

MILK AND DAIRY FOOD CONSUMPTION IS ASSOCIATED WITH REDUCED PREVALENCE OF THE METABOLIC SYNDROME

This large prospective study evaluated the relationship between milk and dairy product consumption and the metabolic syndrome in more than 2,300 middle-aged men (45-59 years) enrolled in the Caerphilly Cohort Study in the UK. Men were judged to have the metabolic syndrome if they had two or more of the following risk factors: 1) plasma insulin or glucose concentration in the 90th percentile or higher (≥ 163 mmol/L and > 6.3 mmol/L, respectively); 2) body mass index (BMI) in the 90th percentile or higher (≥ 30 kg/m²); HDL-cholesterol or plasma triglycerides in the 90th percentile or higher (< 0.92 mmol/L and ≥ 3.25 mmol/L, respectively); and blood pressure in the 90th percentile or higher (≥ 166 mmHg/ ≥ 104 mmHg). Consumption of milk and dairy products was assessed using a food frequency questionnaire and by a 7-day weighed intake record kept by a subsample of the men. Results showed that about 15% of these men had the metabolic syndrome as specified by these criteria. Men with the metabolic syndrome had a significantly increased risk of subsequent heart disease, death, and diabetes compared to those without the metabolic syndrome after the 20 year follow-up.

There was a marked significant negative relationship between milk consumption and the metabolic syndrome. For example, men who drank one pint of milk or more per day had a 62% lower risk of having the metabolic syndrome at baseline than those who stated they drank little or no milk. Similarly, among the men who kept the 7-day weighed food record, those with the highest milk intake had a 57% lower risk of the metabolic syndrome at baseline than those with the lowest milk intake. In addition, the risk of having the metabolic syndrome decreased with increased consumption of other dairy foods, not just milk. For example, men in the highest quarter of dairy food (milk, yogurt, and cheese) intake had a 60% lower risk of having the metabolic syndrome at baseline than those with the lowest dairy food intake. In men who kept 7-day weighed intake diet records, there was no relationship, however, between milk intake and the incidence of diabetes.

The authors note that a number of previous studies have shown a similar negative association between milk consumption and the metabolic syndrome. They say, "This paper adds to the evidence that milk and dairy products fit well into a healthy eating pattern and that their consumption should be promoted." [Elwood PC, Pickering JE, and Fehily AM, *J Epidemiol Community Health*, 61: 695-698, 2007]

Another study among 20 overweight and/or obese patients with the metabolic syndrome found that a carbohydrate-restricted diet relatively high in mono-unsaturated fatty acids and protein was effective in reducing body weight, total body fatness, blood pressure, and waist circumference. [Jayes MR, et al., *J Nutr*, 137: 1944-1950, 2007]