Preventing Fasting Plasma Glucose Determines Weight Loss on High-Fat Diets: The PREDIMED Study

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In this re-analysis of the PREDIMED population, we confirmed that fasting plasma glucose is an important biomarker for weight change and weight loss. Subjects with high fasting glucose demonstrated significantly less weight change when consuming high-fat, ad libitum Mediterranean diets compared to a moderate-fat, hypocaloric, low-carbohydrate diet. Therefore, it is possible that the overall weight change originally reported in PREDIMED14 were significantly influenced by subjects with high fasting glucose levels.

In the past several decades, numerous trials have compared various diets for the management of obesity, based on the assumption that a single dietary strategy is appropriate for all. However, emerging evidence suggests that a single dietary strategy may not be appropriate for all individuals. These novel results, along with other analyses of large, international diet studies presented at this congress (73-LS-7B, 75B, 792-P, 201-OR, 202-OR), demonstrate that easily accessible biomarkers such as fasting plasma glucose could be used to identify diet responders and represent a significant step forward in personalized weight management.

REFERENCES