

Improving oxidative stress and inflammation status of obese women with metabolic syndrome using phenolic-rich red kidney bean sprout milk yogurt

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Abstract	<p>Oxidative stress and inflammation are involved in the pathogenesis of metabolic syndrome (MetS). Antioxidant-rich food products are known for improving the oxidative stress and inflammation as well as inhibiting the development of metabolic syndrome. The present work thus aimed to determine the effects of phenolic-rich red kidney bean sprout milk yogurt (RKBSMY) on superoxide dismutase (SOD) activity, TNF-alpha level, and body mass index (BMI) of women with MetS. Thirty obese women with MetS, low SOD activity, and high TNF-alpha level served as research subjects. The 2-month intervention using red kidney bean sprout milk yogurt (RKBSMY) with 2% lactic acid bacterial starter, 10% sucrose, and 24-h fermentation was conducted to women with MetS. Results showed that RKBSMY increased the SOD activity from 5.13 to 8.02 ng/mL ($p = 0.047$), decreased the plasma TNF-alpha level from 60.89 to 39.77 pg/mL ($p < 0.05$), and decreased the BMI from 28.04 to 24.38 kg/m². Therefore RKBSMY could be beneficial for people with degenerative diseases associated with oxidative stress. (c) All Rights Reserved</p>
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