CHOLESTEROL LDL WHITE MOUSE (Rattus norvegicus) LEVELS GIVEN Trans FATTY ACIDS FROM MARGARINE, WHITE BUTTER AND WASTE COOKING OIL

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ABSTRACT

Coronary heart disease is one of the main cause of death in the world. Coronary heart disease are caused by several factors, one of them is excessive consumption of trans fatty acids. The high consumption of trans fatty acids will increase cholesterol LDL levels, reduce cholesterol HDL levels and increase triglyceride levels. The purpose of this research is to find out whether trans fatty acids from margarine, white butter and waste cooking oil for 8 weeks can increase cholesterol LDL levels in white male mouse (Rattus norvegicus). This research use twenty male white mouse divided in four groups. Control group (P0) without trans fatty acids, treatment group 1 (P1) given margarine; treatment group 2 (P2) given white butter; treatment group 3 (P3) given waste cooking oil. In the end of research, all of the sample of white male mouse blood are collected to identify cholesterol LDL levels. The result data of cholesterol LDL levels are analyzed by using One way ANOVA showed significant difference (p<0,05) followed by Duncan experiment 0,5%. The result showed that between P0 and P1 was different (p<0,05) but in P0 and P2 group, P0 and P3 group was not different (p>0,05). Based on the result we concluded trans fatty acids from white butter and waste cooking oil can not increase cholesterol LDL blood levels significantly, but trans fatty acids from margarine reduce cholesterol LDL levels of white male mouse blood.

Keyword: trans fatty acids, margarine, white butter, waste cooking oil, cholesterol LDL