

Concurrent Session 2: Obesity

Breakfast - helping to solve the obesity problem

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Background – The prevalence of obesity and diabetes have been increasing at a rapid rate over the last 20 years. Furthermore, coronary heart disease is still the leading cause of death in Australia despite declines in mortality. The reasons for these changes still remain relatively unclear and to date there is limited information to help clarify this. Furthermore, longitudinal data on predictors of obesity change are scarce. The Sydney Adventist Hospital, situated in a high socioeconomic area in North Sydney has a unique 30 year data set on biomedical, lifestyle and dietary factors related to heart health. To our knowledge no other data set in Australia contains such extensive information in such a long time series that is relevant to non communicable disease.

Objective – To examine the relationship between food consumption and BMI. In particular, as breakfast has often been claimed to be of influence on biomedical indices, this paper aims to investigate its possible influence on obesity (and serum cholesterol).

Design – 300 to 725 self-reported questionnaires from the Sydney Adventist Hospital, detailing demographic, lifestyle and dietary habits, were randomly selected for the years 1976, 1986 and 2005. Analyses included simple descriptive statistics, reliability analysis, univariate analysis of variance and linear regression analysis.

Outcomes – The relative size of breakfast consumed was found to be very important in the maintenance of body weight for men ($R^2=6.1\%$, $P < 0.001$, 1976; $R^2=5.6\%$, $P=0.001$, 1986; $R^2=4.9\%$, $P=0.044$, 2005) but not for women ($P = 0.869$, 1976; $P = 0.772$, 1986; $P = 0.669$, 2005) for all three years. However, the addition of vegetarianism and physical activity to the regression model did not substantially attenuate the main association of breakfast and BMI. In addition, relative breakfast size was inversely related to serum cholesterol in women ($R^2=3.7\%$, $P = 0.008$, 1976) but not men.

Conclusions – These findings suggest that breakfast consumption may help to control overweight and obesity but may also have broader implications for health that extend beyond body weight. Similar associations are also likely to be found with cholesterol and other biomedical factors in subsequent years.