

The Effect of Chocolate Drinks on Low-Density Lipoprotein (LDL) Levels of White Rat Wistar Strain Dyslipidemia Model (*The Effect of Chocolate Drinks on Low-Density Lipoprotein (LDL) Levels of White Rat Wistar Strain Dyslipidemia Model*)

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ABSTRACT

Dyslipidemia is an occurrence of abnormality in the lipid profile in the form of increased levels of total cholesterol, LDL, triglycerides, and decreased levels of HDL. Therapy that can be performed in dyslipidemia cases includes pharmacological therapy by administering statin drugs such as simvastatin and non-pharmacological therapy by administering chocolate drinks that are high in antioxidants such as polyphenols and flavonoids to reduce LDL oxidation level. This study aimed to analyze the effect of chocolate drinks on changes in the LDL level in the white rat wistar strain of dyslipidemia model. The type of research used was the True Experimental research design of Pretest-Posttest with Control Group Design. Total samples used included 25 white Wistar strain rats, male, the bodyweight of 150-200 grams, aged 2 - 3 months divided into 5 treatment groups, including control (K+), (K-), (P1) that was given chocolate drinks of 5,3ml/2x/day, (P2) that was given simvastatin suspension of 9ml/kg BW/day, and (P3) that was given chocolate drinks of 5.3ml/2x/day and simvastatin suspension 9ml/kg BW/day for 28 days. Data were analyzed with One Way Anova Test and Paired T-Test. Based on the results of the One-Way ANOVA Test, there was no significant difference in LDL pretest ($p = 0.049$) and there was no significant in LDL posttest ($p = 0,449$). Based on the Paired T-Test, there was no significant differences in pretest-posttest LDL levels in the group of (K+) ($p = 0,931$) and (P3) ($p = 0,270$), but, there were significant differences in pretest-posttest LDL levels in the group of (K-) ($p = 0.01$), (P1) ($p = 0.006$), and (P2) ($p = 0.017$). There was no significant differences between LDL pretest-posttest ($p = 0,070$). The conclusion of this study is that giving chocolate drinks has no effect on reducing LDL levels in white rats.

Keywords: *Dyslipidemia, LDL, Chocolate Drinks, Simvastatin.*