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CONSORTIUM

Conference Abstract

HYPOCHOLESTEROLEMIC EFFECT OF DESIGNER YOGURTS FORTIFIED WITH OMEGA FATTY ACIDS AND DIETARY FIBRES IN HYPERCHOLESTEROLEMIC SUBJECTS

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Abstract

Background: The saturated fatty acids of dairy products have negative impact on plasma cholesterol and limited the consumption and benefits of these products for human. The aim of this study was to evaluate the effect of designer yogurts with improved health lipid indexes through double fortification with omega fatty acids and fibres of extruded flaxseed powder (EFSP) in hypercholesterolemic subjects.

Methods: A cohort study of 90 days was designed to explore the effect of yogurts on hypercholesterolemia. The hypercholesterolemic subjects were randomly divided in group 1 and group 2 and blood samples and blood pressure were taken at 0 day (baseline). Group 1 was offered plain sheep yogurt and group 2 cow milk yogurt for 30 days (intervention). At the end 30th day, blood samples and blood pressure were taken. Participants were allowed to eat routine diet for further 30 days (wash-out period). After wash-out periods, the blood samples and blood pressure were taken (baseline) and EFSP fortified sheep and cow milk yogurts were offered to group 1 and 2, respectively, for next 30 days (intervention). At the end, blood samples and blood pressure were recorded. Descriptive statistics was used to compare the influence of yogurts intake on hyperlipidemia

Results: Significant increase in serum TC (6.33±0.48 to 6.51±0.04) and LDL-C (5.17±0.28 to 5.37±0.47) was observed in participants consumed plain sheep milk yoghurt for 30 days and non-significant change was observed for HDL-C and TG. After washout period of 30 days, no significant change was observed in any cholesterol or TG. Significant decrease in TC (6.47±0.95 to 6.28±0.84) and LDL-C (5.35±0.29 to 5.13±0.44) was observed while TG and HDL-C did not change significantly in group 1 consuming EFSP fortified yogurt for 30 days. Non-significant change was observed for serum TC, HDL-C, LDL-C and TG in group 2 consuming plain cow milk yogurt. After washout period, significant decrease in serum TC (6.38±1.01 to 6.20±0.98), HDL-C (1.10±0.21 to 1.27±0.46) and LDL-C (5.30±1.16 to

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4.98±0.99) was noticed while TG level did not change significantly in group 2 consuming EFSP fortified cow milk yogurt. The intake of fortified yogurts reduced pressure significantly blood pressure in both groups.

Conclusions: The results show that regular dietary intake of yogurt double fortified with omega fatty acids and fibres can help to reduce the cholesterol and elevated blood pressure in hypercholesterolemic subjects

Key words: Milk yogurt, omega fatty acids, dietary fibres, flaxseed, fortification, hypercholesterolemia