

ABSTRACT

EFFECT OF FEEDING SOY TEMPE ON FASTING BLOOD GLUCOSE LEVELS IN OBESE *DEUTSCHLAND-DENKEN-YOKEN* (ddY) STRAIN MALE MICE (*MUS MUSCULUS L.*)

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Obesity is a predisposing factor for the onset of elevated blood sugar levels, this is due to the toxic effects of lipid accumulation in body tissues which causes a decrease in insulin sensitivity so that disrupt the use and storage of glucose. Obesity can be avoided by adjusting lifestyle and diet. Food that is associated with a decrease in blood glucose levels is soy tempe. Soy tempe has a high isoflavone content in the form of genistein, glisitein, daidzein and factor-II. Isoflavones improving insulin sensitivity, improve insulin secretion, blocking intestinal glucose absorption and are antioxidants. The aim of this study is to know the effect of feeding soy tempe on fasting blood glucose levels in obese ddY strain male mice. This is true experimental study in *pre-post test with randomized control group design*. This study was preserved for 28 days with 25 samples of ddY strain male mice (*Mus musculus L.*) allotted into 4 groups, normal control group (K1), obese control group (K2), the group feed soy tempe 2 gram/day (KP1) and the group feed soy tempe 4 gram/day (KP2). The results of analysis with paired t-test show significant differences in groups of KP1 ($p = 0.016$) and KP2 ($p = 0.016$). the results of analysis with One Way-Anova test show significant difference in groups of K1 vs K2 ($p = 0.000$), K2 vs KP1 ($p = 0.000$) and K2 vs KP2 ($p = 0.000$). The conclusion of this study is feeding soy tempe gives impact on lowering blood glucose levels in obese ddY strain male mice.

Keywords: Fasting Blood Glucose , Obesity, Soy Tempe