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Critical Analysis of Dietary Interventions Proposed for Autism Spectrum Disorder (ASD)

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Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder with multifactorial implications. Nutritional challenges add to the extant complexity of ASD. Adequate nutrition is proven beneficial in alleviating ASD symptoms by addressing underlying nutritional deficiencies, reducing inflammation, improving gut microbiota, and modulating neurotransmitter function. Numerous dietary strategies have been proposed for ASD. However, their critical analysis is necessary to elucidate the existing nutritional knowledge of autism to individuals with ASD, their parents or caregivers, paediatricians, nutritionists, and researchers. The benefits and drawbacks of each diet and their comparative assessment provide insights into the status and future directions in this area of research. This study aims to provide a comprehensive analysis of nutritional interventions for ASD. A systematic search using databases like Google Scholar and PubMed was conducted. After critical screening and analysis, 24 diets were deemed relevant and subsequently categorised into five distinct groups: Standalone diets, Diets for GI function, Addition diets, Reduction diets, and Elimination diets. The literature search emphasised characterising the mechanisms of action, advantages, and limitations of the diets identified. Some diets like Medium-Chain Triglycerides (MCT) Diet & Specific Carbohydrates Diet (SCD) help improve the core symptoms associated with ASD as evidenced by reduced Autism Treatment Evaluation Checklist (ATEC) scores. However, there is limited scientific evidence to support the effectiveness of certain diets for ASD. The effective dietary approach for each individual with ASD varies depending on the specific physiological functions targeted by each diet. Despite the restrictive nature of some diets, balancing nutrition with other food groups is possible and essential to prevent exacerbating ASD symptoms. An optimum diet tailored to every one with ASD lays the foundation for improved reception to other ASD treatments..

Biography

Manali Chindarkar is a PhD Student specialising in Nutrition, with a focus on Autism Nutrition. Armed with a master's degree in Nutrition and Dietetics, where she delved into Nutrigenomics, and a bachelor's degree in Biochemistry, Manali's academic journey has been marked by a pursuit of understanding the intricate relationship between nutrition and health. She holds the UGC-NET Junior Research Fellowship, demonstrating her commitment to advancing research in her field. Her research endeavors aim to navigate the complexities of nutrition in Autism Spectrum Disorder (ASD), particularly within the diverse cultural landscape of India. Through her work, she seeks to unravel the potential benefits of various dietary interventions, emphasizing the crucial role of nutrition in promoting gut health and overall well-being in individuals with ASD.

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