

RELATIONSHIP OF BLOOD GLUCOSE LEVELS TO AMYLASE ENZYME LEVELS IN PEOPLE WITH DIABETES MELLITUS

Mike Permata Sari¹, Anggun Setia Utami²

^{1,2} Institut Kesehatan Hermina, Tjakra Clinic

Article Info	ABSTRACT
Article History: Received 06/05/2026. Revised - Accepted 14/07/2026 Keywords: Diabetes mellitus Blood Glucose Amylase Exocrine Endocrine	<i>Diabetes mellitus is a metabolic disease characterized by an increase in blood sugar levels and abnormality of carbohydrate metabolism due to insulin use, insulin secretion or both. According to the International Diabetes Federation (IDF), by 2021, there are approximately 537 million (10.5%) adults aged 20-79 living with diabetes mellitus worldwide. In patients with diabetes mellitus, there is a decrease in insulin synthesis which causes plasma glucose to rise. As a result, insulin deficiency conditions will trigger progressive hematopoietic cell damage leading to decreased amylase syntheses. The aim of this study is to find out the relationship between blood glucose levels and amylase levels in patients with diabetes mellitus. This research method is quantitative descriptive. The population in this study was 60 people, 30 controlled respondents and 30 case respondents. The study showed low amylase levels in the case group of four and in the control group of eleven. The results statistically showed no difference between blood glucose levels at a time and serum amylase levels ($p=0.208$), and no significant correlation between serum glucosa levels and amylases ($p =0.211$). This is presumed to be due to poor lifestyle patterns of respondents in control groups such as rarely exercising, eating high-calorie foods and smoking. However, descriptively there are differences in the influence of increased blood glucose levels with decreased amylase between the control group and the case. A decrease in amylase in patients with diabetes mellitus was observed at glucose levels > 300 mg/dL.</i> Keywords: Diabetes Mellitus; Blood Glucose; Amylase; Exocrine; Endocrine.
*Corresponding Author: mikepermatasari1411@gmail.com	