

**The Relationship between Macronutrient Intake and Blood Sugar Levels in
Patients with Type 2 Diabetes Mellitus at the Health Center
Pandian of Sumenep Regency**

Ayu Novita Ghazaliana Puspita Putri
Clinical Nutrition Study Program
Department of Health

ABSTRACT

Diabetes Mellitus Type 2 develops when the body still produces insulin but not enough of it, or the insulin produced experiences resistance which causes insulin to not work optimally. In order not to experience prolonged complications it is necessary to control blood glucose levels. Control of blood glucose levels in people with diabetes mellitus is related to meal planning or eating patterns, this is because excess food intake will result in an increase in blood sugar levels. Checking blood sugar levels used is blood sugar at any time without having to fast and pay attention to the last food consumed. The purpose of this study was to analyze the relationship between macronutrient intake and blood glucose levels in patients with diabetes mellitus type 2 at the Pandian Health Center, Sumenep Regency. This study used an observational analytic method with a cross-sectional approach. The subject taking technique used non-probability sampling with quota sampling method and obtained 42 respondents as subjects. The independent variable in this study was intake of macronutrients (energy, protein, fat, carbohydrates) and the dependent variable was random blood sugar levels. The instruments used were a 24-hour food recall form to measure the respondent's food intake and a blood sugar check tool to check blood sugar levels at the time. Statistical analysis using SPSS 22 with the Spearman test. The results of the study obtained $p = 0.000$ for energy, fat and carbohydrate intake. While the results of the analysis of protein intake obtained $p = 0.022$. The conclusion of this study is that there is a relationship between intake of macronutrients energy, protein, fat and carbohydrates on blood sugar levels in patients with diabetes mellitus type 2 at the Pandian Health Center, Sumenep Regency.

Keywords: Diabetes Mellitus Type 2, Macronutrient Intake, Current Blood Sugar Levels