

***Effect of High Fructose Corn Syrup on Total Cholesterol Levels of Wistar Rattus Norvegicus  
White Rats***

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**Maulidina Dwi Wardani**  
*Clinical Nutrition Program  
Department of Health*

**ABSTRACT**

*High Fructose Corn Syrup (HFCS) is an alternative food sweetener in the form of liquid sucrose derived from corn. Fructose in the form of High Fructose Corn Syrup (HFCS) has varying levels of fructose, the most commonly used in soft drinks is fructose HFCS-55 with 55% fructose and 45% sucrose. High Fructose Corn Syrup (HFCS) is known to have a sweetness level of 1.8 times higher than that of sucrose, the total calorific value of High Fructose Corn Syrup is 3.9 calories/gram. The content of fructose in fruits ranges from 1.87 to 8.13 g per 100 g of weight. High Fructose Corn Syrup (HFCS) is lipogenic which, if consumed in excess, can cause dyslipidemia, increased cholesterol, triglycerides and can induce insulin resistance. The purpose of this study was to analyze the effect of giving High Fructose Corn Syrup (HFCS) on the total cholesterol levels of Wistar (white rats *Rattus Norvegicus*). This type of research is true-experimental with pretest-posttest with control group design. This study used 27 male wistar (white rats *Rattus norvegicus* 150-250) aged 2-3 months with a body weight of grams. Samples were selected randomly and grouped into 3 groups, namely the control group (K) given standard feed. The treatment group (P1) was given standard feed and intervention with High Fructose Corn Syrup (HFCS) as much as 0.009 ml/day. The treatment group (P2) was given standard feed and intervened with High Fructose Corn Syrup (HFCS) as much as 0.045 ml/day. High Fructose Corn Syrup (HFCS) was administered once daily for 8 weeks. Total cholesterol levels were measured by the CHOD-PAP (Cholesterol oxydase-phenyl aminopyrazolonemethod). Data were analyzed by One Way Anova test and Paired T-test. The results showed that total cholesterol levels after administration of High Fructose Corn Syrup (HFCS) were ( $p = 0.069$ ) and the difference in total cholesterol levels between groups of rats ( $p = 0.062$ ). In conclusion, the administration of High Fructose Corn Syrup (HFCS) at a dose of 1% and 5% had no effect on cholesterol levels in Wistar (white rats *Rattus Norvegicus*).*

**Keywords :** *High Fructose Corn Syrup, Total Cholesterol, Rattus Norvegicus.*