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## REDUCED ANTIOXIDANTS INTAKE IN PREGNANT WOMEN WITH GESTATIONAL DIABETES: IS PREVENTION POSSIBLE?

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**Background and Aims:** Women who develop gestational diabetes mellitus (GDM) are known to be at increased risk of developing type II diabetes mellitus. Pregnancy complications and their associated future diseases share common pathophysiology of inflammation and endothelial dysfunction, which may play an etiologic role in subsequent cardiovascular diseases. Adiposity and sedentary lifestyle are among prospective causal factors, but information about dietary risk factors for GDM is scarce in literature. Urgency for early detection and prevention of the disease necessitates better knowledge of modifiable risk factors like dietary habits. Therefore, we aimed to investigate the relationship between dietary intake levels of macro- and micronutrients with GDM in pregnant women with and without this condition.

**Methods:** Fifty pregnant women attending the obstetrics outpatient clinics at King Abdulaziz University Hospital, Jeddah, Saudi Arabia were randomly recruited during their screening for GDM between 24 and 28 weeks of gestation. Twenty five women with GDM were matched for age and gestational age with women without GDM in a case-control study design. All participants were subjected to medical history taking, clinical examination and laboratory investigations. Dietary intake was assessed using a food frequency questionnaire.

**Results:** The majority of the study population were obese according to their maternal body mass index. GDM patients had significantly higher dietary intakes of carbohydrates, total fat, saturated fat, and polyunsaturated fatty acids than women without GDM ( $p < 0.05$ ). Conversely, significantly lower levels of intakes of vitamin A, vitamin E and selenium were reported by GDM patients in comparison with their control counterparts ( $p < 0.05$ ).

**Conclusions:** Simple measures like encouraging physical activity, changing dietary patterns, consuming food items rich with antioxidants can contribute significantly in prevention of GDM. While our findings need to be confirmed by longitudinal studies, they highlight the potential of the diet to modify the risk of GDM.

### Biography

Eman M Alissa has received her PhD in 2005 from the School of Biomedical and Molecular Sciences, University of Surrey, UK. Her thesis involves micronutrient status in cardiovascular diseases. In 2015, she became the Head of the Elemental Spectroscopy Unit, in King Fahad Medical Research Center, King Abdulaziz University, Saudi Arabia. Currently, she is a Professor at the Clinical Biochemistry Department, Faculty of Medicine, KAU. Her research interests include: micronutrients status in chronic diseases, nutritional biochemistry, diabetes and endocrinology. She has published over 60 articles and attended several conferences where she presented her research work results and has been serving as an Editorial Board Member of repute.

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