

ANTI-OBESITY EFFECTS OF LAMIACEAE PLANT EXTRACT SUPPLEMENTATION IN DIET-INDUCED OBESE C57BL/6J MICE

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The present study investigated the anti-obesity effects of Lamiaceae plant extract on obesity and metabolic disease in diet-induced obese mice. The C57BL/6J mice (four-week-old males, n=45) were fed a normal diet (ND, 17% fat) and high-fat diet (HFD, 60% fat) for 4 weeks. After inducing obesity, the HFD group were randomly divided into three groups and then fed a HFD (n=15), HFD supplemented with water extract of the Lamiaceae plant (LP, n=10), and HFD supplemented with ethanol extract of the herbaceous perennial plant (EHP, n=10) for 13 weeks. In high fat-fed mice, LP and EHP significantly decreased body weight with an increase in energy expenditure during the day compared to the HFD group. In addition, LP and EHP groups markedly suppressed the liver weight and accumulation of hepatic lipid droplets compared to the HFD group. The levels of plasma total cholesterol and free fatty acid (FFA) were markedly reduced in the EHP group compared to the HFD group. These results suggest that LP and EHP can protect the deleterious effects of diet-induced obesity (DIO) such as body weight gain, hyperlipidemia and hepatic steatosis.

Biography

Eun Jeong Do has been graduated from Department of Food Science and Nutrition, Kyungpook National University as bachelor's degree. Presently she has been being on a master's course from Department of Food Science and Nutrition, Kyungpook National University.

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