Milk consumption is associated with decreased insulin resistance in obese children and adolescents

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Background & Aims: It has been postulated that higher dairy consumption reduces the risk of many chronic diseases, especially obesity and metabolic syndrome. The aim of this study was to determine the association between the frequency of milk consumption and insulin resistance (IR) in obese children and adolescents.

Method: A cross-sectional study was conducted among 136 obese subjects aged 6-17 years. Milk consumption was assessed using a food frequency questionnaire. Total energy was measured using three day diet records and physical activity was evaluated for last week. Fasting concentrations of insulin and glucose were determined and a value of homeostatic model assessment of IR was calculated using these parameters. Binary logistic regression models was used to estimate multivariable odds ratios (ORs) and 95% CIs comparing different frequency of milk consumption with adjustment for potential confounding variables.

Results: The mean age and body mass index of the participants (55 males) were 11.5±2.8 years and 27.6±4.3 kg/m², respectively. Also, the mean daily energy intake was 2102±627 kcal among obese children and adolescents. After adjustment for age, sex, daily energy intake and physical activity level, the multivariable ORs comparing highest with lowest intake categories were 0.404 (0.181-0.903) (0.027) for milk consumption.

Conclusion: The results suggest that frequent consumption of milk (more than five a week) may be associated with lower IR among obese children and adolescents.

Biography
Zeynep Caferoglu has completed her MSc from Erciyes University and has been continuing PhD education at Hacettepe University. She is a Research Assistant at Erciyes University. She has published several papers related to nutrition and dietetics in journals.

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