

The Effect of Giving Gembili Flour and Soybean Flour Snack Bars on the LDL/HDL Cholesterol Ratio of Hypercholesterolemic Wistar Rats

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ABSTRACT

Hypercholesterolemia is an abnormality in lipid levels in the body, characterized by blood cholesterol values exceeding normal levels, namely high levels of LDL (Low Density Lipoprotein) and low levels of HDL (High Density Lipoprotein) which are also characteristics of this condition. The LDL/HDL cholesterol ratio is considered a good predictor of cardiovascular disease. This research aims to determine the effect of giving snack bar Gembili flour and soy flour on the LDL/HDL ratio in hypercholesterolemic Wistar rats. This research is research true experiential, using a Pretest-Posttest with Control Group Design approach. The samples were 18 male mice aged 2-3 months which were divided into negative control groups that were given standard food and water, positive controls that were given high-fat food, simvastatin and PTU, and treatment groups that were given high-fat food, simvastatin and snack bar gembili flour and soybean flour. The research was conducted in May-July 2021. The treatment during this research was adaptation for 7 days, induction using high-fat feed for 21 days and intervention using snack bar for 21 days. Analysis of differences in LDL/HDL cholesterol ratio levels before and after testing using the Wilcoxon test. The results of this research show that there is no significant difference between before and after administration snack bar gembili flour and soybean flour on LDL/HDL cholesterol levels of white mice, in the K- group the value was ($p = 0.173$), the K+ group (0.075) and the treatment group the value was ($p = 0.917$). so that the test results for all groups obtained $p > 0.05$, so it can be said that gembili flour and soybean flour snack bars were unable to reduce LDL/HDL cholesterol levels in hypercholesterolemic white mice. This is due to the failure of the induction period to increase cholesterol levels and too little fiber content in gembili flour and soybean flour snack bars.

Keywords: *Gembili Flour and soybean snack bar, LDL/HDL, Hypercholesterolemic Wistar rats*