

Effects of Germinated Soy Germ Extract on Obesity

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Obesity is a worldwide public health concern asking for safe dietary strategies. Recent studies suggest that isoflavones from soy or soybeans have beneficial effects on weight loss and reducing fat accumulation. However, the effects of germinated soy germ are not fully investigated, despite the biochemical and nutritional changes during germination. In our study, we aim to evaluate the effects of germinated soy germ extracts (GSGE) on obesity. High-fat diet (HFD) induced obese C57BL/6 were randomly assigned to four groups: (i) HFD: HFD only; (ii) Low: HFD and 1mg/kg of GSGE; (iii) Mid: HFD and 5mg/kg of GSGE; (iv) High: HFD and 20mg/kg of GSGE. The mice received GSGE by intragastric administration for 5 weeks daily and were assessed for body weight, wet fat weight, micro-CT analysis and histological analysis. All the GSGE treated groups showed decrease in average body weight, gonadal fat weight and adipose tissue volume at 5 weeks. In addition, the average size of adipocytes in subcutaneous and visceral adipose tissues was significantly reduced. Moreover, the expression of genes associated with the adipogenesis and lipogenesis was downregulated in GSGE treated groups. These results demonstrate that germinated soy germ extract has potential to promote weight loss and reduce fat accumulation, being a promising dietary strategy for preventing obesity.

Biography:

Eun-ji Choi received the B.S. degree from the College of Veterinary Medicine, Konkuk University, Korea, in 2016. She is currently a Ph.D. course in Department of Veterinary Clinical Pathology, College of Veterinary Medicine, Konkuk University. Her research interests include obesity, osteoporosis, and arthritis and tumor immunotherapy.