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DIETS OF DIFFERENT COMPOSITION FOR TREATMENT OF TYPE 2 DIABETES

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The issue of ideal diet composition in treatment of type 2 diabetes is debated. Most guidelines recommend a balanced diet, with moderate caloric restriction for overweight individuals. Some authors have proposed low-carbohydrate diets as a tool for improving glucose control. Systematic reviews of randomized trials comparing the effects on HbA1c of diets with different proportions of carbohydrates in type 2 diabetes provided inconsistent results. We made a meta-analysis including RCT which compared two diets with a minimum difference of 5% in the proportion of prescribed carbohydrate, irrespective of their total amount; we only included RCT performed in people with T2DM, which established HbA1c as main outcome, at least three months of treatment. We retrieved 18 trials. Difference on HbA1c at endpoint was -0.05 [-0.21, 0.10] mg/dl. Overall, in our meta-analysis the reduction of carbohydrate intake did not produce any improvement of glycemic control, at any time point (3,6,12 months, endpoint). A small but significant reduction in BMI was reported at 12 months, but not at other time points. Low-carbohydrate diets did not produce any relevant variation, when compared to more balanced diets, of systolic or diastolic blood pressure, HDL cholesterol, or triglyceride. Conversely, a small but significant increase of total cholesterol was reported at endpoint. Only 2 out of 18 trials reported data on renal function after dietary intervention. Therefore, the renal safety of carbohydrate restriction in patients with type 2 diabetes remains totally unknown. In conclusion, we demonstrated that carbohydrate restriction does not improve glycemic control in patients with T2DM to a greater extent than balanced diets.



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