

## Effect of diet modification on attention deficit hyperactivity disorder outcome and its relation to serum sphingosin - 1 - phosphate

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### Abstract

**Background:** ADHD is one of the most common neurodevelopmental disorders, affect 5% of children worldwide and characterized by impairing inattention, hyperactivity and impulsivity and can be avoided by excluding risk factors such as food. Sphingosin- 1-phosphate (S1P) is thought to have role in neuropsychiatric disorders, immunological diseases/allergic reactions and disturbances in its metabolic pathway were associated with intake of some foods and nutrients.

**Aim:** The study aimed to assess effect of diet modification on ADHD outcome, the role of food as a precipitating factor for ADHD symptomatology and its relation to serum S1P.

**Results:** There was improvement in ADHD symptoms as measured by Conner's parent rating scale-revised short form (CPR-RS) after 5-weeks of diet modification program. Carbohydrate and protein intake decreased significantly after diet modification program. Energy intake did not show statistical difference while fat intake increased significantly after the diet program. Vitamin A, C, riboflavin, thiamin and iron intakes decreased significantly after diet program but were within the recommended dietary allowance. Serum S1P levels decreased significantly after diet modification

**Conclusion:** Following health education tips and diet modification program improved symptoms of ADHD as documented by decrease of CPR scores with concomitant decrease of serum S1P. Dietary carbohydrate and protein intakes were positively correlated with Conner's parent rating scale-revised short (CPR-RS) scores and S1P.



### Biography:

Rania Nabil Sabry has completed PhD at the age of 37 years from Institute of postgraduate's childhood studies, Ain

Shams University, Cairo, Egypt. She is graduated from faculty of medicine Kasr El Eini, Cairo University, Egypt at 1997. She is an associate professor in child health department, National Research Center, Egypt. She published more than 18 papers in reputed journals. She had been speaker in international conferences several times before.

### Speaker Publications:

1. "Pilot-scale investigation of forward/reverse osmosis hybrid system for seawater desalination using impaired water from steel industry"; International Journal of Chemical Engineering, 2016.
2. "Characterization and pretreatment of dyeing wastewater from the cotton and polyester textile industry in Egypt"; Desalination and Water Treatment/ V 3, 2019.
3. "Prepared and properties of filled and pozzolanic-filled cements from marble dust waste and granulated slag"; Journal of Thermal Analysis and Calorimetry/ V 2, 2020.
4. "Separation of metal ions and color from wastewater of dyed polyester by using nano filtration"; Australian Journal of Basic & Applied Sciences/ V 7, 2013.
5. "Preparation of conductive polymer nano-composite with chitosan and its application in the removal of hexavalent chromium"; Egyptian Journal of Chemistry/ V 7, 2020.

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