

## THE EFFECT OF INTERMITTENT FASTING OF GLUTATHIONE PEROXIDASE LEVEL OF BALB-C MICE

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### ABSTRACT

**Background :** Increase production of Reactive Oxygen Species (ROS) causes oxidative stress in the body. Intermittent fasting (IF) triggered mild oxidative stress, then body will compensate through increasing antioxidant enzymes level. Glutathione peroxidase (GPx) is one of antioxidant enzymes. **Objective :** The aim of this study is to investigate the effect of IF of GPx levels between the group who treated with IF and control groups.

**Methods :** This experimental randomized control group study designed by posttest control group used. Fifteen male BALB-C mice who are 6 months randomly divided into three groups. AL group had given daily standart dietary and water *ad libitum*. HF group had given daily high fat dietary and water *ad libitum*. IF group had given intermittent fasting regiment with 14 hours fasting (05.00 p.m till 7.00 a.m) every one day interval and given standart dietary and water *ad libitum* when the feast day. The level of GPx is checked by spectrophotometric method. The normality test of the data is checked by Shapiro-Wilk test. The data is checked by a parametric test, One Way ANOVA.

**Results :** The result showed that the data have a normal distribution. Then, we take a parametric test One Way ANOVA. The result showed there are different levels of GPx in mice treated with IF compared with the control group. The mean of GPx level's serum in AL group=43,06 U/l, IF group=55,54 U/l, and HF group=32,26 U/l, *p-value*=0,000 ( $p < 0,05$ ).

**Conclusion :** There is an effect of IF to mean of GPx's level in blood serum. The levels of GPx in IF group is significantly higher than AL group and HF group.

**Keyword:** *intermittent fasting, glutathione peroxide, oxidative stress.*