

***Effect of Giving a Combination of Oatmeal Drink with Chocolate Powder on Triglyceride Levels of Rats of Wistar Strain (Rattus Novergicus) Diabetes Mellitus***

**Tsamrotun Ainiyah**  
*Clinical Nutrition Study Program*  
*Department of Health*

**ABSTRACT**

*Triglycerides are fatty acids formed from the esterification of three fatty acid molecules into one glycerol molecule. Apart from being an energy reserve, triglycerides play an important role in the body's metabolism. Beta-glucan, a component of soluble fiber found in oatmeal, is believed to be able to be an alternative dietary therapy to lower triglycerides in diabetes mellitus (DM). Factors that cause increased triglycerides include excess sugar consumption, obesity, smoking, alcohol consumption, drug use, genetic disorders, and type 2 diabetes. One of the efforts to lower triglyceride levels is through the consumption of high-fiber foods, such as oatmeal, which has alpha-glucan that can lower cholesterol and triglycerides, thereby reducing the prevalence of cardiovascular disease and hypercholesterolemia. This study aims to determine the effect of giving a combination of oatmeal drink with cocoa powder on triglyceride levels of HFD (High Fat Diet) induced wistar strain rats on DM conditions. The research was conducted in April – June 2024 at the Biomedical Laboratory, Faculty of Dentistry, University of Jember and the Prosenda Laboratory of the New Jember Clinic. The research uses a True Experimental design with a Pre-test–Post-test Control Group Design. The sample was in the form of 30 wistar strain rats weighing 200 – 300 grams, divided into 5 treatment groups: negative control (P-), positive control (P+), P1, P2, and P3 treatments. Data analysis used the Shapiro Wilk test for normality test, One Way Anova for the difference in triglyceride levels between groups, and the Paired T-test for the difference in triglyceride levels pre-test and post-test. The results showed that there was no significant difference in triglyceride levels between groups during the pre-test ( $p=0.947$ ). However, there was a significant difference during the post-test ( $p=0.018$ ). The Paired T-test showed that there was no real difference in the difference in triglyceride levels between groups ( $p=0.211$ ). This study showed that there was no effect of the combination of oatmeal drink with cocoa powder and glimepiride in lowering triglyceride levels in diabetic mellitus rats induced by a high-fat diet.*

**Keywords:** *HFD (High Fat Diet), Triglycerides, Fiber*