

ABSTRACT

ULYATUNNISA, 2024. The Relationship between total carbohydrate intake and glycemic load with blood glucose levels in type 2 DM sufferers at the Turen Community Health Center, Malang Regency. Undergraduate Study Program in Applied Nutrition and Dietetics, Malang Health Polytechnic. Supervisor: Dr. Etik Sulistyowati, SST., S.Gz., M.Kes and Fifi Luthfiah, SST., M.Kes

Background : Diabetes mellitus or better known as diabetes is a disease that can have detrimental effects and even endanger the patient's safety. The 2018 Riskesdas results show that the prevalence of diabetes mellitus in Indonesia based on doctor's diagnosis at age ≥ 15 years is 2%. This figure shows an increase compared to the 2013 Riskesdas results of 1.5%. However, the prevalence of diabetes mellitus according to blood glucose examination results increased from 6.9% in 2013 to 8.5% in 2018. This figure shows that only around 25% of diabetes sufferers know that they have diabetes. One application of managing type 2 diabetes mellitus is nutritional therapy to monitor and control the patient's blood glucose levels and prevent them from developing complications. Nutritional therapy is an important part of diet management, such as consuming complex carbohydrate sources with a low glycemic index or food glycemic load. Continuous excessive carbohydrate intake will make insulin unable to maintain blood glucose levels within normal limits. Glycemic load provides an overview of the response of blood glucose levels to food, especially the amount and type of certain carbohydrates in the food. The amount of carbohydrates consumed from main meals and snacks can influence the increase in blood glucose levels. Two factors influence the increase in blood glucose levels, namely the amount and type of carbohydrates. In most people, blood glucose levels are more influenced by carbohydrate intake. Glycemic load is used to see the impact of the amount of carbohydrate consumed on increasing blood glucose. Glycemic load (BG) is a description of the response of blood glucose levels to the amount and type of certain carbohydrates in the food consumed and the glycemic index of the food.

Objective : To determine the relationship between total carbohydrate intake and glycemic load with blood glucose levels in outpatients with type 2 diabetes mellitus at the Turen Community Health Center, Malang Regency.

Method : This type of research is observational research. This research design uses a cross sectional design. The sampling method used was purposive sampling. Research data analysis used the Spearman Rank correlation statistical test.

Results : Statistical tests showed that the amount of carbohydrate intake obtained was $p = 0.000$ and the glycemic load was $p = 0.001$

Conclusion : There is a strong relationship between the amount of carbohydrate intake and glycemic load with blood glucose levels in outpatients with type 2 diabetes mellitus at the Turen Community Health Center, Malang Regency.

Keywords : Total Carbohydrate Intake, Glycemic Load, Blood Glucose Levels, Diabetes Mellitus (DM) type 2