PENURUNAN KADAR GLUKOSA DARAH TIKUS WISTAR JANTAN DIBANDING TIKUS WISTAR BETINA AKIBAT PENGARUH LATIHAN FISIK AEROBIK

(The Decrease Levels of Blood Glucose in Male Wistar Rats Compare With Female Wistar Rats as Effect of Aerobic Exercise)

Abstract

Background. Epidemic of diabetes becomes worldwide spread due to increase number of diabetes mellitus type 2. Physical inactivity, western lifestyle, and urbanization are predisposition factors that lead to higher level of blood glucose. Regular exercise can modulate regulation of blood glucose by increasing uptake of glucose to the muscle, increasing insulin sensitivity and decrease level of body fat. Regulation of blood glucose can decrease risk and delaying diabetes mellitus in higher risk population. The secondary sex characteristic between men and women affect performance in both sexes.

Purpose. This study aims to determine whether there is a difference decrease of blood glucose between male and female wistar rats due to aerobic exercise. Method: Rats were divide in four group, male control group, male treatmen group, female control group, and female treatment group. This research was conduct experimental animal (Wistar rats). In treatment group rats were swam with load 3% of body weight, with duration 80% of maximum exercise capacity, three times a week for 45 days. Result. Treatment group have lower level of blood glucose than in control group in both sexes there is significant (p<0.05) decrease level of blood glucose in treatment group. And there is significant (p<0.05) difference decrease level of blood glucose group and between male and female group of wistar rats. Conclusion. There is difference decrease level of blood glucose in male and female wistar rats due to 45 days regular aerobic exercise.

Key words: Aerobic Excercise, Blood glucose, Sexes