

ABSTRACT

GANDA PUTRI MAYTA ARDANA, 2023. *The Effect of Fruit Smoothies with Low Glycemic Index on Blood Glucose Levels on Diabetes Mellitus Patients.*

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Background: Diabetic Mellitus is one of diseases or metabolic problems that caused by failure of the pancreas to produce enough insulin. In Indonesia, its known that Diabetic Mellitus is caused by many factors, one of them is a change in lifestyles that affects on a person's unbalanced dietary habit that can be causing obesity. For Diabetic patients with high fiber-diet, the more consumed foods and meals are from fruits and vegetables. The information from previous studies shows that fruits with low glikemics index like grapes, apples and strawberry having good contents on the blood glucose levels, so further studies can be carried out to find which fruits provides good influences to blood glucose levels in people with Diabetic.

Methods: In this study, the research design used was quasi-eksperimental using a cross sectional approach. The experiment design is to conducted to give different treatments (giving smoothies made from grapes, apples and strawberries) to groups samples. The sample in this study were 13 Diabetic patients who met the criteria. Data were analyzed using ANOVA to find out which smoothies had the highest and lowest effects on blood sugar levels.

Results: There is significant difference in the effect given by smoothies made from grapes, apples and strawberry on blood sugar levels. Patient who consumed grapes-based smoothies tended to have higher blood sugar levels than patients who consumed apples and strawberries smoothies.

Conclusion: the average blood sugar level in the patients before consuming the smoothies was still relatively normal, which was about 215,641 mg/dL in average. The average of blood sugar level of the patients after consuming the smoothies rose and relatively high, which was about 260,872 mg/dL in average. Based on the t-test there is a significant difference before and after giving smoothies. Based on the ANOVA test, there is a significant difference in the effect of the smoothies made from apples, grapes and strawberry on blood sugar levels. Patient who consumed grape-smoothies tended to have higher blood sugar levels than patients who consumed apples and strawberries smoothies.

Keyword: Diabetic, glikemics index, fruits smoothies, sugra-blood levels.