THE EFFECT OF RED DRAGON FRUIT AND LEMON JUICE CONSUMPTION ON HDL LEVELS IN OBESE STUDENTS OF THE HEALTH DEPARTMENT AT POLITEKNIK NEGERI JEMBER

Faisyatil Karmila

Clinical Nutrition Study Program

Department of Health

ABSTRACT

Obesity is a health problem that can increase the risk of metabolic disorders, including dyslipidemia, which is characterized by low levels of High Density Lipoprotein (HDL). One of the non-pharmacological efforts that can be applied is the consumption of functional foods, such as red dragon fruit and lemon, which is rich in flavonoids and antioxidants. This study aimed to determine the effect of red dragon fruit and lemon juice consumption on HDL levels among obese students of the Health Department at Politeknik Negeri Jember. This study used a quasi-experimental design with a pre-test and post-test control group design. The subjects consisted of 26 respondents divided into two groups: a control group and a treatment group, each consisting of 13 participants. The treatment group received red dragon fruit and lemon juice for 21 days, while the control group did not receive any intervention. HDL levels were measured before and after the intervention and analyzed using appropriate statistical tests. The results showed an increase in the average HDL levels in the treatment group from 59.00 mg/dL to 61.30 mg/dL with a significant result ($p<0.05$), while the control group showed no significant change ($p>0.05$). However, the analysis of the difference in HDL level changes between the two groups showed no significant difference ($p=0.359$). In conclusion, the consumption of red dragon fruit and lemon juice for 21 days can increase HDL levels in the treatment group, but it has not shown a significant difference between groups. Further research with a longer intervention duration and better control of dietary intake and physical activity is recommended.

Keywords*: red dragon fruit, lemon, HDL, obesity, flavonoids*