A Reduced Carbohydrate Diet Results in Weight Loss and Improved Glycaemic Control in a Patient with Poorly Controlled Type 2 diabetes.

Jennifer Elliott

Background: Evidence suggests that a reduction in carbohydrate intake is an effective strategy to reduce BGLs in people with Type 2 diabetes.

Case study: A 38 year old man with poorly controlled diabetes (HbA1c 10.7%), BMI 51.9 and features of MetS (central obesity, hypertension, HDL 0.8 mmol/l and Tg 1.85 mmol/l) presented for dietary advice.

Education included an explanation of pathways of carbohydrate metabolism and the effects of insulin resistance on hunger, appetite, energy levels, central weight gain, snoring, blood lipids and moods. The rationale for reducing carbohydrate intake to reduce insulin levels was explained and a 2-week trial of non-ketogenic carbohydrate restriction commenced. The diet intervention restricted carbohydrate foods to one meal per day, with other meals and snacks consisting of foods with a minimal carbohydrate content. This eating plan was well accepted by the patient, who chose to continue it for longer.

Results after 7 weeks:

1. 13 kg weight loss (150 to 137 kg)

2. Cessation of insulin injections. (At initial consultation, insulin regimen was Lantus 32 u/s evening and Novorapid 22 u/s with meals).

3. FBG reduced from 14-19 mmol/l to 5 - 7 mmol/l

4. Pre-meal BGLs reduced from 15-20 mmol/l to 5-7 mmol/l

5. HbA1c reduced from 10.7% to 7.7%

6. Reduced snoring

7. Reduced hunger

8. Improved moods

Conclusion: A reduced carbohydrate intake for the management of Type 2 diabetes resulted in weight loss, improved glycaemic control, reduction in diabetes medication and was well accepted by the patient.