

## **Wild ginseng ethanol extract prevents and treats the metabolic syndrome induced by high fat diet in ICR mice**

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The constellation of disturbed carbohydrate metabolism, together with truncal obesity, dyslipidemia and hypertension, is referred to as the "metabolic syndrome." Despite engaging in nutrition therapy and exercise, many people having metabolic syndrome need nutraceutical or medication to prevent cardiovascular diseases. Ginseng root has been used as a tonic remedy and antidiabetic activity has been demonstrated as early as 1920s. Although wild ginseng has anecdotally ascertained to be superior to cultivated ginseng as far as pharmacological properties were concerned, there hasn't been no prior reports on anti-metabolic syndrome effect of wild ginseng. In this study we investigated the anti-metabolic syndrome effects of wild ginseng ethanol extract (WGEE) in preventive and treatment modes. In the preventive experiment, WGEE coadministered with high fat diet significantly inhibited the body weight gain, fasting blood glucose, high blood pressure, triglyceride and free fatty acid levels in dose dependent fashion. WGEE-treated mice at dose of 250 and 500 mg/kg improved the insulin resistance index by 55% and 61% compared to the high fat diet control, respectively. In the treatment mode experiment, WGEE also significantly reduced the body weight by 14% and fasting blood glucose levels by 23% compared to the control mice. Taken together, WGEE has a potential as a preventive and treatable agent for metabolic syndrome and deserves clinical trial in near future.

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