

Effects of Soy-Germ Protein on Catalase Activity of Plasma and Erythrocyte of Metabolic Syndrome Women

Title	Effects of Soy-Germ Protein on Catalase Activity of Plasma and Erythrocyte of Metabolic Syndrome Women
Author Order	1 of 4
Accreditation	
Abstract	<p>Oxidative stress always accompany patients with metabolic syndrome (MS). Several researchers reported that soy-protein is able to decrease oxidative stress level. However, there is no report so far about soy-germ protein in relation to its potential to the decrease oxidative stress level of MS patients. The aim of this study was to explore the potential of soy-germ protein on activity of catalase enzyme in blood's plasma as well as erythrocytes of MS patients. Double-blind randomized clinical trial was used as an experimental study. Thirty respondents were included in this study with MS, normal level blood sugar, low-HDL cholesterol but high in triglyceride, 40-65 years old, Body Mass Index > 25 kg/m², live in Purwokerto and agreed to sign the informed consent. They were randomly grouped into 3 different groups, 10 each: Group I, was given special milk that contains soy-germ protein and Zn; Group II, soy-germ protein, while Group III was placebo; for two consecutive months. Data were taken from blood samples in 3 different periods i.e. 0, 1, and 2 months after treatment. Two months after treatment, there was an increase from 5.36 to 20.17 IU/mg (P = 0.028) in activity of catalase enzyme in blood's plasma respondents who consumed milk containing soy-germ protein with or without Zn. A similar trend of catalase activity, but at a lower level, was also noticed in erythrocyte; which increased from 88.31 to 201.11 IU/mg (P = 0.013). The increase in activity of catalase enzyme in blood's plasma was 2.2 times higher than that in erythrocytes.</p>
Publisher Name	Bogor Agricultural University, Indonesia
Publish Date	2015-01-02
Publish Year	2015
Doi	DOI: 10.4308/hjb.22.1.1
Citation	1
Source	HAYATI Journal of Biosciences
Source Issue	Vol. 22 No. 1 (2015): January 2015
Source Page	1
Url	http://journal.ipb.ac.id/index.php/hayati/article/view/9382/7345
Author	Dr Ir HERY WINARSI, M.S