

The problem with using self-report data in nutrition research re: sodium intake and pizza consumption

By ACSH Staff — January 20, 2015



Can you remember what you ate yesterday? Last week? Last

month? The answer is probably not, and that's one of the major issues with nutrition research: a lot of studies rely on what is known as the Food Frequency Questionnaire, the most commonly used dietary assessment tool in which participants report the foods they ate over a defined period of time and how often they consumed them. Two new studies one examining salt intake among older adults and the other examining pizza consumption among children used this measure to make conclusions about health outcomes.

As [we have discussed in the past](#) ^[1], too much of a restriction on sodium intake can have detrimental consequences, and there is a lack of evidence of the benefit of reducing sodium intake among whole populations. A [new study published](#) ^[2] in *JAMA Internal Medicine* confirms this view. The researchers, led by Dr. Andreas P. Kalogeropoulos of Emory University, assessed salt intake among about 2600 older adults ages 71 to 80 using 10-year follow-up data. Dietary sodium intake was assessed using a food frequency questionnaire at the beginning of the 10-year period. The researchers found that sodium intake was not associated with mortality or the development of cardiovascular disease or health failure at the levels assessed (less than 1500 mg/day, 1500-2300 mg/d and greater than 2300 mg/d).

The Dietary Guidelines for Americans 2010 recommend that adults over the age of 50 should consume less than 1500 mg/d of sodium, a target which is very difficult to achieve. This study adds to the growing collection of literature illustrating that there is no benefit to this low level of sodium intake. Although this study did have several limitations it was based on self-report data, the population of older adults included in the study were generally healthy the conclusions indicate that there is no evidence to support a low-sodium diet for the general population. Study authors conclude that there is a need for stronger evidence, preferably from rigorous controlled trials testing additional thresholds for sodium intake, before applying a policy of further sodium restriction to older adults beyond the current recommendation for the general adult population (2,300 mg/d).

The [second study](#) ^[3] relying on food frequency questionnaires was intended to examine the role of

pizza and kids health. Researchers led by Dr. Lisa M. Powell, a professor of health policy and administration at the Institute for Health Research and Policy at the University of Illinois examined data over a four-year period from children and adolescents ages two to 19 who were part of the National Health and Nutrition Examination Survey. Researchers conducted two dietary recall interviews with participants children under six had proxy respondents and children between the ages of six and eleven had proxy-assisted interviews. In total, researchers recorded data from about 6000 children and almost 6000 adolescents.

Researchers found that on days when participants consumed pizza as a snack, children and adolescents consumed about 200 and 365 calories more respectively than on days when pizza was not consumed as snack. However, overall, the researchers found a decline in total energy intake from pizza over the four-year period. And calorie intake from pizza consumed at fast food restaurants was also down over the study period.

Study authors then used this data to conclude: These observations emphasize that pizza, like sugary drinks, may be a significant contributor to excess caloric intake and obesity and should become a target for counseling for the prevention and treatment of obesity in pediatric practice. They also urge pediatricians to encourage restaurants to change the nutrient content of their pizza as a way to combat childhood obesity.

ACSH's Ariel Savransky had this to say, Besides the inherent problems associated with using self-report data to assess diet made worse by the need here for taking children's portions into account there is no way that the study authors could correctly estimate the calories in pizza from different venues. Unless the restaurant is reporting calories and even then those numbers are sometimes inaccurate it's going to be hard to estimate how many calories are in one slice of pizza compared to another. And then of course, there's the issue of how to measure, or even reliably estimate, the size of the slice.

She goes on, This is starting to sound like the [case against sugary beverages](#) [4]. The bottom line is that doctors and other healthcare providers should be teaching children and adolescents, as well as their parents, about consuming a balanced diet and exercising as opposed to counseling them to give up pizza or soda.

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[1] <http://acsh.org/2014/04/regulating-salt-content-consumer-products/>

[2] <http://archinte.jamanetwork.com/article.aspx?articleid=2091399>

[3] <http://www.medpagetoday.com/Pediatrics/Obesity/49600>

[4] <http://acsh.org/2014/06/bloombergs-soda-ban-gets-third-bite-big-apple-states-highest-court/>