

OBJECTIVE – The aim of this study was to compare the impact effectiveness of a diet with a low glycemic index versus a common diabetic diet in selected metabolic and anthropometric parameters.

RESEARCH DESIGN AND METHODS – 20 volunteers with the type 2 diabetes treated only with metformin were randomly split into two groups. Each group was advised to follow a common diabetic diet (DD) or a diet with a low glycemic index (GI) for a period of 3 months in a crossover design. The effectiveness of the two diets was evaluated according to the selected metabolic and anthropometric parameters using a hyperinsulinemic euglycemic clamp with endogenous glucose production measurement, indirect calorimetry and bioimpedance analysis.

RESULTS – Body weight after 3 months following DD was 93kg (83-104) vs. GI 92kg (85-104) $p < 0.05$, BMI DD 31.3 kg/m² (27.5-35.9) vs. GI 30.7 kg/m² (27-35.3) $p < 0.05$, body fat DD 28% (25.5-43) vs. GI 27% (23-43) $p < 0.05$. The diets did not differ in effects on glycosylated hemoglobin, fasting glucose, lipid profile, insulin sensitivity or hepatic glucose production.

CONCLUSIONS – In comparison with a common diabetic diet, the diet with low GI leads to a slight weight loss, as well as the BMI and body fat reduction. No significant differences regarding glycemic control, lipid profile, insulin sensitivity or endogenous glucose production were observed between the two diets.