

ABSTRACT

THE EFFECT OF SOYBEAN INTAKE AND MODERATE INTENSITY EXERCISE TOWARD LDL-CHOLESTEROL CONTENT OF WHITE RATS (*Rattus norvegicus*) GALUR WISTAR MALE THAT HAS BEEN HIGH-FAT DIET

By

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Excessive fat consumption can increase infected venous and heart diseases. Blood cholesterol levels that increase can be lowered through a system and good lifestyle, one with moderate intensity exercise and eating soybeans. Moderate intensity exercise more than 1 hour can degrade soybean fat as energy, which contains lecithin to be able to stabilize the LDL-cholesterol are at levels can be tolerated by the body. It needs to be tested in order to obtain clear facts to prove.

This study used an experimental method of *pre and post-test design*. The research subject are 24 Galur Wistar rats, aged 8-12 weeks, weight 200-300 g, were divided into four treatment groups. Group A (moderate intensity exercise and soybean porridge intake), group B (moderate intensity exercise), group C (soybean porridge intake), group D (control). Normality test is used (*Shapiro-Wilk* $p > 0.05$), homogeneity test (Levene's $p > 0.05$), paired t-test and one-way ANOVA test on all treatment and control groups.

From the result showed decreased LDL levels in group A (66.60 ± 3.9 to 60.8 ± 4.91), group B (67.80 ± 3.70 to 64.0 ± 3.53), group C (66.2 ± 3.89 to 63.60 ± 5.17) and group D (63.60 ± 5.17 to 62.60 ± 5.98) in rats fed high-fat diet. Based on these results it can be concluded that the soy bean porridge intake given to test animals is accompanied by moderate intensity exercise is more effective in lowering LDL-cholesterol levels in rats, compared with test animals are given only soybean porridge intake, moderate-intensity exercise and control groups.

Key words: Soybean, Moderate Intensity Exercise, LDL-cholesterol.