Strong Evidence Links Soft Drink Consumption To Obesity And Diabetes

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The case against swigging soda just got stronger. A large systematic review reveals clear associations between consumption of non-diet soft drinks and increased calorie intake and body weight.

Full-calorie soft drinks are also linked with reduced intake of milk and fruit and increased risk of type 2 diabetes. Recommendations to reduce population soft drink consumption are strongly supported by the available science, concludes the review of 88 studies.

The American Beverage Association, however, presents a different view on its Web site. It is not feasible to blame any one food product or beverage as being a sole contributor to obesity ¦. No science supports such a claim.

Carbonated soft drinks are the single largest source of calories in the American diet, according to a 2005 report called Liquid Candy, produced by the nonprofit Center for Science in the Public Interest (CSPI). Companies annually manufacture enough soda pop to provide more than 52 gallons to every man, woman and child in the United States.

Nobody claims there is a single cause to the obesity problem, but the existing science certainly puts soft drinks in the list of leading contributors, said review co-author Kelly Brownell, Ph.D. He is director of the Rudd Center for Food Policy and Obesity at Yale University.

The systematic review appears in the April issue of the *American Journal of Public Health*. The work was supported in part by the Rudd Foundation, a private philanthropic organization focusing on obesity and education.

The authors say that a true test of links between a consumer product such as soft drinks and health outcomes requires a critical mass of large studies employing strong methods.

These conditions now exist, and several clear conclusions are apparent, they say. One of the most powerful findings is the link between soft drink intake and increased calorie consumption.

Of 21 studies, 19 showed that as people drink more soda pop, the number of calories they consume rises. Moreover, the studies using the most reliable statistical methods showed the largest effects.

Instead of satisfying a sweet tooth, soft drinks may do just the opposite. Several studies found that the caloric increase is actually greater than that contained in the soda, raising

the possibility that soft drinks increase hunger, decrease satiety or simply calibrate people to a high level of sweetness that generalizes to preferences in other foods, the authors say.

These results, taken together, provide clear and consistent evidence that people do not compensate for the added calories they consume in soft drinks by reducing their intake of other foods, the reviewers say.

The authors anticipated a weaker relationship between soft drink consumption and body weight, because there are many other calorie sources in the diet. Yet in the highest-quality studies, which controlled for a number of unrelated variables, a moderate relationship existed. The review also showed a slight correlation between soft drink consumption and lower intakes of milk, calcium, fruit and fiber.

The most striking link was between soft drink consumption and the incidence of type 2 diabetes, according to the reviewers. In a study of 91,249 women followed for eight years, those who consumed one or more soft drinks per day were twice as likely as those who consumed less than one per month to develop diabetes

This result alone warrants serious concern about soft drink intake, particularly in light of the unprecedented rise in type 2 diabetes among children, the review says.

The authors acknowledge that there is a great deal of variability among the studies included in this review, which incorporate differing methods, populations, beverage types and measurements of key factors such as body weight. Future research with more uniform approaches would help clarify the impact of soft drink consumption on nutrition and health outcomes, they say.

CSPI, on the other hand, is satisfied with the research to date. There is so much damning evidence, says Michael F. Jacobson, Ph.D., executive director. This is just sugar water. The real need is for laws and regulations that would help rein in soft drink consumption.

The consumer advocacy group calls for clearly presented calorie information at vending machines, convenience stores and restaurants. The group urges schools to stop selling full-calorie soft drinks. CSPI has also petitioned the federal government to require health notices on all non-diet sodas warning that they may promote obesity, diabetes, tooth decay, osteoporosis and other health problems.

The soft drink industry, for its part, has developed voluntary school beverage guidelines designed to limit the availability of sugary sodas and offer more water, milk, juice, energy drinks and diet soft drinks to students.

All foods and beverages can play an important role in a healthy diet if they are consumed in moderation and also with regular exercise, said Tracey Halliday, a spokesperson for the American Beverage Association.

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