

Effect of Dose and Duration of Stir-Fried Gude Beans Tempe (*Cajanus cajan*) to Fasting Blood Glucose Levels in Type 2 Diabetes Patients

Budiyanti Wiboworini^{1*}, Siti Utami Sulasty² and Sugiarto¹

¹Universitas Sebelas Maret, Surakarta, Indonesia

²Nutrition Department of West Nusa Tenggara General Hospital, Indonesia.

Published September 22, 2020

ABSTRACT

Background: Diet in diabetes patients is an obligatory therapy to control blood glucose level. Dietary intake of high fiber and antioxidant affects the decline of blood glucose in diabetic. Gude bean tempe (*Cajanus cajan*) is one of the functional food that is high in fiber and antioxidant. This study aimed to analyze the effect of stir-fried gude bean tempe intake toward blood glucose level in type 2 Diabetes patients.

Method: This was a Randomized Control Trial (RCT) with pre-posttest control group design. Subjects were 39 type 2- diabetes patients, aged 30-69 years; divided randomly into 3 groups: 13 patients as control group, 12 patients in group P1 which got 50 g of stir-fried gude beans tempe intake, and 14 patients in group P2 which got 75 g of stir-fried gude beans tempe intake. Fasting blood glucose was observed in the first, 7th and 14th day of treatment. Data were analyzed using one-way anova (ANOVA) continued with Post Hoc LSD.

Result: Stir-fried gude beans tempe intake as much as 75 g on P2 proved to be lowering fasting blood glucose levels of patient type 2 Diabetes on day 7 and day 14 ($-50,64 \pm 31,94$ g/dL; $p = 0,003$ and $94,93 \pm 46,35$ mg/dL; $p < 0.001$), while the dose 50 g did not give the effect of decrease in fasting blood glucose ($p > 0.005$). Dosing 50 g for 7 days or 14 days does not show any difference compared with the control.

Conclusion: Giving 75 g of stir-fried gude beans tempe minimum of 7 days could decrease the fasting blood glucose level in type 2 diabetes patients.

Keywords: Gude beans, *Cajanus cajan*, Fasting blood glucose

Corresponding author: Budiyanti Wiboworini, Postgraduate Program of Nutrition Sciences, Universitas Sebelas Maret, Surakarta, Indonesia, E-mail: budiyanti_w@staff.uns.ac.id

Citation: Wiboworini B, Sulasty SU & Sugiarto. (2020) Effect of Dose and Duration of Stir-Fried Gude Beans Tempe (*Cajanus cajan*) to Fasting Blood Glucose Levels in Type 2 Diabetes Patients. Food Nutr Current Res, 3(S1): 2.

Copyright: ©2020 Wiboworini B, Sulasty SU & Sugiarto. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited