

Effects of milk consumption on body weight, body mass index, and HDL-cholesterol in Korean adults

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Introduction

The components of milk including calcium, whey protein, short-chain fatty acid, and conjugated linoleic acid are potentially suggested to lower blood triacylglyceride, facilitate lipolysis, and prevent lipid accumulation. However, the associations between milk and obesity are still controversial and unidentified in Korean adults.

Aim

This study aimed to investigate the changes of parameters related to obesity after milk consumption.

Methods

Ninety six adults (19~65y aged, \geq body mass index 23 kg/m²) were divided into two groups and both groups were restricted 500 kcal than their usual diet. A milk group was provided 2 cups of whole cow's milk (400ml) per day for 8 weeks whereas total calorie intake of a control group was restricted as much as milk calorie. Anthropometric and blood parameters were measured and a 112-items semi-food frequency questionnaire was applied at baseline and after intervention. During the intervention period, participants of both groups were provided nutritional education for dietary record. Furthermore, the dietary and milk intake of participants were monitored by trained nutritionists.

Results

Only the milk group showed significant decreases of body weight (0.8kg, $p < 0.01$) and BMI (0.28 kg/m², $p < 0.01$) compared to the control group. However, percentage of body fat was decreased in the milk group, but was even increased in the control group. The calorie intake was not different between the milk and control groups. Calcium intake was significantly increased in the milk group ($p < 0.001$). The concentration of HDL-cholesterol in the milk group was significantly elevated (3.48 mg/dl, $p < 0.01$) whereas the concentration of the control was significantly reduced (0.29 mg/dl, $p < 0.05$). TG level was reduced in the milk group, but was increased in the control.

Conclusion

The present results indicate that milk consumption for 8 weeks may have a favorable effect on weight loss and HDL-cholesterol in overweight or obese Korean adults.