

**Effects of 12-week oral supplementation of Ecklonia cava polyphenols on anthropometric and blood lipid parameters in overweight Korean individuals: a double-blind randomized clinical trial.**

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**Abstract**

The effects of 12-week supplementation with a polyphenol extract from *Ecklonia cava* (ECP) on anthropometry, serum biochemistry and hematology have been investigated. Ninety-seven overweight male and female adults (average age  $40.5 \pm 9.2$  yr and body mass index (BMI) of  $26.5 \pm 1.6$  kg/m<sup>2</sup>) were enrolled in a randomized, double-blind, placebo-controlled trial with parallel-group design. Subjects were randomly allocated into three groups designated as PC (placebo), LD (low-dose, 72 mg-ECP/day) and HD (high-dose, 144 mg-ECP/day). Both LD and HD groups showed significant decreases in BMI, body fat ratio, waist circumference, waist/hip ratio, total cholesterol, low-density lipoprotein (LDL) cholesterol, total cholesterol/high-density lipoprotein (HDL) cholesterol and atherogenic index (AI) after 12 weeks, as compared with the placebo group. The HD group also showed a significant increase in serum HDL cholesterol as compared with the placebo group. Only the HD group showed significant decreases in serum glucose and systolic blood pressure after 12 weeks. There was no significant adverse event related with ingestion of ECP, and serum biochemical and hematological parameters were maintained within normal range during the intervention period. In conclusion, these results demonstrated that ECP supplementation significantly contributed to lowering body fat and serum lipid parameters such as total and LDL cholesterol with dose dependence. Further studies using different populations, dosages or biological markers are highly recommended to better understand the physiological features of this polyphenol.