

***Effect of Giving Tempeh Flour on LDL Cholesterol Levels of  
Hypercholesterolemia White Rats***

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**ABSTRACT**

*Hypercholesterolemia is a condition of abnormal lipids characterized by an increase in total cholesterol and LDL cholesterol. High LDL cholesterol can cause oxidative stress. Efforts that can be made to overcome this is by consuming foods that contain isoflavones, flavonoids, and fiber. The food that contains all three is tempeh flour. The aim of the study was to determine the effect of tempeh flour on LDL cholesterol levels in hypercholesterolemia white rats. This type of research is true-experimental with a pretest-posttest with a control group design. This study used 16 male Wistar rats which were divided into 3 groups. Group (K-) was given standard feed, group (K+) was given a high-fat diet and PTU, and group (P) was given a high-fat diet, PTU, as well as an intervention in the form of tempeh flour 1.8 gram/200 gram rats. LDL cholesterol levels were measured using the CHOD-PAP method and LDL precipitation. Data were analyzed using Kruskal Wallis, Mann Whitney, Paired T-Test, and Wilcoxon. The results showed that there was no difference in LDL cholesterol levels between groups before the intervention ( $p=0.11$ ), there was a difference in LDL cholesterol levels between groups after the intervention ( $p=0.007$ ), there was no difference in LDL cholesterol levels in each group before and after the intervention ( $p>0.05$ ), and there was no difference in LDL cholesterol levels between groups before and after the intervention ( $p=0.117$ ). The conclusion of this study is that there is no effect of giving tempeh flour on LDL cholesterol levels of hypercholesterolemia rats.*

**Key Words:** *hypercholesterolemia, LDL cholesterol, tempeh flour*