICAL MANIFESTATIONS OF CARDIOVASCULAR DISEASE IN JUVENILE IDIOPATHIC ARTHRITIS

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Background. Juvenile idiopathic arthritis (JIA) is one of the most frequent chronic diseases of childhood, often persisting into adulthood and can lead to significant long-term morbidity. As a long-standing chronic inflammatory disease, concerns have been expressed about the risk of premature cardiovascular disease (CVD) in JIA. **Objective of the study.** assessment of traditional cardiovascular risk factors in patients with juvenile idiopathic arthritis. **Material and methods**. The research is related to the analysis of bibliographic sources identified in PubMed, NCBI, Research Gate, Medline, from the last 10 years. **Results.** JIA is the most common chronic inflammatory arthritis in children and young people, with onset below the age of 16 years and characterized by pain, swelling and long-lasting joint stiffness. In the pathogenesis and progression of JIA, the imbalance between pro- and anti-inflammatory cytokines may be involved in the regulation of systemic inflammation, local joint lesions and bone erosion. In the last few decades, there has been considerable interest in the long-term outcomes of people with chronic inflammatory arthritis, and one area of particular interest has been the increased prevalence of CVD. This increased risk is attributed to a higher prevalence of traditional CVD risk factors and the role of systemic inflammation in accelerating atherosclerosis. Previous studies have identified an elevation of traditional cardiovascular disease risk factors in JIA, including family history of cardiovascular disease, hypertension and even smoking history. In addition, an abnormal lipid profile has been observed. **Conclusions**. Patients with JIA present with subclinical signs of inflammation and risk of cardiovascular disease, evidenced by increased levels of inflammatory cytokines, elevated lipid profile abnormalities involved in impairment of the cardiovascular system. **Keywords:** juvenile idiopathic arthritis, cardiovascular disease, lipid profile.