

The Effect of Chocolate Drinks (*Theobroma Cacao L*) on Changes of Abdominal Circumference in Obesity White Rat Wistar Strain

*(The Effect of Chocolate Drinks (*Theobroma Cacao L*) on Waist Circumference of Obesity White Rat Wistar Strain)*

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ABSTRACT

Obesity is a condition with excess adipose tissue which can provide health risks such as diabetes, high blood pressure, heart disease and cancer. The incidence of obesity in Indonesia continues to increase and mostly occurs in adulthood (>18 y.o). The use of Body Mass Index as a parameter for determining obesity will be more accurate if it's balanced with waist circumference measurement. The use of natural products in therapy of obesity is increasingly being investigated, including cocoa (which's rich in flavonoid) by processed it into chocolate drinks. The aim of this experiment is to analyze the effect of chocolate drinks on abdominal circumference in obesity white rat Wistar strain. The type of this experiment is true experimental with pretest-posttest control group design. The sample used is 30 male Wistar rats, which 2-3 months old and weighing 200-300 grams. The samples were divided into negative control group (K-), positive control group (K+) and treatment group (P) that were given 5,3 ml of chocolate drinks/day for 28 days. Statistical tests were carried out with Kruskal Wallis and One Way Anova, also used Paired T-test and Wilcoxon to determine before-after test. The result showed that there was no different in pretest abdominal circumference ($p=0,167$). There was a significant difference in abdominal circumference between the posttest groups ($p=0,004$), namely in the treatment group and the negative control group (K-) ($p=0,002$). There was no difference in pretest-posttest abdominal circumference in each group. There was no difference in the difference in abdominal circumference between groups ($p=0,846$). The conclusion obtained is that giving chocolate drinks helps reduce the abdominal circumference of rats but not significantly.

Keywords: *Obesity, Abdominal Circumference, Chocolate Drinks.*