Association between Dairy Food Consumption and Weight Change over 9 Y in 19352 Perimenopausal Women


**OBJECTIVE**
To investigate the association between changes in dairy product consumption and changes in body weight over nine years in perimenopausal women.

**STUDY DETAILS**
– This is a prospective, cohort study of 19352 perimenopausal or early postmenopausal women, aged 40 to 55 years at baseline from the Swedish Mammography Cohort
– Data were collected via a six-page questionnaire on dietary intake, body weight, height, age, education and parity from 1987 to 1990 and again in 1997
– Dietary intake was measured in 1987 via a 67-item food-frequency questionnaire and again in 1997 via a 96-item questionnaire. Frequencies of intake of whole milk and sour milk (3% fat), medium-fat milk (1.5% fat), low-fat milk and sour milk (≤ 0.05% fat), cheese and butter (80% fat) were calculated at baseline and at follow-up
– The women were categorized into one of four groups according to their dairy intake:
  • constant, <1 serving/day at baseline and follow-up
  • increased from <1 serving/day at baseline to ≥1 serving/day at follow-up
  • constant, ≥1 serving/day at both baseline and follow-up
  • decreased from ≥1 serving/day at baseline to <1 serving/day at follow-up
– Participants reported their body weight to the nearest 0.1 kg at baseline and follow-up, and were categorized into two groups according to mean weight change of <1 or ≥1 kg/year
– Other variables were measured via questionnaire both at baseline and follow-up; physical activity was measured as time spent walking/bicycling and exercising and the time was summed and categorized into tertiles

- For each type of dairy product, the associations between the change in intake and a mean weight gain of ≥1 kg/year during follow-up were calculated as age-adjusted odds ratios (OR) with the use of logistic regression analyses, with the group with constant low intake as the reference
- Exclusion criteria: women whose weight or height were missing at baseline or follow-up; women who had suffered from cancer, cardiovascular disease or diabetes before 1997; women whose mean change in body mass index (BMI) between baseline and follow-up was >2/year (n=12)

**KEY FINDING**
The association between dairy-product consumption and weight change differed according to product type and to body weight status at baseline.

There was no association between low-fat dairy intake and weight gain.

There was an inverse association between the intake of whole milk and sour milk and weight gain.

**RESULTS**
– The mean (± standard deviation) age at baseline was 46.3 ± 4.5 years and the mean BMI was 23.7 ± 3.5 kg/m²
– Most of the women consumed <1 serving/day of each type of dairy product (except for cheese: 74% of the women consumed ≥1 serving/day)
– BMI was significantly higher in subjects with lower intakes of whole and sour milk, cheese and butter compared to those with higher intakes
– BMI was significantly lower in subjects with lower intakes of low-fat milk and sour milk
– The mean weight gain in the whole cohort was 0.33 ± 0.63 kg/year
Women with a constant intake of ≥1 serving/day of whole milk, sour milk and cheese during the follow-up period had a statistically significant lower risk of gaining ≥1 kg/year than did women with a constant lower intake of these products.

- Trends indicated that women who increased their intake had a lower risk of gaining ≥1 kg/year than did women with a constant low intake and that women who decreased their intake had a higher risk of gaining ≥1 kg/year than did women with a constant high intake.

- No clear trends were observed for medium-fat milk, nor were statistically significant associations observed for low-fat milk and butter.

- When separate analyses were done to determine the impact of body weight, it was found that a constant intake of ≥1 serving/day of whole milk and sour milk was associated with a lower risk of gaining ≥1 kg/year in the normal-weight women only; no statistically significant results were seen for medium-fat milk, low-fat milk, or butter for either overweight or normal-weight women.