

## ABSTRACT

### COMPARISON OF THE EFFECTS OF GRANTING EXTRA VIRGIN OLIVE OIL, HONEY AND COMBINATION OF EXTRA VIRGIN OLIVE OIL AND HONEY ON BLOOD LEVELS OF HIGH DENSITY LIPOPROTEIN IN MALE WHITE RATS (*Rattus norvegicus*) *Sprague dawley* STRAIN THAT INDUCED BY HIGH-CHOLESTEROL DIET

By

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Hipercholesterolemia is a condition in which the blood cholesterol is increased beyond the normal threshold which is characterized by increased levels of total cholesterol especially Low Density Lipoprotein (LDL) and followed by a decreased in the levels of High Density Lipoprotein (HDL). Increased blood HDL proved to prevent the occurrence of hipercholesterolemia. One of the hipercholesterolemia prevention is by consuming Extra Virgin Olive Oil (EVOO) and honey that containing flavonoids compounds. Flavonoids proved to increase HDL levels in the blood.

The aim of this research is to know the influence of granting EVOO and honey to the level of blood HDL in male white rats (*Rattus norvegicus*) *Sprague dawley* strain that induced by high-cholesterol diet. This research is experimental research with post test only with control group design, using 25 male white rats that randomly selected and divided into 5 groups. Each group was adapted for 7 days before received the treatment. Group K1 received a standard diet, K2 received 3 ml of cow's brain suspension, K3 received 3 ml of cow's brain suspension and 1.35 ml of honey, K4 received 3 ml of cow's brain suspension and 1 ml of EVOO, K5 received 3 ml of cow's brain suspension and combination of 1.35 ml honey and 1 ml EVOO.

The results obtained average HDL levels K1 ( $27,43 \pm 5,27$ ); K2 ( $19,95 \pm 3,58$ ); K3 ( $26,46 \pm 3,75$ ); K4 ( $23,90 \pm 1,83$ ) K5 ( $30,59 \pm 7,38$ ). The HDL levels of K3, K5, K4 is higher than K2, however post hoc tests didn't get a significant difference levels between K4 and K2.

**Key words:** high-cholesterol diet, HDL, EVOO, honey.