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FORTIFIED MILK WITH VITAMIN D AS A COST-EFFECTIVE FOOD TO PREVENT DIABETES: A RANDOMIZED DOUBLE-BLIND CLINICAL TRIAL

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Background and Aim: Vitamin D has a role in both insulin secretion and insulin sensitivity, and thus could be important in the pathogenesis of diabetes. The aim of this study was to compare the effect of milk fortified with vitamin D and oral vitamin D supplement on glycemic and anthropometric indices in pre-diabetic individuals.

Methods: This study was conducted on 150 subjects with pre-diabetes in three groups: those given fortified yogurt with vitamin D, those given plain milk and those given oral vitamin D supplements. The study variables were evaluated at the beginning and end of the intervention period.

Results: Results from the participants' oral glucose tolerance tests (OGTT) decreased significantly in only the fortified-milk group. The mean fasting serum insulin and the insulin-resistance index (HOMA-IR) in the fortified-milk (p < .01) and oral-supplement (p < .03, p < .04) groups decreased significantly. Waist-to-hip ratio (WHR) and percentage of body fat (PBF) decreased significantly in the fortified-milk (p < .02, p < .006) and oral-supplement (p = .015, p < .001) groups

Conclusion: These findings show that mlik fortified with vitamin D improves glycemic and anthropometric indices in pre-diabetic individuals

Keywords: vitamin D, fortification, milk, diabetes