

World Summit on **O**BESITY AND **W**EIGHT **M**ANAGEMENT

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The effect of non-caloric restricted, low-carbohydrate diet in reversing Type 2 diabetes mellitus among active Omani diabetic patients attending North Mawaleh Health Center**Salma Alkalbani***Ministry of Health, Oman***Statement of the problem:** There is growing evidence that a low-carbohydrate diet can positively improve the glycaemic index in patients with type 2 diabetes mellitus (1-5).**Objective:** This study examined the effectiveness of a non-caloric restricted, low-carbohydrate diet (NCRLCD) in improving glycaemic control over a 24-week period in active Omani diabetic patients attending primary care setting at North Mawaleh health centre, Muscat.**Methodology:** This is a prospective, descriptive study with longitudinal follow-up and pre-test, post-test comparison. Eighty-three patients were recruited. Blood was collected at baseline, 12-week, and 24-week. Each patient was advised to follow a NCRLCD (< 80 grams of carbohydrate per day) and exercise recommendations. The primary outcome was glycated haemoglobin (HbA1c).**Result:** Seventy-one patients were able to complete the study. A non-caloric restrictive low-carbohydrate diet showed a significant reduction in glycated haemoglobin in a 24-week period by 11.58%, from 7.12 (SD=1.07) % at week 0 to 6.28(SD = 1.07) % at week 24, p-value < 0.05. This reduction was noticed along with the adjustment of diabetic medications, with more than three-quarters of patients reaching an optimal glycaemic level at the end of the study period. The mean weight had shown a significant reduction from 82.63(SD = 14.3) kg to 76.67(SD=14.90) kg, p <0,005. However, linear regression failed to show any correlation between HbA1c and weight changes. Diabetic medication was stopped in 18 (25.4%) patients, reduced in 7 (9.8%) patients, increased in 2 (2.8%) patients, and remained unchanged in 44(62.0%) patients.**Conclusion:** Non-caloric restricted Low carbohydrate diet had improved glycaemic control in patients with type 2 DM in this study. Further controlled studies are warranted.**Biography**

Salma Alkalbani is senior specialist family physician from Oman. She has completed residency program in family medicine in 2014 from Oman medical specialty Board, Oman. She completed masters in public health at University College Dublin and currently doing her fellowship on public health in Ireland. Her area of interest is obesity management through primary prevention and health promotion.