

Berkey CS, Rockett HRH, Willett WC, Colditz GA. Milk, dairy fat, dietary calcium, and weight gain: a longitudinal study of adolescents. *Arch Pediatr Adol Med.* 2005; 159(6): 543-50.

Researchers looked at the associations between weight change and milk, calcium from food, beverages, and dairy fat. This is a longitudinal study, a study done over a number of years with the same people, consisting of 12,829 U.S. children ranging in age from nine to 14 years old. Height, weight, and a food frequency questionnaire (FFQ) were reported annually. Body Mass Index's (BMI) were assessed with the height and weight given, and they were divided into different groups at the baseline, or beginning. FFQ were used to assess total dietary calcium, dairy fat, vegetable fat, other fat, and energy. Physical activity, inactivity, race/ethnicity, stage of puberty, and age were also collected and used to weed out factors that would show another association. It was found through longitudinal statistical analyses that children who consumed more milk tended to gain more weight, that larger weight gains were seen in children that drank more 1% and skim than those who drank smaller amounts, and that dietary calcium had more of an effect on weight gain than did the dairy fat. Boys who consumed more than 3 servings of milk per day had a larger BMI than boys who ate more than 1 serving but less than or equal to 2 servings. Also, girls who consumed more than 3 servings of milk a day had larger BMI's than those that consumed half a glass or less each day.

This study has a well written hypothesis, but there are many different variables that affect weight. The large numbers and longitudinal aspects of this study were well designed, but can't be completely controlled. Controls are very hard to maintain in a longitudinal study where information is sent in from the participants.

Studies about the effect of dietary calcium on weight have been presented by others, but no studies have given the same conclusion. This study's results did not agree with the hypothesis given that it would help with weight loss. In fact, it did the opposite. Weight gain and an increase in BMI was the result for most participants. This weight gain and change in BMI could be due to many different aspects that are not addressed in this particular study such as: genetics, total fat intake, and excess calories.