

## Management of Nutritional Strategies in Prevention of Autism Before and During Pregnancy

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**Abstract :** Objectives: Autism is a neuro-developmental disorder that has negative effects on verbal, mental and behavioral development. Studies have shown the role of a maternal dietary pattern before and during pregnancy. The relation of exerting of nutritional management programs in prevention of Autism has been approved. This review article has been made to investigate the role of nutritional management strategies before and during pregnancy in the prevention of Autism. Methods: This review study was accomplished by using the keywords related to the topic, 67 articles were found (2000-2015) and finally 20 article with criteria such as including maternal lifestyle, nutritional deficiencies and Autism prevention were selected. Results: Maternal dietary pattern and health before and during pregnancy have important roles in the incidence of Autism. Studies have suggested that high dietary fat intake and obesity can increase the risk of Autism in offspring. Maternal metabolic condition specially gestational diabetes (GDM) (p-value < 0.04) and folate deficiency (p-value = 0.04) is associated with risk of Autism. Studies have shown that folate intake in mothers with autistic children is less than mothers who have typically developing children (TYP) (p-value<0.01). As folate is an essential micronutrient for fetus mental development, consumption of average 600 mcg/day especially in P1 phase of pregnancy results in significant reduction in incidence of Autism (OR:1.53, 95%CI=0.42-0.92, p-value = 0.02). furthermore, essential fatty acid deficiency especially omega-3 fatty acid increases the rate of Autism and consumption of supplements and food sources of omega-3 can decrease the risk of Autism up to 34% (RR=1.53, 95%CI=1-2.32). Conclusion: regards to nutritional deficiency and maternal metabolic condition before and during pregnancy in prevalence of Autism, carrying out the appropriate nutritional strategies such as well-timed folate supplementation before pregnancy and healthy lifestyle adherence for prevention of metabolic syndrome (GDM) seems to help Autism prevention.

**Keywords :** autism, autism prevention, dietary inadequacy, maternal lifestyle

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