People of higher socioeconomic status choose better diets -- but pay more per calorie

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As people become more educated, studies have demonstrated that they tend to choose foods that are lower in calories but higher in nutrients. They also pay more. In a study published in the May 2009 issue of the *Journal of the American Dietetic Association*, researchers from the University of Washington compared the eating habits and food costs of a sample of 164 adults in the Seattle, Washington area.

The energy density of the diet (i.e. available energy per unit weight) is one indicator of diet quality. Lean meats, fish, low-fat dairy products and fresh vegetables and fruit provide fewer calories per unit weight than do fast foods, sweets, candy and desserts. Energy dense foods provide more calories per unit weight but tend to be nutrient-poor.

Diets of low energy density and high nutrient content have been associated with less weight gain and with lower rates of obesity, type 2 diabetes, cardiovascular disease and some forms of cancer. In contrast, energy-dense diets have been linked to higher obesity rates and higher disease risk. Improving diet quality by lowering its energy density is standard advice for weight control, cancer prevention and better health.

The 164 participants (103 women and 61 men) recorded their usual frequency of consumption of 152 foods and 22 beverages and indicated portion size. They also provided four-day dietary records and completed demographic and behavioral questionnaires.

For both men and women, higher dietary energy density was associated

with higher intakes of total fat and saturated fat and with lower intakes of dietary fiber, potassium and vitamins A and C. Daily diet cost ($/day) was slightly higher for men ($6.72/day) than women ($6.21/day), reflecting the fact that men ate more than women. However, the difference reversed after adjusting for energy. For each 2,000 kcal of dietary energy, men spent $7.43 compared to $8.12 spent by women. Diets that were more costly in terms of $/2000 kcal were also lower in energy density and contained higher levels of nutrients.

Higher quality diets were not only more costly per 2000 kcal but were associated with higher household incomes and education of study participants. Education, rather than incomes was the dominant factor. More highly educated respondents reported higher quality and therefore more costly diets, independent of household income level.

Writing in the article, Pablo Monsivais, PhD MPH, and Adam Drewnowski, PhD, both of the University of Washington, Seattle, conclude, "The finding that higher-quality diets were consumed by women of higher (socioeconomic status) and more costly per 2000 kcal has implications for epidemiologic studies of diet and chronic disease. Nutritional epidemiology has historically been based on the premise that nutrient exposures are directly linked to health outcomes. However, nutritional status is also intimately linked to socioeconomic status, and the findings reported here raise the possibility that the higher monetary cost of nutritious diets may provide one explanation for these observations. Future studies, based on more representative samples, will be needed to elucidate the connections between diet quality and diet cost across socioeconomic strata."

More information: The article is "Lower-energy-density diets are associated with higher monetary costs per kilocalorie and are consumed by women of higher socioeconomic status" by Pablo Monsivais, PhD MPH, and Adam Drewnowski, PhD. It appears in the Journal of the

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