Effect of daily supplementation of yoghurt enriched with lactobacillus acidophilus on lipid profile among hypercholesterolemic Indonesian adult males

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Abstrak

Probiotics, product containing viable, defined and sufficient microorganisms that beneficially alfects the host, has shown cholesterol-lowering effect in in vitro, animal and human studies. However, studies in human showed inconclusive findings.

A randomized double-blind two-way cross-over study was conducted to investigate whether daily supplementation of yoghurt enriched with Lactobacillus acidophilus improves lipid profile in hypercholesterolemic Indonesian adult males. Each period of treatment was 4 wk, separated by a 2 wk washout period. During both treatment periods, subjects consumed daily either yoghurt enriched with Lacidophilus FNCCI I6 (test yoghurt) or traditional yoghurt (control yoghurt).

By the end of the first period, serum total cholesterol concentration of subjects in test group was significantly lower (p<0.05) compared to those in control group (21 0.4 kurang lebih 8.3 vs 226.8 kurang lebih 4.5 mg/dL); and the concentration in both groups was significantly lower compared to baseline. The reduction, however, was not significantly different between groups (-6.0 kurang lebih 2.0 vs -5.9 kurang lebih 2.1 %). There were no significant differences between groups on other lipid profile variables i.e serum LDL-C, HDL-C, tryglicerides, and LDL/HDL ratio, after supplementation. No significant differences on all lipid profile variables between groups were observed after supplementation at the second treatment period and when the treatment period was combined. However, there was a tendency that test group had better lipid profile, except for triglycerides, than control group (p<0.05 for LDL/HDL ratio; p=0.053 for LDL-C).

This cross-over study showed that daily supplementation of yoghurt enriched with Lacidophilus FNCCI 16 showed hypocholesterolemic effect only at the first period, but not at the second and the combined periods.